DOT	US Department of Transportation
PHMSA	Pipelines and Hazardous Materials Safety Administration
OPS	Office of Pipeline Safety Western Region

Principal Investigator	Mike Petronis/Jim Coleman
Regional Accident Coordinator	Peter J. Katchmar
Region Director	Chris Hoidal
Date of Report	10/08/2013
Subject	Failure Investigation Report – Belle Fourche-Sussex Diesel Line Release

Operator, Location, & Consequences

Date of Failure	11/13/2011
Commodity Released	Diesel, Fuel Oil
City/County & State	Wright/Campbell County, WY
Op ID & Operator Name	1248 Belle Fourche Pipeline Company
Unit # & Unit Name	73919/Sussex Diesel Line
SMART Activity #	136756
Milepost / Location	MP 71.3/N 44.02195, W 105.53802
Type of Failure	Operator Error/Incorrect Operations
Fatalities	0
Injuries	0
Description of Area Impacted	Site is approximately 18 miles SW of Gillette and NW of Wright, WY, in a very remote area.
Property Damage	$1,872,546

Executive Summary

On the evening of November 13, 2011, a release of nearly 19,000 barrels of diesel fuel occurred at the Belle Fourche Pipeline Company's (BFPL) Davis Station in a remote area of Wyoming. Immediately prior to the incident, a supervisory control and data acquisition (SCADA) controller for the BFPL started a delivery of diesel fuel. After the shipment was started, a booster pump in the middle of the line exceeded the pump's high discharge pressure setting and went offline. The high pressure occurred because the mainline valves were closed and no flow could occur. The controller reset the line and restarted the pump. The controller did not check to ensure diesel product was being delivered into the Hawk Point tank, which was the intended destination of the product. Near the end of the scheduled delivery, on the morning of November 14, 2011, the controller noticed that the meter at the Hawk Point station had not moved. The controller confirmed no-flow conditions at the delivery tank, shut down the line, and dispatched a field technician to check the line conditions. The field technician, after finding nothing wrong with the meter at the Hawk Point station, drove to the Davis Station and saw diesel spilling out of the vault that houses the Davis Station and mainline valves. PHMSA's investigation determined that the primary cause of the release was operator error, specifically, the controller pumped against two closed valves, which resulted in a failure of the valve flange gasket. Secondary causes that contributed to the incident were a lack of detailed written procedures for normal and abnormal conditions, difficulty in ascertaining valve positions, and an improperly installed flange gasket.

System Details

BFPL's Sussex Diesel Line ships diesel fuel from ConocoPhillips's Seminoe pipeline to Belle Fourche's Hawk Point terminal facility for use in the surrounding mining industry. The 6-inch pipeline begins at the upstream flange to Belle Fourche's pump skid. This is downstream of the custody transfer meter on ConocoPhillips's Seminoe pipeline at the Tisdale Pump Station, approximately 58 miles south of Buffalo, WY. The pipeline continues northeast to the Sussex Pump Station and breakout tank and then on to the Iberlin booster pump site about 49 miles from the Tisdale station. At Iberlin, the line reduces to a 4-inch outside diameter. The pipeline continues east 26 miles to the Hawk Point terminal facility, approximately 18 miles south of Gillette, WY, where it ends at the upstream side of the custody transfer meter at Hawk Point. Between Iberlin and Hawk Point, there is one breakout tank at the Davis facility. At Hawk Point, there is one breakout tank that can receive surges from the Sussex diesel line as well as store diesel for distribution via a truck loading facility. Pipe was installed between 1960 and 1999.

The diesel system is a 75-mile pipeline consisting of 49 miles of 6-inch-diameter pipe and 26 miles of 4-inch-diameter pipe. The pipeline takes deliveries off of the Conoco Phillips Seminoe line directly into the Sussex tank. From the Sussex tank, product is shipped to Hawk Point. Along the way, it goes past the Iberlin booster station that is situated at the

beginning of the 4-inch-diameter line. Deliveries can be made into the Davis tank and re-injected into the line for delivery into Hawk Point, or product can be delivered directly to Hawk Point. (b) (7)(F)

(b) (7)(F)

Figure #1

System History

Due to the Silvertip line rupture in Montana on July 2, 2011, the Seminoe line had no diesel to sell to Belle Fourche, and the Sussex diesel line sat idle until October 16, 2011. On that day, Belle Fourche started receiving diesel from the Seminoe line into the Sussex tank and down the line to the Hawk Point Terminal. On October 22, 2011, high tank levels at Hawk Point caused the direction of flow to change back into the Davis tank. A field employee was dispatched to change the flow by opening the closed input valve into the Davis station. He opened the valve into the Davis tank. At this time, the operator reported they thought the mainline valve was closed. From October 22, 2011, until October 31, 2011, the product flow went through the Davis station tank and out to Hawk Point instead of going through the

mainline valve, which is the normal flow for this line. From October 31, 2011, to November 11, 2011, no deliveries were made along this line to Davis or Hawk Point.

With the anticipation of deliveries over the weekend and the need to expedite them to Hawk Point, a different field employee was dispatched on November 11, 2011, to close the Davis input valve to allow normal flow along the line to Hawk Point. Because the employee knew the mainline valve was normally open and there was no written procedure requiring the valve be checked, the employee did not check the status of the mainline valve.

At 6:32 p.m. mountain standard time (MST), on the evening of November 13, 2011, the controller began the sequence to start the system and deliver product from Sussex to Hawk Point.

Events Leading up to the Failure

At 6:32 p.m. MST, on November 13, 2011, the controller at the SCADA control center began the sequence to start the system and deliver product from Sussex into Hawk Point. The sequence was executed correctly, but at 7:40 p.m., due to the closed mainline block valve, the high-pressure switch at Iberlin shut down the Iberlin booster. Per the written procedures, the controller proceeded to shut down the upstream pumps at Sussex.

The controller began the start sequence for the second time at 7:49 p.m., and the system began coming up to pressure. At 7:55 p.m., the controller started the pump at the Iberlin booster station. At 8:04 p.m., as the Iberlin booster came up to speed, the controller received a high-discharge pressure alarm. The controller stopped Pump 4 at Sussex to avoid over-pressurizing the system and was successful in stabilizing the system at a pressure below the high-pressure alarm. Per procedure, the controller set alarm levels for each of the tank levels and allowed the system to run.

At 2:53 a.m., on November 14, 2011, the controller recognized that there was no flow coming into the Hawk Point tank. The controller set a tank level alarm to see if there was product there and whether the meter had failed or if the product was not arriving. Upon confirming no-flow status, the controller began shut down procedures and proceeded to call local field personnel out to investigate. The leak was located at 5:00 a.m. when personnel found diesel overflowing the vault housing the Davis valves.

