

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

Principal Investigator Brett Mahan – NYS DPS
Senior Accident Investigator Michael Yazemboski – PHMSA ER
Region Director Byron E. Coy
Date of Report 04/18/2012
Subject Failure Investigation Report – Buckeye Partners LP, Turnpike Road NY
Line 803 Excavation Damage

Operator, Location, & Consequences

Date of Failure 09/20/2011
Commodity Released Gasoline
City/County & State Aurelius / Cayuga, New York
OpID & Operator Name 1845 Buckeye Partners L.P.
Unit # & Unit Name 3201 Auburn Area - NY
SMART Activity # 139214
Milepost / Location MP 7.2 Line 803, Latitude: 42.959503 ; Longitude: -76.665351
Type of Failure Leak caused by excavation damage (farmer using plow to install drain tile in field)
Fatalities None
Injuries None
Description of area impacted Rural, Farming
Total Costs \$1,391,720

Failure Investigation Report – Buckeye Partners LP, Turnpike Road NY-Line 803 Excavation Damage
Failure Date 09/20/2011

Executive Summary

On September 20, 2011, at approximately 10:20, a farmer installing drain tile struck and ruptured a 10-inch liquid petroleum line owned and operated by Buckeye Pipeline LP, causing the release of approximately 595 barrels of gasoline. The damage occurred on Buckeye's Line 803 in Cayuga County, New York. The line runs approximately 95 miles from the Auburn Terminal to the Rochester Terminal.

The pipeline was marked out properly under Dig Safely-NY. The farmer had been in contact with local Buckeye personnel during the installation of drain tile in his field adjacent to Buckeye's pipeline (Line 803). The farmer was instructed by Buckeye not to dig in the pipeline right-of-way, which is approximately 25 feet from the centerline of the pipeline. On the day of the incident, the farmer was plowing the field approximately perpendicular to the pipeline, and failed to stop the tractor and raise the tile-plow out of the ground prior to proceeding over the pipeline. After hitting the line, the farmer called Buckeye to report that he had hit the line and that gasoline was escaping from the pipe. Buckeye personnel arrived at the site within 15 minutes to start the emergency response.

There were no injuries or fatalities as a result of the accident. Approximately 70 homes within a 1.5 mile radius of the leak site were evacuated as a precaution until the line was secured and the area made safe.

System Details

Buckeye Line 803 is located in Cayuga County, New York and runs from the Auburn Terminal to the Rochester Terminal.

1. The line is 10-inch diameter, API5L grade X46 seamless pipe, with a wall thickness of 0.279 inches.
2. The Maximum Operating Pressure is 1296 psig.
3. The elevation at failure site was 475 feet above sea level.
4. The line was installed in 1953.
5. The line had an external Coal Tar coating.
6. Over pressure protection for Line 803 is provided by high pressure shut down switches on the discharge lines from the Auburn pump station located approximately 7.2 miles upstream of the Auburn Terminal in Auburn, NY.

Events Leading up to the Failure

Prior to the incident, the farmer had contacted local Buckeye personnel to notify them of the drainage tile installation that would be occurring near their Line 803. The farmer also contacted the One-Call System and the pipeline was properly marked out under Dig Safely-NY prior to the work commencing. On the day of the incident, Line 803 was not flowing product and was shut in due to an unrelated leak at the Auburn Tank Farm that was discovered earlier the same morning.

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Emergency Response

All of the events below occurred on September 20, 2011. Buckeye successfully implemented their Emergency and OPA Contingency Plans to address the safety and environmental issues resulting from the leak.

Time	Event
10:20	Buckeye’s Line 803 from Auburn to Waterloo was struck by a farmer installing drainage tile in his field using a plow. The farmer immediately called a Buckeye employee to report the damage. The Buckeye employee contacted Buckeye’s local Control Center to inform them of the line hit and instructed the farmer to call 911.
10:25	The upstream valve at the Auburn Terminal was closed.
10:35	Buckeye personnel arrived onsite to assess the situation.
11:08	The downstream valve at Route 89 was closed.
11:25	The downstream valve at Route 90 was closed. This allowed for the downstream pump station to recover a portion of the gasoline remaining in the line before the line was completely isolated.
11:30	The incident was reported to the National Response Center (NRC Report #990200) by Buckeye.
15:00	An inspector with the New York State Department of Public Service (NYS DPS) arrived on site to begin their investigation.

