

DOT U.S. Department of Transportation  
PHMSA Pipeline and Hazardous Materials Safety Administration  
OPS Office of Pipeline Safety's Accident Investigation Division

**Principal Investigator** Darren Lemmerman  
**AID Director** Peter Katchmar  
**Date of Report** April 2, 2018  
**Subject** Failure Investigation Report: Third-party damage to Natural Gas Pipeline Company of America (NGPL) pipeline operated by Kinder Morgan

### **Operator, Location, and Consequences**

**Date of Failure** December 5, 2017  
**Commodity Released** Natural Gas  
**City/County & State** Dixon, Lee County, Illinois  
**OpID & Operator Name** 13120—Natural Gas Pipeline Company of America (Kinder Morgan)  
**Unit # & Unit Name** 3223—Geneseo  
**SMART Activity #** 158640  
**Milepost/Location** Station 2777+18 IL lateral No. 1  
**Type of Failure** Third-party damage  
**Fatalities** 2  
**Injuries** 2  
**Description of Area Impacted** Rural, agricultural crop land, not located in a High Consequence Area (HCA)  
**Total Costs** \$888,700.00

# Failure Investigation Report: Third-party Damage to a Kinder Morgan-operated NGPL Pipeline Dixon, Lee County, Illinois

Failure Date: December 5, 2017

## Executive Summary

On the morning of December 5, 2017, two owners and two employees of M&R Farms were installing drainage tile<sup>1</sup> on property that the company had leased for many years in Dixon, Illinois. After completing approximately 400 feet of tile installation, the tiling plow became lodged on an underground object. In order to free the lodged plow, M&R Farms personnel hooked up a second tractor in front of it, allowing the tractors to pull together. At 10:09 a.m. Central Standard Time,<sup>2</sup> the two tractors ruptured a 20-inch, high-pressure natural gas pipeline operated by Natural Gas Pipeline Company of America (NGPL) that is known as the Illinois Lateral #1 line. The escaping natural gas ignited almost immediately, killing the two owners, severely injuring one employee, and minimally injuring the other employee.

Automatic valves on each side of the rupture began closing immediately after the loss of pressure in the pipeline. It took approximately 51 minutes after the valves were shut for the line to blow down, which helped mitigate the intensity of the fire, allowed first responders to secure the area, and facilitated the retrieval of the bodies. The Pipeline and Hazardous Materials Safety Administration (PHMSA) deployed an investigator to the site; the investigation concluded that M&R Farms did not call the local one-call number prior to the installation of the drain tile. The following is excerpted from the pipeline operator's report:

On Tuesday, December 5, 2017, at 9:35 a.m. local time, Natural Gas Pipeline Company of America LLC's (NGPL) 20-inch pipeline, known as the Illinois Lateral No. 1, in Lee County, Illinois, was struck by a third-party operating drain tile equipment. The incident occurred at approximately Station 2777+18 on the Illinois Lateral No. 1. Upon confirmation that the third-party strike caused a rupture and fire resulting in the deaths of two (2) persons and injuries to two (2) others, who were immediately hospitalized, NGPL issued a revised NRC notice (No. 1198866). One of the injured persons was released on December 6, 2017, and the other was listed as being in stable condition on the day following the incident.

Two automatic valves (I-9 and I-10) on the Illinois Lateral No. 1 began to close upon the detection of a pressure loss and isolate the damaged portion of pipeline, as designed. Valve I-9 required additional manual operation to fully close the valve. This was completed by 10:44 am local time, with the flow of gas shut off, the fire contained, and later extinguished.

As a precautionary measure, the NGPL reduced the pressure of their adjacent Illinois Lateral #2 pipeline to 500 pounds per square inch gauge (psig) pending an investigation to determine if it sustained any damage as a result of the incident. Upon arrival at the site, a PHMSA representative requested that the NGPL assess whether the operating pressure of Illinois Lateral #2 could be further reduced without affecting operations. The Control Center determined that the line could be lowered to 450 psig without affecting customers while people were working near the line. NGPL further reduced the pressure to 450 psig. Results of the Illinois Lateral #2 investigation revealed that the line didn't sustain any damage; as such, the NGPL began bringing Illinois Lateral #2 back to normal operating pressure.