Investigation

After the ExxonMobil release into the Yellowstone River on July 1, 2011, diesel deliveries were curtailed to Belle Fourche's Hawk Point Station from the ConocoPhillips (CPPL) refinery in Billings, MT. After the Yellowstone River incident occurred and the pipeline was returned to crude oil delivery, a decision was made to start delivering diesel from CPPL to Hawk Point again. When the required tank level at Hawk Point was reached, a field employee was dispatched to open the Davis input line valve to allow flow into the Davis tank.

At some point, someone closed the mainline valve near the Davis Station (which is normally open at all times to allow distribution to Hawk Point). All individuals involved were interviewed, and no one took responsibility for closing the mainline valve.

A few weeks later, the controller was scheduled to make another delivery to Hawk Point, and a different individual was dispatched to close the Davis input line control valve (which is used to control the flow to Davis or Hawk Point). This normally allows the delivery to continue along the main line to Hawk Point, bypassing the Davis Station. When the delivery to Hawk Point was initiated, the pump went down due to high-discharge pressure at the Iberlin booster station as designed. At this time, the mainline valve gasket blew due to the incorrect torque setting of the flange bolts because the pressure climbed to 1087 pounds per square inch gage (psig) on the line but was short of the high-pressure shutdown set point of 1120 psig and the maximum operating pressure (MOP) of 1200 psig.

During the controller interview, the controller stated that there were unwritten rules in the control room; one of which was that whenever an abnormal event occurred, the controller was supposed to inform his supervisor. The controller did not report this shutdown to his supervisor, nor did the controller check with field personnel to understand why the line went down. The controller reset the pipeline system and attempted a restart. When the restart was done and the line came up to pressure, the Iberlin booster station pump came online and another high-pressure alarm was received. The controller shut down Pump 4 at Sussex to avoid over-pressurizing the system and was successful at stabilizing the line at a pressure below the high-pressure set point. Per his procedure, he set the tank alarms and let the system run.

There were only general written procedures for operating the Sussex Diesel line detailing which pumps to start and generally how to start the line flowing. The written procedures did not include any information concerning valve configuration other than generally stating that the controller should make sure the valves are configured correctly before starting the pumps, which was not done. (b) (7)(F) [redacted]
There is the same written procedure for lines not controlled by SCADA, which requires field personnel to check valve alignment before starting a pipeline. The controller did explain that his written procedures did not cover the specific hydraulic concerns for the Sussex Diesel line. He also said that the unwritten diesel line system procedure is, because of slack line conditions, to wait approximately 2 hours after successful start-up for the system to achieve steady-state flow before checking the flow into the Hawk Point tank. The controller did not do this, and diesel fuel flowed onto the ground for approximately 7 hours before he discovered product was not flowing into the Hawk Point tank. When the controller noticed that product was not flowing into the Hawk Point tank, he shut the system down and dispatched a field employee to find out what was going on. The field employee found a leak in the vault of the mainline valve near the Davis station. The leak was from the upstream flange of the closed mainline valve. Repair and cleanup was started immediately. The reason the operator was so sure of the spill volume is because the batch they were shipping was 1900 BBLs, and it was all lost. Two days after the gasket was replaced, a successful 4-hour hold pressure test on the line at 770 psig was conducted.

Emergency Response

At 2:53 a.m., on November 14, 2011, the controller recognized that there was no product flowing into the Hawk Point tank. He set a tank level alarm to see if there was product there and whether the meter had failed or if the product never arrived. When he discovered the no-flow status of the product and no tank level, he began to shut down the system and call local

field personnel out to investigate. After checking the Hawk Point tank and meter and finding no problems, the field tech went to the Davis station and found no problems there. He then went up the hill to the vault containing the mainline valves.

At 5:00 a.m., the field tech discovered a leak in the vault coming from the upstream flange of the mainline valve. Repairs and clean up started immediately. Most of the diesel soaked into the ground. A new gasket was installed on the valve, and the flange bolts on both sides of the valve were checked for the proper torque pattern and setting.

Summary of Initial Start-up Plan and Return-to-Service, including Preliminary Safety Measures

A new mainline valve flange gasket was correctly installed, and the system was brought up to operating pressure and continues to operate with no issues. On November 16, 2011, the operator conducted a 4-hour hold test on the line at 770 psig with no leaks or issues.

The operator has already implemented an Operator Qualification task related to the installation of flange gaskets.

Company management, field operations personnel, and control center staff met to further investigate the accident and discuss possible changes to prevent this from happening on the line in the future. Some possible changes that were discussed included:

1) Adding signage and warning tags to the vault for the mainline valve and the valve itself telling personnel not to change the configuration of the valve without explicit instructions from their supervisor.
2) Improving all stages of training of field personnel about the danger of closing the mainline valve and ensuring all personnel know how the system works from beginning to end.
3) Installing SCADA equipment allowing the control center to see the status of the mainline valve and/or operate it from the control room.
4) Making changes to field operating procedures explaining how line flow is diverted to the Davis tank and/or sent directly to Hawk Point.
5) Possibly reconstructing the present mainline valve setup to an above-ground valve setup.
6) Including all control center operations in table-top drills and conducting Abnormal Operating Condition (AOC) simulation drills to keep controllers fresh and avoid complacency.
7) Reviewing and updating all training materials for controllers.
8) Programming the programmable logic controllers to raise an alarm when the system is started if no flow is detected at downstream stations after a defined short period of time.