Summary of Return-to-Service

On September 20, 2011, at approximately 23:00, a temporary sleeve was installed over the damaged area of pipe (Appendix B – Photo #3). A permanent repair was made on September 22, 2011. The repairs consisted of welding in a new section of pipe (Appendix B – Photo #5). All welds were x-rayed and found to meet code requirements. Line 803 was returned to service on September 23, 2011.

Investigation Details

The pressure at the Auburn Terminal, upstream of the failure location, at time of failure was approximately 300 psig. The elevation at the failure site was 475 feet above sea level. The pressure at the time and location of the line hit was approximately 277 psig, below the MOP of 1296 psig.

A visual inspection of the damaged section of pipe was performed by NYS DPS. The inspection indicated that the coal tar coating was in excellent condition with no signs of disbondment. There was no external corrosion present on the section of pipe exposed. Cathodic Protection was installed on line 803 and readings taken the day of the incident showed an acceptable level of -1.435V taken at the leak site.

The leak location consisted of a hole approximately 10 inches in length by approximately 3 inches wide, originating at the 9 o’clock position facing downstream. The hole was caused by the tile plow hitting the pipeline (Appendix B – Photo #4).

The pipeline was marked out under Dig Safely-NY. When NYS DPS arrived onsite to begin their investigation, they verified that the line was accurately marked (Appendix B – Photo #6). The depth of cover was measured to be approximately 30 inches at the leak location.

Pretested pipe was used to make permanent repair. The NYS DPS inspector reviewed welding procedures and pressure test records for the new piping and no issues were identified. The prettested pipe test record is number 2151.

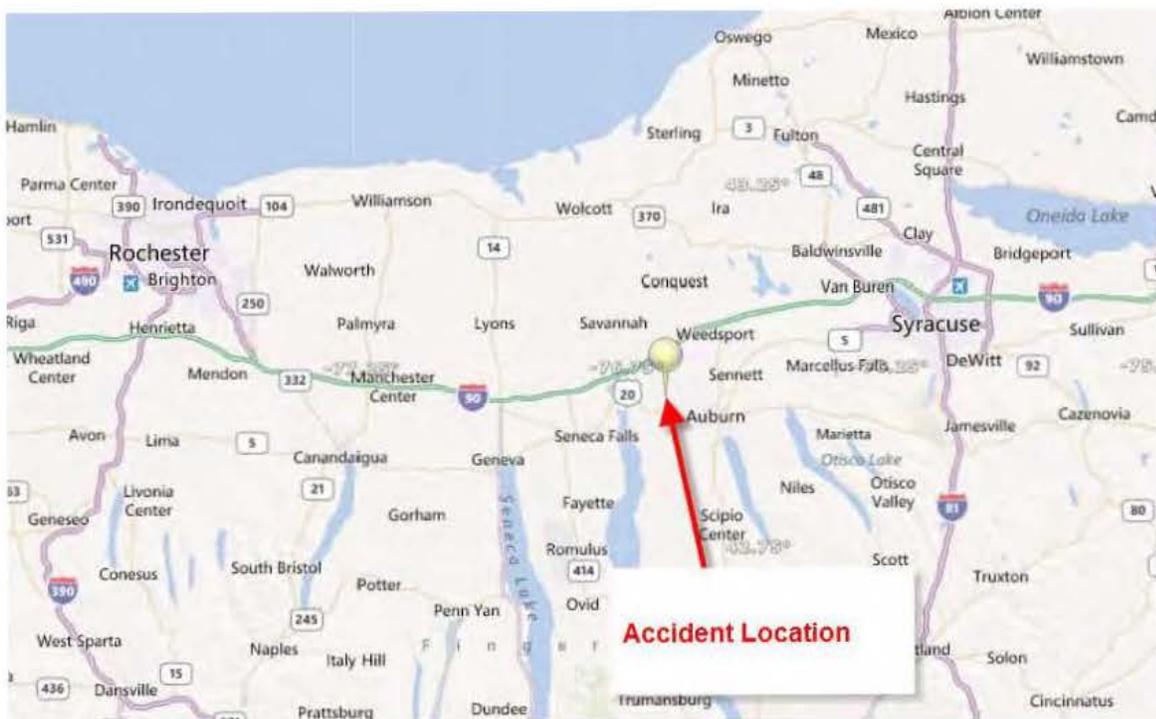
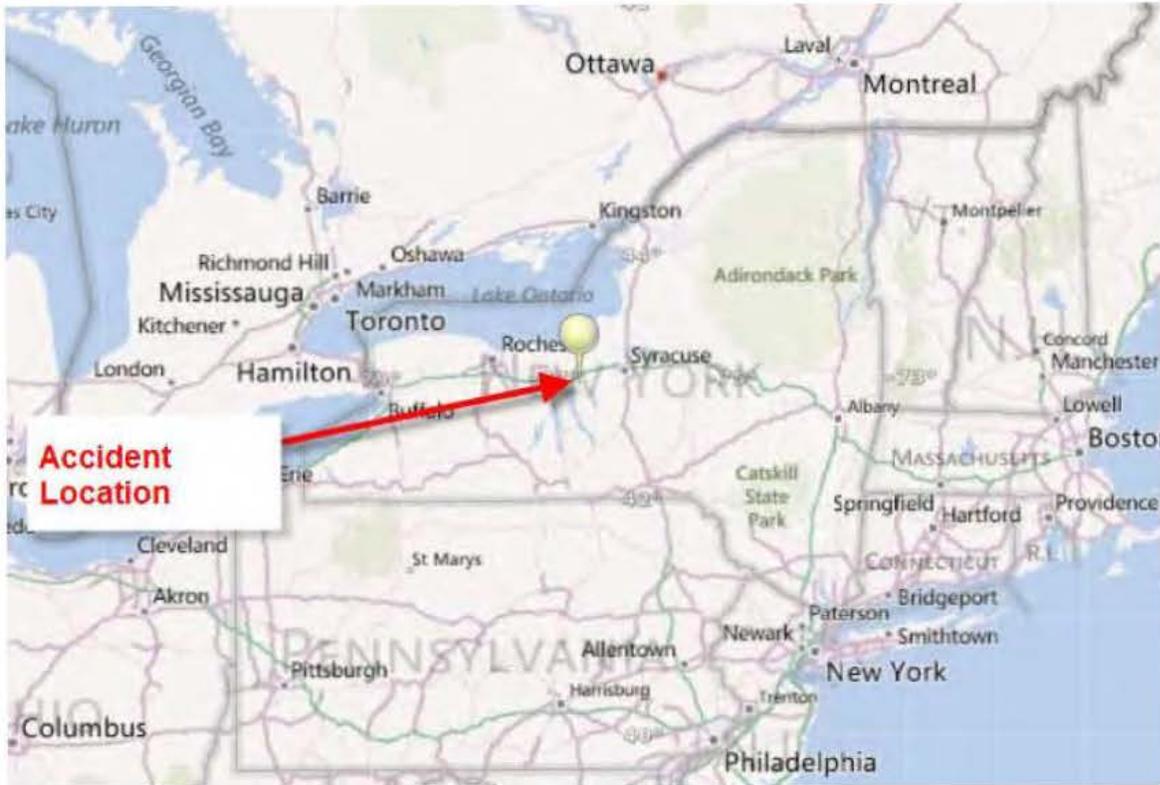