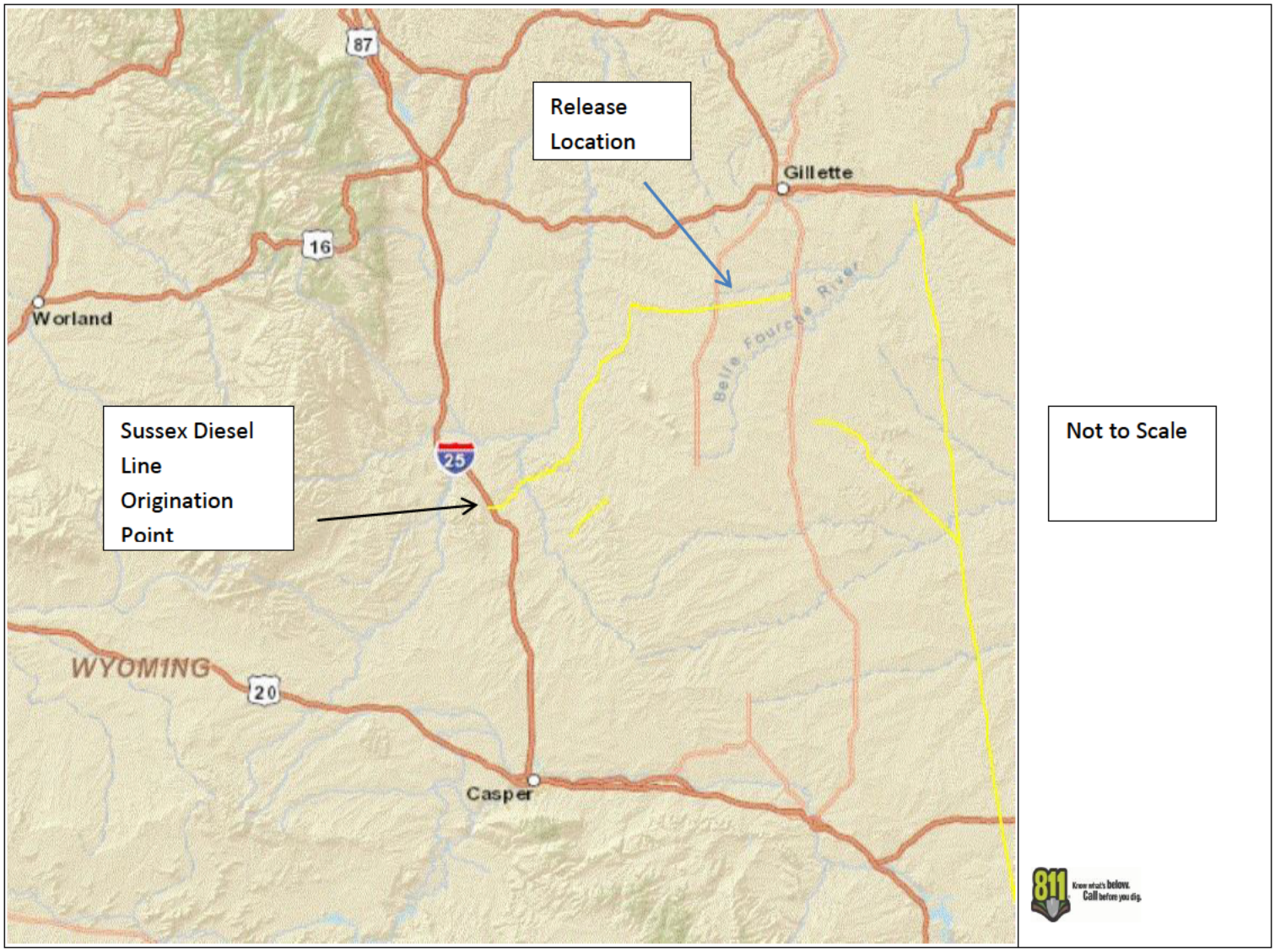
Investigation Findings & Contributing Factors

PHMSA's investigation determined that the primary/immediate cause of this release was Operator Error, specifically, pumping against closed valves. Contributing factors to this incident included:

1. Field personnel were not familiar with the operations of the Sussex Diesel Line and improperly closed the mainline valve prior to attempting to pump through that line section.
    a. BFPL had no written procedures for keeping the Davis mainline valve open.
    b. BFPL had no engineering design barriers in place to make sure the Davis mainline valve was never closed.
2. The controller did not follow the procedures requiring him to check valve alignment before operating the pipeline.
    a. Since the valves at the Davis Station are not remotely controlled by the control room, field personnel should have been dispatched to ensure the correct valve alignment.
3. The controller did not have adequate start up procedures for this line.
    a. BFPL's written start up procedure is inadequate.
        i. The line operates in slack conditions and it takes time to pack. The controller knows this and reported that the unwritten procedure is for the controller to wait a sufficient time period and then check for flow into the downstream tank.
4. The controller did not have enough information to operate the line successfully. The existing system controls do not indicate the position of critical operational valves.
5. The mainline valve flange gasket was improperly installed when the Davis mainline valve was replaced in 2008.
    a. BFPL has no written procedures detailing the installation of a four-inch flanged connection.

Appendices

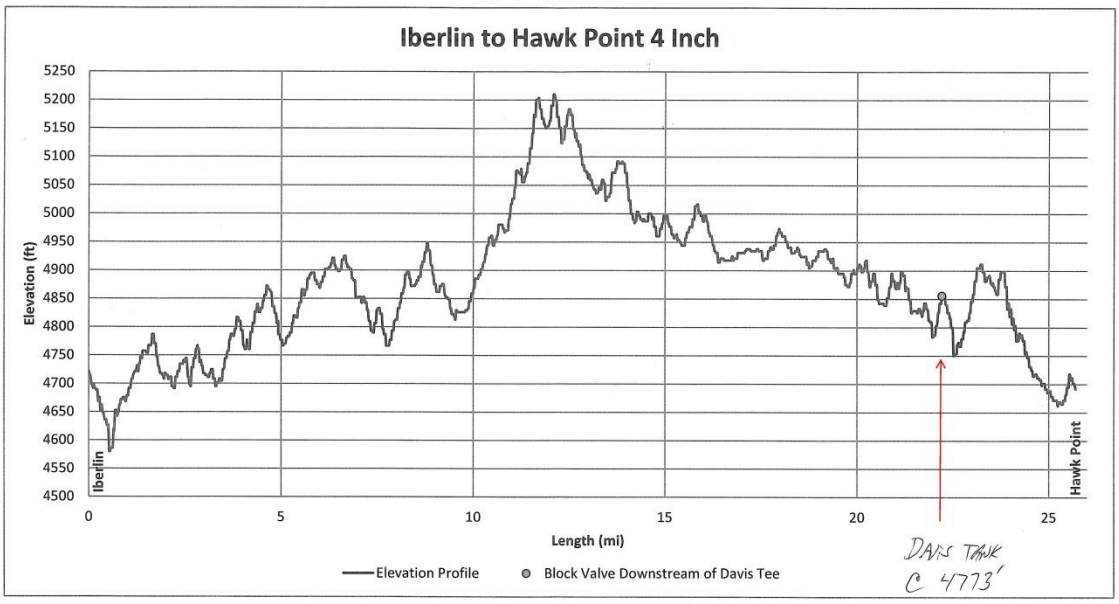
1. System map
2. Valving schematic
3. Iberlin to Hawk Point Elevation Profile
4. Photographs
5. Operator's Narrative
6. NRC Report #995428
7. NRC Report #995432
8. BFPL 30 Day Written Report



Map of Pipeline System

(b) (7)(F)