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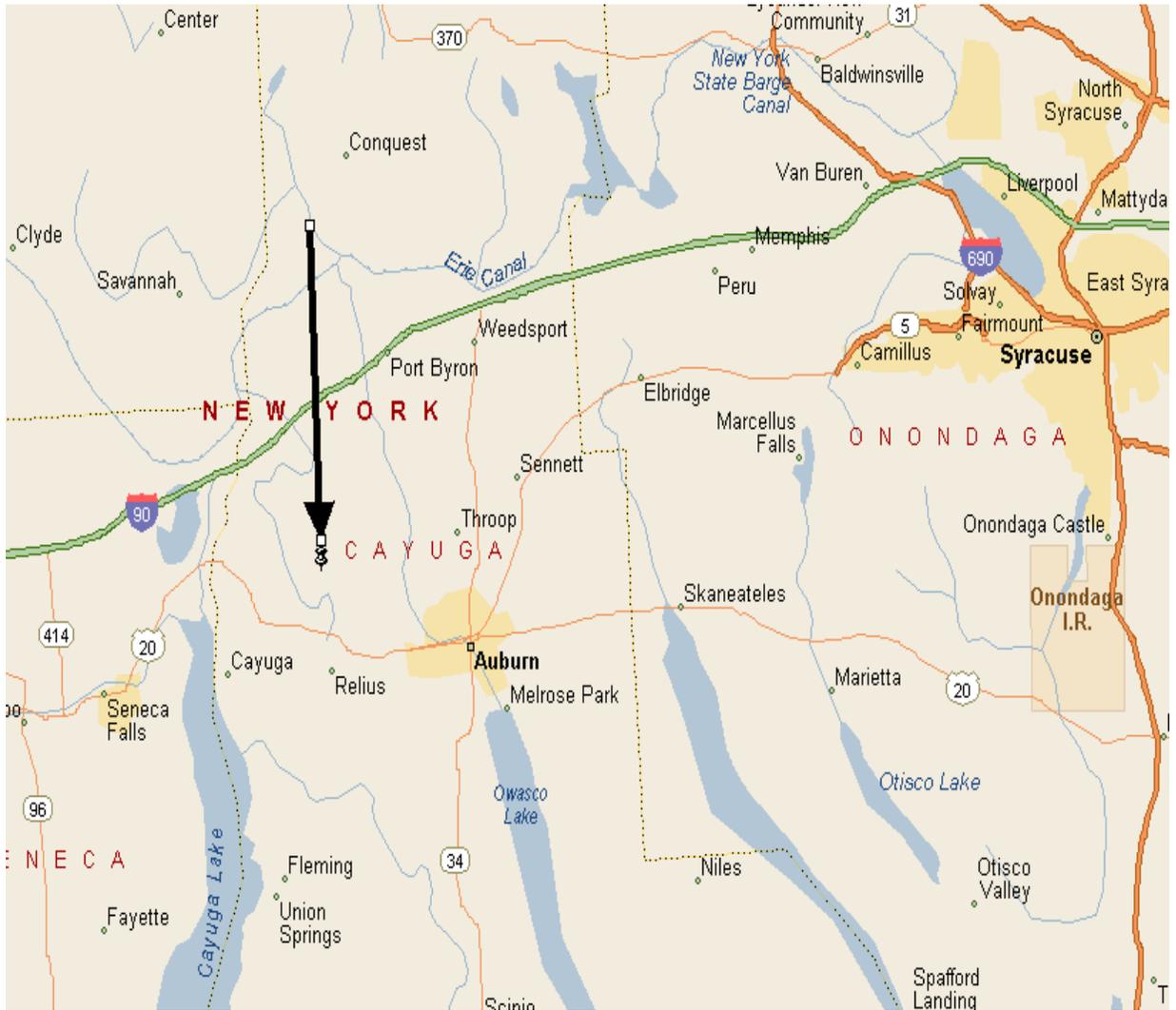
Findings and Contributing Factors