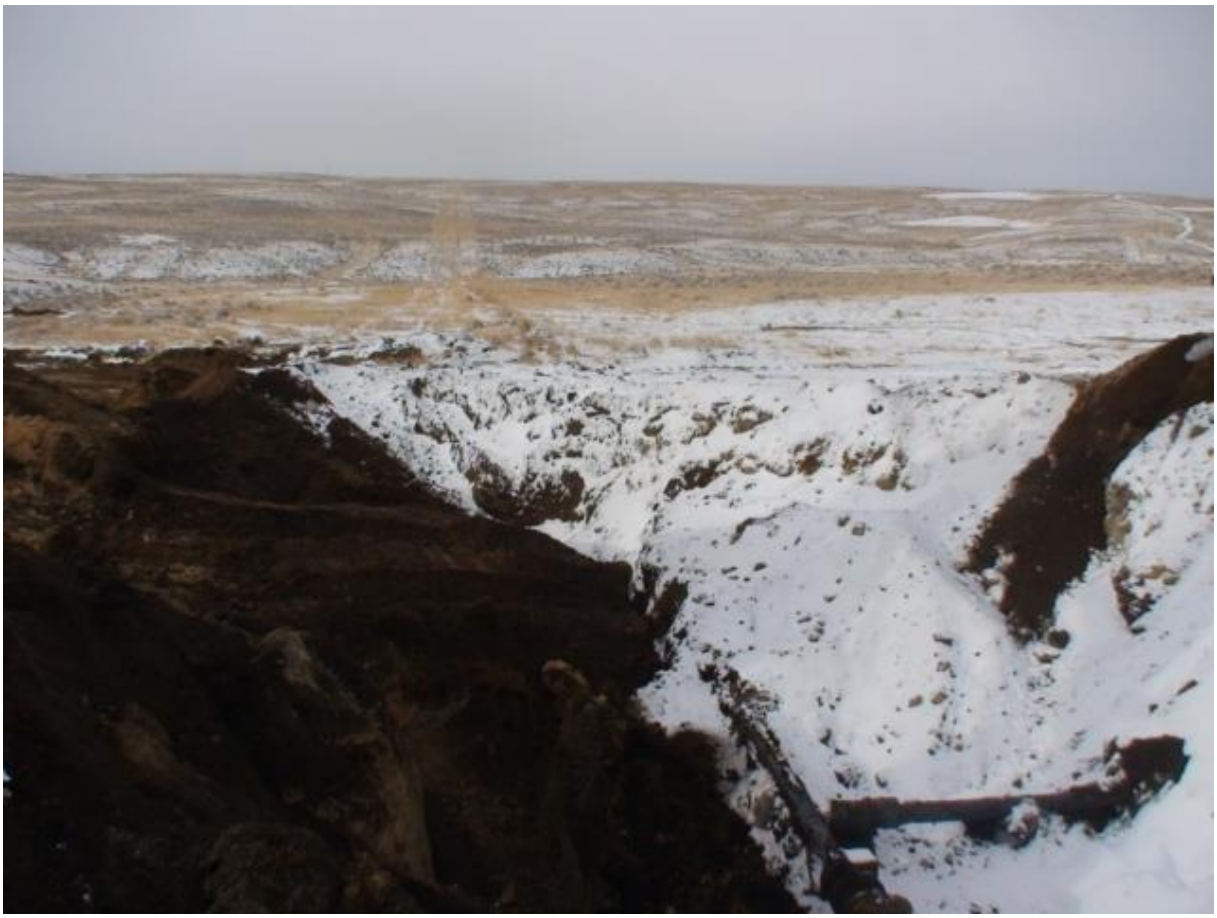
Davis Station Valve Configuration



Iberlin to Hawk Point Elevation Profile

Davis Valve failed flange gasket – note depression at upper portion of gasket indicating appropriate compression of the gasket. The lower portion of the gasket does not have this depression indicating that it was not adequately compressed. This was likely due to the flange bolts not being properly torqued.

(b) (7)(F)



Davis Valve Release Location – looking upstream towards Iberlin Station

Looking Downstream towards Hawk Point Station

Davis Station

(b) (7)(F)

From: Ken Dockweiler
To: Coleman, James (PHMSA)
Subject: Narrative Account
Date: Monday, November 21, 2011 2:06:28 PM

Below is an accounting of the events surrounding the diesel spill. Of course our cleanup is ongoing and our conversation around the event will continue for some time.

As always feel free to contact me with any questions or concerns you may have as you review this and/or any of the other data that Mike gathered while he was out.

Thanks,
Ken

Background information:

The diesel system is a 75 mile pipeline consisting of 49 miles of 6" pipe and 26 miles of 4" pipe. The pipeline takes deliveries off of the Conoco Phillips Seminoe line directly into our Sussex tank. From the Sussex tank product is shipped to Hawk Point. Along the way it goes past the Iberlin booster that is situated at the beginning of the 4". Deliveries can be made into Davis tank and re-injected into the line for delivery on into Hawk Point or it can be delivered directly into Hawk (b) (7)(F)

(b) (7)(F)

(b) (3)

This summer after the Silvertip pipeline incident in Montana there was no diesel available on the COP pipeline and for almost four months the pipeline sat idle. On October 16, we began receiving product off of Seminoe into our Sussex tank.

On October 22nd high tank levels at Hawk Point dictated changing the direction of flow into Davis. Employee A was dispatched to make the switch. Employee A opened the valve into Davis, but was not aware that the (b) (7)(F)

From October 22nd until October 31st flow continued to go into Davis and back out to Hawk Point around the closed mainline block valve. From October 31st to November 11th no deliveries were made into either Hawk Point or Davis station.

In anticipation of deliveries beginning over the weekend and in the interest of expediting delivery into Hawk Point Employee B was dispatched on November 11th to change the valve configuration to deliver directly into Hawk Point bypassing the Davis Station. Employee B was unaware that Employee A had closed the mainline block valve and because the valve is normally left open at all times Employee B had no reason to descend into the closure and inspect it.

The events of November 13th and 14th:

At 6:32 p.m. on November 13th the controller at the control center began the sequence to start the system and deliver from Sussex into Hawk Point. The sequence was executed correctly but at 7:40

due t (b) (7)(F) [redacted]

Highest pressure observed via SCADA was 1087 psi and the MOP of the line is 1120 psi. The pressure profile would not have suggested that a gasket should have failed as the MOP of the line was not compromised but further investigation after the incident would reveal that the flange gasket was incorrectly and unevenly torqued at the time of installation causing its failure. Based on the pressure profile of this and the subsequent restart it is estimated that it was at this high pressure point that the gasket on the upstream flange of the Davis Junction block valve failed.

Control Room Procedure requires that any high pressure shutdown be reported to the control room supervisor before any restart is attempted, but that contact did not occur.

Controller again began the start sequence for the system at 7:49 p.m. and the system began coming up to pressure. At 7:55 the pump at the Iberlin booster station came back on line. At 8:04, as the Iberlin Booster came up to speed a high discharge pressure alarm was received by the controller. The controller stopped pump 4 at Sussex to avoid over pressuring the system and was successful in stabilizing the system at a pressure below the high pressure alarm. Per procedure the controller set alarm levels for each of the tank levels and allowed the system to run.

At 2:53 a.m. on November 14th the controller recognized that there was still no flow coming into the Hawk Point tank and set a tank level alarm to see if there was product there and the meter had failed or if the product really was not arriving. Upon confirming the no-flow status the controller began shut down procedures and proceeded to call out local field personnel to investigate.

Repairs and clean-up commenced immediately upon discovering the failed flange gasket and spilled diesel fuel. Gasket was replaced and flange bolts on both sides of the valve were checked for correct torque and the system was restarted. Clean-up will continue for some time.

The follow-up:

On November 17th at 9:00 a.m. Control Center, field operations and management met to further investigate the incident and discuss changes that could be made in order to avoid any similar incidents on this or any other Belle Fourche pipeline in the future. A list of some of the items being considered is shown below.

With regard to the incorrectly installed/torqued flange gasket

1) Belle Fourche has already implemented an OQ task related to the installation of flanges.

With regard to the closed valve

1) Add signage to the Davis mainline block valve that indicates it as a normally open valve not to be closed under any operational condition.
2) Improve training with any field personnel that may operate valves on this system to ensure that all know the mainline valve should remain in the open position. Refresher training with all field personnel reminding them of the risks involved with closing any mainline block valve.
3) Installation of SCADA equipment to allow the control center to:
   a. See the mainline block valve at Davis Junction and/or
   b. Operate the mainline block valve at Davis Junction
4) Change field operating procedures in regard to how flow is diverted to Davis or sent directly into Hawk Point
5) Possible reconstruction of the Davis mainline valve as an above ground valve setting.

With regard to the actions/inactions by the controller:

1) Include control center operations in all table top drills to keep controllers fresh and avoid complacency
2) Consider implementing periodic simulation drills by artificially signaling abnormal operating conditions to the SCADA system and checking for appropriate responses by the controllers.
3) Review training materials and update as necessary to address deficiencies.
4) Hold table top review of this incident with all controllers and communicate lessons learned.
5) Program PLCs to alarm when the system is started if no flow is detected at downstream stations after a defined period of time.

NATIONAL RESPONSE CENTER 1-800-424-8802
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applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 995428

INCIDENT DESCRIPTION

*Report taken at 09:41 on 14-NOV-11
Incident Type: PIPELINE
Incident Cause: EQUIPMENT FAILURE
Affected Area:
The incident was discovered on 14-NOV-11 at 03:00 local time.
Affected Medium: LAND ONTO THE GROUND

SUSPECTED RESPONSIBLE PARTY

Organization: BELLE FOURCHE PIPELINE
CASPER, WY 82602

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

DAVIS BLOCK VALVE County: CAMPBELL
City: WRIGHT State: WY
Latitude: 44° 02' 03" N

Longitude: 105° 34' 17" W
IN THE FIELD

RELEASED MATERIAL(S)

CHRIS Code: ODS Official Material Name: OIL: DIESEL
Also Known As:
Qty Released: 19 BARREL(S)

DESCRIPTION OF INCIDENT

CALLER STATED THERE WAS A SPILL DISCOVERED COMING FROM A STEEL PIPELINE DUE TO EQUIPMENT FAILURE. CALLER STATED THE PIPELINE IS POSSIBLY A FOUR INCH PIPELINE.

INCIDENT DETAILS

Pipeline Type: TRANSMISSION
DOT Regulated: YES
Pipeline Above/Below Ground: BELOW
Exposed or Under Water: NO
Pipeline Covered: UNKNOWN

DAMAGES

Fire Involved:	NO	Fire Extinguished: UNKNOWN			
INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:	
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:	
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:		
Damages:	NO				

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			
Waterway:	N			
Track:	N			

Major Artery: N

Passengers Transferred: NO
Environmental Impact: UNKNOWN
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

CALLER STATED THE PIPELINE HAS BEEN SHUT IN AND THEY JUST GOT PEOPLE ON THE GROUND TO ASSESS THE DAMAGE.
Release Secured: YES
Release Rate:
Estimated Release Duration:

WEATHER

Weather: SUNNY, 25ºF

ADDITIONAL AGENCIES NOTIFIED

Federal: NONE
State/Local: NONE
State/Local On Scene: NONE
State Agency Number: NONE

NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)
14-NOV-11 09:50
CGIS RAO ST. LOUIS (COMMAND CENTER)
14-NOV-11 09:50
COLORADO INFO ANALYSIS CENTER (FUSION CENTER)
14-NOV-11 09:50
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
14-NOV-11 09:50
U.S. EPA VIII (MAIN OFFICE)
14-NOV-11 09:57
NE INFORMATION ANALYSIS CENTER (MAIN OFFICE)
14-NOV-11 09:50
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
14-NOV-11 09:50
NOAA RPTS FOR WY (MAIN OFFICE)
14-NOV-11 09:50
NTSB PIPELINE (MAIN OFFICE)
14-NOV-11 11:26
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE OF PIPELINE SAFETY (AUTO))
14-NOV-11 09:50
DOI/OEPC DENVER (MAIN OFFICE)
14-NOV-11 09:50
WY DEPARTMENT OF ENVIRON QUALITY (MAIN OFFICE)
14-NOV-11 09:50
USCG DISTRICT 8 (MAIN OFFICE)
14-NOV-11 09:50
WYOMING CRIMINAL INTEL CENTER (SR INTELLIGENCE OFFICER)
14-NOV-11 09:50
WYOMING OFFICE OF HOMELAND SECURITY (OPERATIONS DIVISION)
14-NOV-11 09:50

ADDITIONAL INFORMATION

CALLER STATED THE WEST REGION PHMSA WILL BE CALLED NEXT.