The failure was due to excavation damage during the installation of drainage tile in a rural farm field. The failure consisted of a hole in the pipe that measured approximately 10 inches by 3 inches (Appendix B – Photo #1). Approximately 595 Barrels of Gasoline was spilled. As of 10/19/2011, 271 Barrels had been recovered. The pipeline was properly marked per Dig Safely-NY regulations (Ticket Number 07281-146-004-00).

Appendices

Appendix	Description
A	139214 - Appendix A - Maps
B	139214 - Appendix B - Photographs
C	139214 - Appendix C - NRC Report 990200
D	139214 - Appendix D - Buckeye Accident Report 20110391-16132





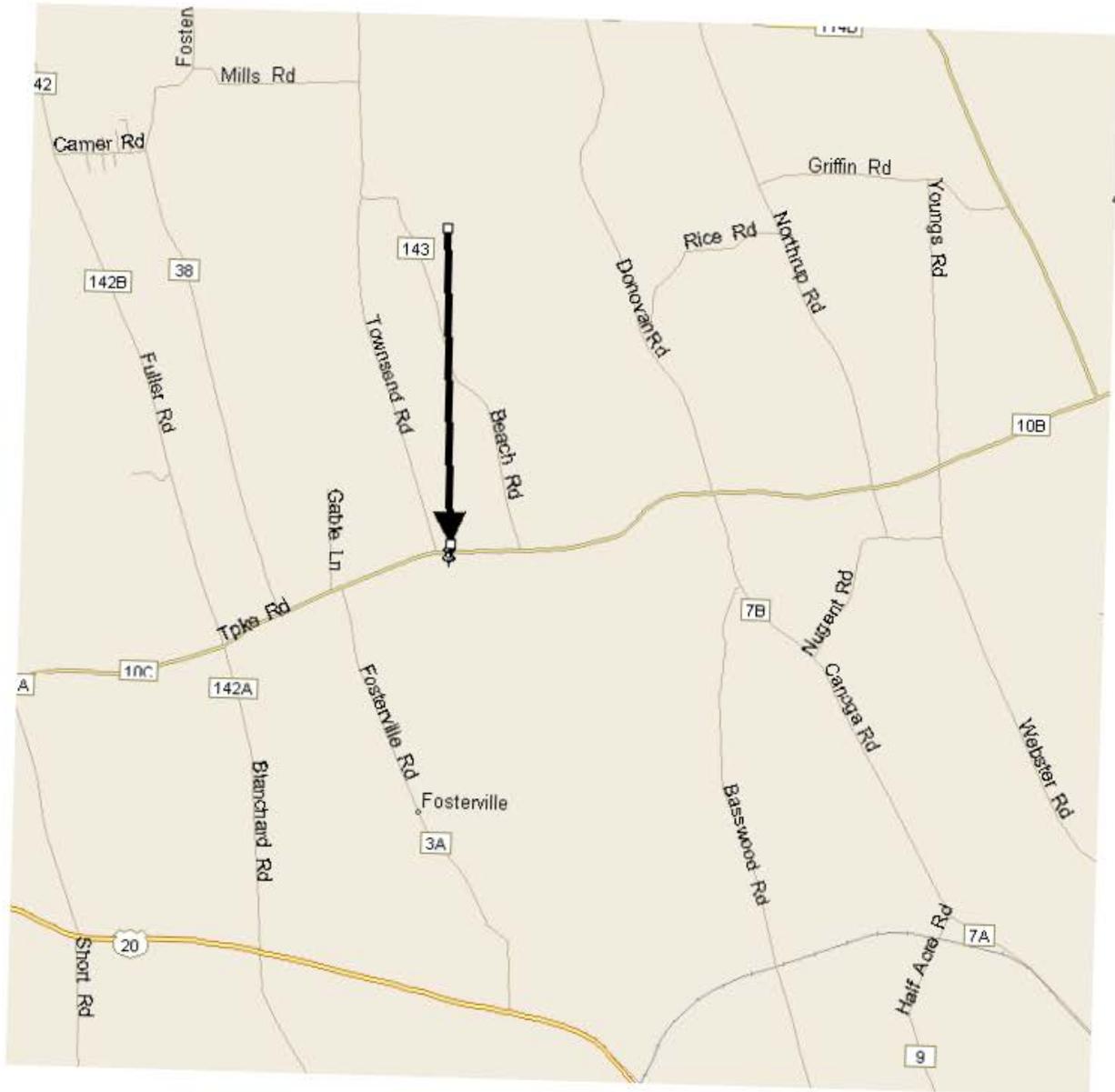




Photo #1: Damage to the external surface of the pipe.



Photo #2: Damage to the internal surface of the pipe (cut out).



Photo #3: Temporary leak clamp being installed to facilitate evacuation of the line.



Photo #4: Temporary repair made to the pipe to stop the leak.



Photo #5: Pipeline with the damaged section cut out.



Photo #6: Looking East from the damage location. Photo shows the marking flags.



139214 - Appendix C - NRC Report 990200

NATIONAL RESPONSE CENTER 1-800-424-8802

*** For Public Use ***

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 990200

INCIDENT DESCRIPTION

*Report taken at 11:30 on 20-SEP-11

Incident Type: PIPELINE

Incident Cause: OPERATOR ERROR

Affected Area:

The incident occurred on 20-SEP-11 at 10:30 local time.

Affected Medium: SOIL

SUSPECTED RESPONSIBLE PARTY

Organization: BUCKEYE PIPELINE CO

LINDEN, NJ 07036

Type of Organization: PRIVATE ENTERPRISE

INCIDENT LOCATION

TURNPIKE RD County: CAYUGA

City: AUBURN State: NY

RELEASED MATERIAL(S)

CHRIS Code: GAS Official Material Name: GASOLINE: AUTOMOTIVE (UNLEADED)

Also Known As:

Qty Released: 34 BARREL(S)

DESCRIPTION OF INCIDENT

CALLER REPORTED A THIRD PARTY HIT A LINE WHILE INSTALLING A DRAIN.

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:	Y TURNPIKE RD		ALL Major Artery: N
Waterway:	N		
Track:	N		

Passengers Transferred: NO

Environmental Impact: UNKNOWN

Media Interest: NONE Community Impact due to Material:

REMEDIAL ACTIONS

CONTRACTOR HAS BEEN HIRED
 Release Secured: YES
 Release Rate:
 Estimated Release Duration:

WEATHER

Weather: UNKNOWN, °F

ADDITIONAL AGENCIES NOTIFIED

Federal: 911
 State/Local: NYDEC
 State/Local On Scene: NONE
 State Agency Number: 1107816

NOTIFICATIONS BY NRC

ATLANTIC STRIKE TEAM (MAIN OFFICE)
 20-SEP-11 11:35
 USCG ICC (ICC ONI)
 20-SEP-11 11:35
 DHS PROTECTIVE SECURITY ADVISOR (PSA DESK)
 20-SEP-11 11:35
 DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)
 20-SEP-11 11:35
 U.S. EPA II (MAIN OFFICE)
 20-SEP-11 12:00
 NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)
 20-SEP-11 11:35
 NJ OFC HMLND SECURITY & PREPAREDNES (COMMAND CENTER)
 20-SEP-11 11:35
 NJ STATE POLICE (MARINE SERVICES BUREAU)
 20-SEP-11 11:35
 NOAA RPTS FOR NY (MAIN OFFICE)
 20-SEP-11 11:35
 NTSB PIPELINE (MAIN OFFICE)
 20-SEP-11 11:35
 BUREAU TOXIC SUBSTANCE (MAIN OFFICE)
 20-SEP-11 11:35
 NY STATE DEC SPILL HOTLINE (MAIN OFFICE)
 20-SEP-11 11:35
 PIPELINE & HAZMAT SAFETY ADMIN (OFFICE OF PIPELINE SAFETY (AUTO))
 20-SEP-11 11:35
 USCG DISTRICT 1 (COMMAND CENTER)
 20-SEP-11 11:35
 USCG DISTRICT 9 (COMMAND CENTER)
 20-SEP-11 11:35

ADDITIONAL INFORMATION

NONE

*** END INCIDENT REPORT # 990200 ***

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.

139214 - Appendix D - Buckeye Accident Report 20110391-16132

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: 01/31/2013	
 U.S Department of Transportation Pipeline and Hazardous Materials Safety Administration	Report Date:	10/19/2011	
	No.	20110391 - 16132 ----- (DOT Use Only)	
ACCIDENT REPORT - HAZARDOUS LIQUID PIPELINE SYSTEMS			
A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0047. Public reporting for this collection of information is estimated to be approximately 10 hours per response (5 hours for a small release), including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.			
INSTRUCTIONS			
Important: Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline .			
PART A - KEY REPORT INFORMATION			
Report Type: (select all that apply)	Original:	Supplemental:	Final:
	Yes		
Last Revision Date:			
1. Operator's OPS-issued Operator Identification Number (OPID):	1845		
2. Name of Operator	BUCKEYE PARTNERS, LP		
3. Address of Operator:			
3a. Street Address	FIVE TEK PARK, 9999 HAMILTON BOULEVARD		
3b. City	BREINIGSVILLE		
3c. State	Pennsylvania		
3d. Zip Code	18031		
4. Local time (24-hr clock) and date of the Accident:	09/20/2011 10:22		
5. Location of Accident:			
Latitude:	42.959503		
Longitude:	-76.665351		
6. National Response Center Report Number (if applicable):	990200		
7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable):	09/20/2011 11:35		
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:	Gasoline (non-Ethanol)		
- If "Other" Subtype, Describe:			
- 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):	595.00		
10. Estimated volume of intentional and/or controlled release/blowdown (Barrels):			
11. Estimated volume of commodity recovered (Barrels):	271.00		
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			

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associated with this Operator	
13e. General public	
13f. Total injuries (sum of above)	
14. Was the pipeline/facility shut down due to the Accident?	No
- If No, Explain:	The pipeline was already shut down.
- If Yes, complete Questions 14a and 14b: <i>(use local time, 24-hr clock)</i>	
14a. Local time and date of shutdown:	
14b. Local time pipeline/facility restarted:	
- Still shut down? (* Supplemental Report Required)	
15. Did the commodity ignite?	No
16. Did the commodity explode?	No
17. Number of general public evacuated:	60
18. Time sequence <i>(use local time, 24-hour clock)</i> :	
18a. Local time Operator identified Accident:	09/20/2011 10:22
18b. Local time Operator resources arrived on site:	09/20/2011 10:35
PART B - ADDITIONAL LOCATION INFORMATION	
1. Was the origin of Accident onshore?	Yes
<i>If Yes, Complete Questions (2-12)</i>	
<i>If No, Complete Questions (13-15)</i>	
- If Onshore:	
2. State:	New York
3. Zip Code:	13021
4. City	Auburn
5. County or Parish	Cayuga
6. Operator-designated location:	Survey Station No.
Specify:	375+03
7. Pipeline/Facility name:	Auburn to Waterloo
8. Segment name/ID:	AB803WL
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):	30
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:	Pipe
- If Pipe, specify:	Pipe Body