*** END INCIDENT REPORT # 995428 ***

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*** For Public Use ***
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applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 995432

INCIDENT DESCRIPTION

*Report taken at 10:19 on 14-NOV-11
Incident Type: PIPELINE
Incident Cause: EQUIPMENT FAILURE
Affected Area:
The incident was discovered on 14-NOV-11 at 03:00 local time.
Affected Medium: LAND ONTO THE GROUND (SOIL)

SUSPECTED RESPONSIBLE PARTY

Organization: BELLE FOURCHE PIPELINE
CASPER, WY 82602

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

LAT: 44N 02' 03" County: CAMPBELL
LONG: 105W 34' 17"
City: WRIGHT State: WY
Latitude: 44° 02' 03" N

Longitude: 105° 34' 17" W
IN THE FIELD, DAVIS BLOCK VALVE

RELEASED MATERIAL(S)

CHRIS Code: ODS Official Material Name: OIL: DIESEL
Also Known As:
Qty Released: 1900 BARREL(S)

DESCRIPTION OF INCIDENT

CALLER STATED THERE WAS A SPILL DISCOVERED COMING FROM A STEEL PIPELINE DUE TO AN EQUIPMENT FAILURE (POSSIBLY A GASKET FAILURE AT THE BLOCK VALVE). CALLER STATED THE PIPELINE IS POSSIBLY A FOUR INCH PIPELINE. CALLER ALSO STATES THEY CAME UP WITH THE CALCULATION OF THE AMOUNT OF MATERIAL INVOLVED IN THE RELEASE BASED ON THE VOLUMES IN AND THE VOLUMES OUT (RECEIPT DELIVERIES). /////////THIS IS A CHANGE TO PREVIOUS NRC REPORT NUMBER 995428. THE AMOUNT OF MATERIAL INVOLVED IN THE SPILL IS 1,900 BARRELS.//////////

INCIDENT DETAILS

Pipeline Type: TRANSMISSION
DOT Regulated: YES
Pipeline Above/Below Ground: BELOW
Exposed or Under Water: NO
Pipeline Covered: UNKNOWN

DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES:	NO	Hospitalized:	Empl/Crew:	Passenger:
FATALITIES:	NO	Empl/Crew:	Passenger:	Occupant:
EVACUATIONS:	NO	Who Evacuated:	Radius/Area:	

Damages: NO

Closure Type		Description of Closure	Length of Closure	Direction of Closure
Air:	N			
Road:	N			
Waterway:	N			

Major Artery: N

Track: N

Passengers Transferred: NO
Environmental Impact: UNKNOWN
Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

CALLER STATES THE PIPELINE HAS BEEN SHUT IN AND THEY JUST GOT PEOPLE ON THE GROUND TO ASSESS THE DAMAGE.
Release Secured: YES
Release Rate:
Estimated Release Duration:

WEATHER

Weather: SUNNY, 25ºF

ADDITIONAL AGENCIES NOTIFIED

Federal: NRC
State/Local: PHMSA
State/Local On Scene: UNKNOWN
State Agency Number: 995428

NOTIFICATIONS BY NRC

USCG ICC (ICC ONI)
14-NOV-11 10:37
CGIS RAO ST. LOUIS (COMMAND CENTER)
14-NOV-11 10:37
COLORADO INFO ANALYSIS CENTER (FUSION CENTER)
14-NOV-11 10:37
DHS PROTECTIVE SECURITY ADVISOR (PSA DESK)
14-NOV-11 10:37
DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
14-NOV-11 10:37
U.S. EPA VIII (MAIN OFFICE)
14-NOV-11 10:45
NE INFORMATION ANALYSIS CENTER (MAIN OFFICE)
14-NOV-11 10:37
NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
14-NOV-11 10:37
NOAA RPTS FOR WY (MAIN OFFICE)
14-NOV-11 10:37
NTSB PIPELINE (MAIN OFFICE)
14-NOV-11 10:37
PIPELINE & HAZMAT SAFETY ADMIN (OFFICE OF PIPELINE SAFETY (AUTO))
14-NOV-11 10:37
PACIFIC STRIKE TEAM (MAIN OFFICE)
14-NOV-11 10:37
SECTOR UPPER MISSISSIPPI RIVER (COMMAND CENTER)
14-NOV-11 10:40
DOI/OEPC DENVER (MAIN OFFICE)
14-NOV-11 10:37
WY DEPARTMENT OF ENVIRON QUALITY (MAIN OFFICE)
14-NOV-11 10:37
USCG DISTRICT 8 (MAIN OFFICE)
14-NOV-11 10:37
WYOMING CRIMINAL INTEL CENTER (SR INTELLIGENCE OFFICER)
14-NOV-11 10:37
WYOMING OFFICE OF HOMELAND SECURITY (OPERATIONS DIVISION)
14-NOV-11 10:37

ADDITIONAL INFORMATION

CALLER HAD NO ADDITIONAL COMMENTS. /////////THIS IS A CHANGE TO PREVIOUS NRC REPORT NUMBER 995428. THE AMOUNT OF MATERIAL INVOLVED IN THE SPILL IS 1,900 BARRELS./////////

*** END INCIDENT REPORT # 995432 ***

The National Response Center is strictly an initial report taking agency

and does not participate in the investigation or incident response. The NRC receives initial reporting information only and notifies Federal and State On-Scene Coordinators for response. The NRC does not verify nor does it take follow-on incident information. Verification of data and incident response is the sole responsibility of Federal/State On-Scene Coordinators. Data contained within the FOIA Web Database is initial information only. All reports provided via this server are for informational purposes only. Data to be used in legal proceedings must be obtained via written correspondence from the NRC.

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed $100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.	OMB NO: 2137-0047 EXPIRATION DATE: 01/31/2014
U.S Department of Transportation Pipeline and Hazardous Materials Safety Administration	**Original Report Date:** 12/13/2011 **No.** 20110449 - 17139 ---------- (DOT Use Only)

ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS

INSTRUCTIONS

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

PART A - KEY REPORT INFORMATION

Report Type: *(select all that apply)*	**Original:**	**Supplemental:**	**Final:**
		Yes	**Yes**
Last Revision Date:	12/27/2012		
1. Operator's OPS-issued Operator Identification Number (OPID):	1248		
2. Name of Operator	BELLE FOURCHE PIPELINE CO		
3. Address of Operator:			
3a. Street Address	455 N POPLAR ST.		
3b. City	CASPER		
3c. State	Wyoming		
3d. Zip Code	82602		
4. Local time *(24-hr clock)* and date of the Accident:	11/14/2011 02:57		
5. Location of Accident:			
Latitude:	44.021949		
Longitude:	-105.538019		
6. National Response Center Report Number (if applicable):	995432		
7. Local time *(24-hr clock)* and date of initial telephonic report to the National Response Center (if applicable):	11/14/2011 07:41		
8. Commodity released: *(select only one, based on predominant volume released)*	Refined and/or Petroleum Product (non-HVL) which is a Liquid at Ambient Conditions		
- Specify Commodity Subtype:	Diesel, Fuel Oil, Kerosene, Jet Fuel		
- If "Other" Subtype, Descr be:			
- 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): B			
9. Estimated volume of commodity released unintentionally (Barrels):	1,958.00		
10. Estimated volume of intentional and/or controlled release/blowdown (Barrels):			
11. Estimated volume of commodity recovered (Barrels):	53.00		
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?	No		
- If Yes, specify the number in each category:			
13a. Operator employees			
13b. Contractor employees working for the Operator			
13c. Non-Operator emergency responders			