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3a. Nominal diameter of pipe (in):	10
3b. Wall thickness (in):	.279
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	46,000
3d. Pipe specification:	X-46
3e. Pipe Seam , specify:	Seamless
- If Other, Describe:	
3f. Pipe manufacturer:	
3g. Year of manufacture:	
3h. Pipeline coating type at point of Accident, specify:	Coal Tar
- 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:	
3j. Year of manufacture:	
- If Tank/Vessel, specify:	
- If Other - Describe:	
- If Other, describe:	
4. Year item involved in Accident was installed:	1953
5. Material involved in Accident:	Carbon Steel
- If Material other than Carbon Steel, specify:	
6. Type of Accident Involved:	Mechanical Puncture
- If Mechanical Puncture – Specify Approx. size:	
in. (axial) by	10.00
in. (circumferential)	3.00
- If Leak - Select Type:	
- If Other, Describe:	
- 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:	Yes
4. Anticipated remediation:	Yes
4a. If Yes, specify all that apply:	
- Surface water	Yes
- Groundwater	Yes
- Soil	Yes
- Vegetation	
- Wildlife	
5. Water contamination:	Yes
5a. If Yes, specify all that apply:	
- Ocean/Seawater	
- Surface	Yes
- Groundwater	Yes
- Drinking water: (Select one or both)	Yes
- Private Well	Yes
- Public Water Intake	
5b. Estimated amount released in or reaching water (Barrels):	108.00
5c. Name of body of water, if commonly known:	Unnamed
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)?	Yes
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	

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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	Yes
Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?	No
- 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	\$ 0
8b. Estimated cost of commodity lost	\$ 0
8c. Estimated cost of Operator's property damage & repairs	\$ 82,070
8d. Estimated cost of Operator's emergency response	\$ 497,010
8e. Estimated cost of Operator's environmental remediation	\$ 812,640
8f. Estimated other costs	\$ 0
Describe:	
8g. Total estimated property damage (sum of above)	\$ 1,391,720
PART E - ADDITIONAL OPERATING INFORMATION	
1. Estimated pressure at the point and time of the Accident (psig):	277.00
2. Maximum Operating Pressure (MOP) at the point and time of the Accident (psig):	1,296.00
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. – 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 source:	Check Valve
5c. Length of segment isolated between valves (ft):	109,942
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, Describe:	
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)	

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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 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?	Yes
- 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 with the detection of the Accident?	Yes
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?	Yes
8. How was the Accident initially identified for the Operator?	CPM leak detection system or SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations)
- 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:	
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?	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 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)	The controllers' actions had no bearing on the release.
- 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	
- 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?	No
- If Yes:	
1a. Specify how many were tested:	

1b. Specify how many failed:	
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? - If Yes:	No
2a. Specify how many were tested:	
2b. Specify how many failed:	
PART G – APPARENT CAUSE	
<i>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).</i>	
Apparent Cause:	G3 - Excavation Damage
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, Describe:	
2. Type of corrosion: <i>(select all that apply)</i>	
- Galvanic	
- Atmospheric	
- Stray Current	
- Microbiological	
- Selective Seam	
- Other:	
- If Other, Describe:	
3. The type(s) of corrosion selected in Question 2 is based on the following: <i>(select all that apply)</i>	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
4. Was the failed item buried under the ground? - If Yes :	
<input type="checkbox"/> 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 <i>(select all that apply):</i> -	
- 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 following <i>(select all that apply):</i> -	
- Field examination	
- Determined by metallurgical analysis	
- Other:	
- If Other, Describe:	
9. Location of corrosion <i>(select all that apply):</i> -	
- Low point in pipe	
- Elbow	

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- Other:	
- If Other, Describe:	
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:
	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:
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:
	Describe:
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:	

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1. Specify:	
- If Other, Describe:	
- If Heavy Rains/Floods:	
2. Specify:	
- If Other, Describe:	
- If Lightning:	
3. Specify:	
- If Temperature:	
4. Specify:	
- If Other, Describe:	
- 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: <i>(select all that apply)</i>	
- Hurricane	
- Tropical Storm	
- Tornado	
- Other	
- If Other, Describe:	
G3 - Excavation Damage - only one sub-cause can be picked from shaded left-hand column	
Excavation Damage – Sub-Cause:	Excavation Damage by Third Party
- 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:
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?	
- 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:	