13d. Workers working on the right-of-way, but NOT 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:	11/14/2011 02:57
14b. Local time pipeline/facility restarted:	11/14/2011 11:36
- Still shut down? (* Supplemental Report Required)	
15. Did the commodity ignite?	No
16. Did the commodity explode?	No
17. Number of general public evacuated:	
18. Time sequence *(use local time, 24-hour clock)*:	
18a. Local time Operator identified Accident:	
18b. Local time Operator resources arrived on site:	

PART B - ADDITIONAL LOCATION INFORMATION

1. Was the origin of Accident onshore?	Yes
If Yes, Complete Questions (2-12)	
If No, Complete Questions (13-15)	
- If Onshore:	
2. State:	Wyoming
3. Zip Code:	82732
4. City	
5. County or Parish	Campbell
6. Operator-designated location:	
Specify:	
7. Pipeline/Facility name:	
8. Segment name/ID:	
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:	In underground enclosed space (e.g. vault)
- If Other, Descr be:	
Depth-of-Cover (in):	60
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 (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:	Interstate
2. Part of system involved in Accident:	Onshore Pipeline, Including Valve Sites
- If Onshore Breakout Tank or Storage Vessel, Including Attached Appurtenances, specify:	
3. Item involved in Accident:	Flange

- 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, Descr be:	
3f. Pipe manufacturer:	
3g. Year of manufacture:	
3h. Pipeline coating type at point of Accident, specify:	
- If Other, Descr be:	
- If Weld, including heat-affected zone, specify:	
- If Other, Descr be:	
- If Valve, specify:	
- If Mainline, specify:	
- If Other, Descr be:	
3i. Manufactured by:	
3j. Year of manufacture:	
- If Tank/Vessel, specify:	
- If Other - Descr be:	
- If Other, descr be:	
4. Year item involved in Accident was installed:	
5. Material involved in Accident:	Material other than Carbon Steel
- If Material other than Carbon Steel, specify:	Paper Flange Gasket
6. Type of Accident Involved:	Leak
- If Mechanical Puncture – Specify Approx. size:	
in. (axial) by	
in. (circumferential)	
- If Leak - Select Type:	Connection Failure
- If Other, Descr be:	
- If Rupture - Select Orientation:	
- If Other, Describe:	
Approx. size: in. (widest opening) by	
in. (length circumferentially or axially)	
- If Other – Describe:	

PART D - ADDITIONAL CONSEQUENCE INFORMATION

1. Wildlife impact:	No
1a. If Yes, specify all that apply:	
- Fish/aquatic	
- Birds	
- Terrestrial	
2. Soil contamination:	Yes
3. Long term impact assessment performed or planned:	No
4. Anticipated remediation:	Yes
4a. If Yes, specify all that apply:	
- Surface water	
- Groundwater	
- Soil	Yes
- Vegetation	
- Wildlife	
5. Water contamination:	No
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?	No
7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?	No
7a. If Yes, specify HCA type(s): *(Select all that apply)*	
- Commercially Navigable Waterway:	
Was this HCA identified in the "could affect"	

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 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 damage	$ 17,000
8b. Estimated cost of commodity lost	$ 282,301
8c. Estimated cost of Operator's property damage & repairs	$ 15,830
8d. Estimated cost of Operator's emergency response	$ 2,000
8e. Estimated cost of Operator's environmental remediation	$ 1,555,415
8f. Estimated other costs	$ 0
Descr be:	
8g. Total estimated property damage (sum of above)	$ 1,872,546

PART E - ADDITIONAL OPERATING INFORMATION

1. Estimated pressure at the point and time of the Accident (psig):	1,087.00
2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig):	1,200.00
3. 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 restriction with pressure limits below those normally allowed by the MOP?	No
- 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 State?	
5. Was "Onshore Pipeline, Including Valve Sites" OR "Offshore Pipeline, Including Riser and Riser Bend" selected in PART C, Question 2?	Yes
- If Yes - (*Complete 5a. – 5e. below)*	
5a. Type of upstream valve used to initially isolate release source:	Automatic
5b. Type of downstream valve used to initially isolate release source:	Manual
5c. Length of segment isolated between valves (ft):	116,160
5d. Is the pipeline configured to accommodate internal inspection tools?	Yes
- If No, Which physical features limit tool accommodation? (*select all that apply)*	
- 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 -	
- If Other, Descr be:	
5e. For this pipeline, are there operational factors which significantly complicate the execution of an internal inspection tool run?	No
- If Yes, Which operational factors complicate execution? (*select all that apply*)	
- Excessive debris or scale, wax, or other wall buildup	

- Low operating pressure(s)	
- Low flow or absence of flow	
- Incompatible commodity	
- Other -	
- If Other, Descr be:	
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 the detection of the Accident?	Yes
6d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?	Yes
7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?	No
- If Yes:	
7a. Was it operating at the time of the Accident?	
7b. Was it fully functional at the time of the Accident?	
7c. Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist 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 with the confirmation of the Accident?	
8. How was the Accident initially identified for the Operator?	Controller
- If Other, Specify:	
8a. If "Controller", "Local Operating Personnel", including contractors", "Air Patrol", or "Guard Patrol by Operator or its contractor" is selected in Question 8, specify the following:	Operator employee
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 Accident?	Yes, specify investigation result(s): (select all that apply)
- 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 controller issues	
- Investigation identified incorrect controller action or controller error	Yes
- 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:	
Descr be:	

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:	1
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?	No
- If Yes:	
2a. Specify how many were tested:	
2b. Specify how many failed:	

PART G – APPARENT CAUSE

Select only one box from PART G in shaded column on left representing the APPARENT Cause of the Accident, and answer the questions on the right. Describe secondary, contributing or root causes of the Accident in the narrative (PART H).

Apparent Cause:	G6 - Equipment Failure
G1 - Corrosion Failure - only one **sub-cause** can be picked from shaded left-hand column	
External Corrosion:	
Internal Corrosion:	
- If External Corrosion:	
1. Results of visual examination:	
- If Other, Descr be:	
2. Type of corrosion: *(select all that apply)*	
- Galvanic	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
- If Other, Descr be:	
3. The type(s) of corrosion selected in Question 2 is based on the following: *(select all that apply)*	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Descr be:	
4. Was the failed item buried under the ground?	
- If Yes :	
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 conducted at the point of the Accident?	
If "Yes, CP Annual Survey" – Most recent year conducted:	
If "Yes, 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?	
- If Internal Corrosion:	
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, Descr be:	
8. The cause(s) of corrosion selected in Question 7 is based on the following *(select all that apply)*: -	
- Field examination	
- Determined by metallurgical analysis	

- Other:	
- If Other, Descr be:	
9. Location of corrosion *(select all that apply)*: -	
- Low point in pipe	
- Elbow	
- Other:	
- If Other, Descr be:	
10. Was the commodity treated with corrosion inhibitors or biocides?	
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 AND the "Item Involved in Accident" (from PART C, Question 3) is Tank/Vessel.	
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 AND the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.	
15. Has one or more internal inspection tool collected data at the point of the Accident?	
15a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage Tool	
Most recent year:	
- Ultrasonic	
Most recent year:	
- Geometry	
Most recent year:	
- Caliper	
Most recent year:	
- Crack	
Most recent year:	
- Hard Spot	
Most recent year:	
- Combination Tool	
Most recent year:	
- Transverse Field/Triaxial	
Most recent year:	
- Other	
Most recent year:	
Descr be:	
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:	
18. 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 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:	
Descr be:	

G2 - Natural Force Damage - only one **sub-cause** can be picked from shaded left-handed column	
Natural Force Damage – Sub-Cause:	
- If Earth Movement, NOT due to Heavy Rains/Floods:	
1. Specify:	
- If Other, Descr be:	
- If Heavy Rains/Floods:	
2. Specify:	
- If Other, Descr be:	
- If Lightning:	
3. Specify:	
- If Temperature:	
4. Specify:	
- If Other, Descr be:	
- If High Winds:	
- If Other Natural Force Damage:	
5. Describe:	
Complete the following if any Natural Force Damage sub-cause is selected.	
6. Were the natural forces causing the Accident generated in conjunction with an extreme weather event?	
6a. If Yes, specify: *(select all that apply)*	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
- If Other, Descr be:	
G3 - Excavation Damage - only one **sub-cause** can be picked from shaded 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:	
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?	
1a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run: -	
- Magnetic Flux Leakage	
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:	
Descr be:	
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?	
- If Yes:	
Most recent year tested:	
Test pressure (psig):	

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 Accident:	
Most recent year conducted:	
- If Yes, but the point of the Accident was not identified as a dig site:	
Most recent year conducted:	
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 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:	
Descr be:	
Complete the following if Excavation Damage by Third Party is selected as the sub-cause.	
6. Did the operator get prior notification of the excavation activity?	
6a. If Yes, Notification received from: *(select all that apply)* -	
- One-Call System	
- Excavator	
- Contractor	
- Landowner	
Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage 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:	
- 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 vis ble 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 predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well):*	
Root Cause:	
- 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:	
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/Explosion as Primary Cause of Incident:	
- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation:	
1. Vehicle/Equipment operated by:	
- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring:	
2. Select one or more of the following IF an extreme weather event was a factor:	
- Hurricane	
- Tropical Storm	
- Tornado	
- Heavy Rains/Flood	
- Other	
- If Other, Descr be:	
- If Routine or Normal Fishing or Other Maritime Activity NOT Engaged 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" (from 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 indicate most recent year run:	
- Magnetic Flux Leakage	
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:	
Descr be:	
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 Yes:	
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:	
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, 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:	

Descr be:	
- If Intentional Damage:	
8. Specify:	
- If Other, Descr be:	
- 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 Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."

Material Failure of Pipe or Weld – Sub-Cause:	
1. The sub-cause selected below is based on the following: *(select all that apply)*	
- Field Examination	
- Determined by Metallurgical Analysis	
- Other Analysis	
- If "Other Analysis", Descr be:	
- Sub-cause is Tentative or Suspected; Still Under Investigation (Supplemental Report required)	
- If Construction, Installation, or Fabrication-related:	
2. List contr buting factors: *(select all that apply)*	
- Fatigue or Vibration-related	
Specify:	
- If Other, Descr be:	
- Mechanical Stress:	
- Other	
- If Other, Descr be:	
- If Original Manufacturing-related (NOT girth weld or other welds formed in the field):	
2. List contr buting factors: *(select all that apply)*	
- Fatigue or Vibration-related:	
Specify:	
- If Other, Descr be:	
- Mechanical Stress:	
- Other	
- If Other, Descr be:	
- If Environmental Cracking-related:	
3. Specify:	
- Other - Describe:	

Complete the following if any Material Failure of Pipe or Weld sub-cause 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	
- Other:	
- If Other, Descr be:	
5. Has one or more internal inspection tool collected data at the point of the Accident?	
5a. If Yes, for each tool used, select type of internal inspection tool 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:	
- Crack	
Most recent year run:	
- Hard Spot	
Most recent year run:	

- Combination Tool	
Most recent year run:	
- Transverse Field/Triaxial	
Most recent year run:	
- Other	
Most recent year run:	
Descr be:	
6. 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 (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 Accident -	
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, 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:	
Descr be:	
G6 – **Equipment Failure** - only one **sub-cause** can be selected from the shaded left-hand column	
Equipment Failure – **Sub-Cause:**	Non-threaded Connection Failure
- If Malfunction of Control/Relief Equipment:	
1. Specify: *(select all that apply)* -	
- Control Valve	
- Instrumentation	
- SCADA	
- Communications	
- Block Valve	
- Check Valve	
- Relief Valve	
- Power Failure	
- Stopple/Control Fitting	
- ESD System Failure	
- Other	
- If Other – Descr be:	
- If Pump or Pump-related Equipment:	
2. Specify:	
- If Other – Descr be:	
- If Threaded Connection/Coupling Failure:	
3. Specify:	
- If Other – Descr be:	
- If Non-threaded Connection Failure:	
4. Specify:	Gasket
- If Other – Descr be:	
- If Defective or Loose Tubing or Fitting:	
- If Failure of Equipment Body (except Pump), Tank Plate, or other Material:	
- If Other Equipment Failure:	
5. Describe:	

Complete the following if any Equipment Failure sub-cause is selected.	
6. Additional factors that contributed to the equipment failure: *(select all that apply)*	
- Excessive vibration	
- Overpressurization	
- No support or loss of support	
- Manufacturing defect	
- Loss of electricity	
- Improper installation	Yes
- 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, Descr be:	

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:	
- If Other, Descr be:	
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 selected.	
3. Was this Accident related to *(select all that apply)*: -	
- Inadequate procedure	
- No procedure established	
- Failure to follow procedure	
- Other:	
- If Other, Descr be:	
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 from the shaded left-hand column	
Other Accident Cause – Sub-Cause:	
- If Miscellaneous:	
1. Describe:	
- If Unknown:	

2. Specify:	

PART H - NARRATIVE DESCRIPTION OF THE ACCIDENT

Flange gasket that was not tightened evenly failed during startup. Controller did not recognize flow condi ions that were out of normal ranges at delivery point and continued to operate pipeline for extended time.

File Full Name

PART I - PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name	Kenneth D. Dockweiler
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Authorized Signature's Name	Kenneth D. Dockweiler
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Date	12/27/2012