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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:	
Describe:	
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?	Yes
6a. If Yes, Notification received from: <i>(select all that apply)</i> -	
- One-Call System	Yes
- 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)?	Yes
8. Right-of-Way where event occurred: <i>(select all that apply)</i> -	
- Public	
- If "Public", Specify:	
- Private	Yes
- If "Private", Specify:	Private Landowner
- Pipeline Property/Easement	
- Power/Transmission Line	
- Railroad	
- Dedicated Public Utility Easement	
- Federal Land	
- Data not collected	
- Unknown/Other	
9. Type of excavator:	Farmer
10. Type of excavation equipment:	Farm Equipment
11. Type of work performed:	Drainage
12. Was the One-Call Center notified?	Yes
12a. If Yes, specify ticket number:	7281146005
12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:	Dig Safely New York
13. Type of Locator:	Utility Owner
14. Were facility locate marks visible in the area of excavation?	Yes
15. Were facilities marked correctly?	Yes
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 <i>(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):</i>	
Root Cause:	Excavation Practices Not Sufficient
- If One-Call Notification Practices Not Sufficient, specify:	
- If Locating Practices Not Sufficient, specify:	
- If Excavation Practices Not Sufficient, specify:	Failure to maintain clearance
- 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	

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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, Describe:	
- 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:
Describe:	
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:
Describe:	
- If Intentional Damage:	
8. Specify:	
- If Other, Describe:	
- If Other Outside Force Damage:	

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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: <i>(select all that apply)</i>	
- 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:	
2. List contributing factors: <i>(select all that apply)</i>	
- Fatigue or Vibration-related	
	Specify:
	- If Other, Describe:
- Mechanical Stress:	
- Other	
	- If Other, Describe:
- If Original Manufacturing-related (NOT girth weld or other welds formed in the field):	
2. List contributing factors: <i>(select all that apply)</i>	
- 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-cause is selected.	
4. Additional factors: <i>(select all that apply)</i> :	
- Dent	
- Gouge	
- Pipe Bend	
- Arc Burn	
- Crack	
- Lack of Fusion	
- Lamination	
- Buckle	
- Wrinkle	
- Misalignment	
- Burnt Steel	
- Other:	
	- If Other, Describe:
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:

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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 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:	
Describe:	
G6 – Equipment Failure - only one sub-cause can be selected from the shaded left-hand column	
Equipment Failure – Sub-Cause:	
- If Malfunction of Control/Relief Equipment:	
1. Specify: <i>(select all that apply)</i> -	
- Control Valve	
- Instrumentation	
- SCADA	
- Communications	
- Block 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:	
- If Threaded Connection/Coupling Failure:	
3. Specify:	
- If Other – Describe:	
- If Non-threaded Connection Failure:	
4. Specify:	
- If Other – Describe:	
- 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: <i>(select all that apply)</i>	
- Excessive vibration	
- Overpressurization	
- No support or loss of support	

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- 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/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:

- 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 selected.

3. Was this Accident related to (*select all that apply*): -

- Inadequate procedure
- No procedure established
- Failure to follow procedure
- Other:

- If Other, Describe:

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

ON 9/20/2011, BUCKEYE'S 803 LINE FROM AUBURN TO WATERLOO WAS STRUCK BY A FARMER. THE FARMER IMMEDIATELY CALLED A BUCKEYE EMPLOYEE TO REPORT THE DAMAGE. THE BUCKEYE EMPLOYEE ALERTED THE LOCAL CONTROL CENTER OF THE DAMAGE AND INSTRUCTED THE FARMER TO CALL 911. EMERGENCY RESPONSE PROCEDURES WERE INITIATED AND ALL PROPER NOTIFICATIONS WERE

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MADE. A TOTAL OF 595 BARRELS WERE RELEASED.

A TEMPORARY SLEEVE WAS INSTALLED AT 23:45 THAT EVENING. A PERMANENT TIE-IN WAS WELDED IN ON 9/22/2011. ALL WELDS WERE X-RAYED AND FOUND ACCEPTABLE. THE LINE WAS RESTARTED ON 9/23/2011.

TO DATE, 271 BARRELS OF GASOLINE HAVE BEEN COLLECTED. REMEDIATION IS ON-GOING.

File Full Name

PART I - PREPARER AND AUTHORIZED SIGNATURE

Preparer's Name	BRAD YARZEBINSKI
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