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<sup>1</sup> In agriculture, tile drainage is a type of drainage system that removes excess water from soil below the surface.

<sup>2</sup> All times are Central Standard Time unless otherwise noted.

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On Wednesday, December 6, 2017, the NGPL began repairs on Illinois Lateral #1; on the same day, NGPL provided the National Response Center (NRC) a final 48-hour confirmation report, #1199018, that included a final estimated volume of the release. Repair work, which consisted of replacing 41 feet of 20-inch pipe on the Illinois Lateral #1 line with pre-pressure-tested pipe, was completed on December 9, 2017. At 4:39 p.m. on December 9, 2017, the NGPL placed Illinois Lateral #1 back into full service.

## **System Details**

Jointly owned by Kinder Morgan, Inc., and Brookfield Infrastructure Partners L.P., and operated by Kinder Morgan, Inc., the NGPL is the largest transporter of natural gas into the high-demand Chicago market. The NGPL encompasses approximately 9,200 miles of pipelines, has a compression capacity of over 1 million horsepower, and has 288 billion cubic feet of working gas storage, making it one of the largest interstate pipeline systems in the country.

Of the two pipelines that cross the impacted agricultural property, the first was listed as Illinois Lateral #1, the impacted line, which is a 20-inch, .281-inch-wall-thickness, electric flash weld seamed pipe with an unknown specified minimum yield strength that was manufactured by A.O. Smith. The second line was Illinois Lateral #2, a 24-inch, .250-inch-wall-thickness, American Petroleum Institute X-60 double submerged arc welded seamed pipe that was installed in 1965 and manufactured by Republic Steel. These two lines run parallel in the right of way. The excavation damage occurred between mileposts 73 and 74 in the northeast quadrant of Section 6 of Township 21, located in Range 10 East of Lee County, Illinois. There are automatic closing mainline valves<sup>3</sup> both upstream and downstream from the rupture site, with the nearest upstream valve located 7.3 miles away and the nearest downstream valve 6.2 miles away. The maximum allowable pressure of Illinois Lateral #1 is 800 psig; at the time of the failure, the line pressure was 706 psig.

## **The Company**

M&R Farms was established in 1996 in Dixon, Illinois. This organization's primary business is agricultural/crop production, for which they farm approximately 7,500 acres. Approximately two-thirds of this area is leased, while the other third is owned by M&R. M&R Farms was incorporated in 1996, but had leased the 115 acres where the rupture occurred since 1987. At the time of the incident, M&R Farms had three owners, two of whom primarily did the hands-on field work and one who worked in the office and performed grain elevator operations. M&R also had two employees who worked in the field and, as needed, in other areas of the farm.

## **Events Leading up to the Failure**

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<sup>3</sup> An Automatic Shut-Off Valve (ASV) is a valve that uses electric- or gas-powered actuators to operate automatically based on data sent from pipeline sensors. The sensors send a signal to close the valve based on predetermined criteria—generally pipeline operating pressure or flow rate. The ASV does not require or allow human evaluation or interpretation of event information to determine if the event is a legitimate incident, instead closing automatically based on established criteria.

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## **Investigation Details of Illinois' One Call Excavation Notice Center**

M&R Farms contacted the landowner approximately three months prior to the incident to discuss additional tiling of the acreage where the event occurred. During the discussion, the landowner remembered discussing the Joint Utility Locating Information for Excavators (JULIE)—the Illinois One Call Program—with one of the M&R owners. Illinois State law requires that the excavator performing digging must call JULIE with the necessary information to locate underground utilities. M&R Farms was set up to use the JULIE system's remote ticket entry feature,<sup>4</sup> for which one of the two field-based owners was the account holder and responsible for submission of all excavation notices. Research into the JULIE One Call program revealed that M&R Farms had a history of obtaining One Call dig tickets prior to digging; in fact, they made 18 notifications in 2016 and 8 in 2017. Most of the notifications were for Lee County, but there were also three calls for Ogle County, located to the north. Eight of the notices—four in both 2016 and 2017—were for tiling work, while two were for excavation work in waterways. Twenty-three out of the 25 notices included work on or immediately adjacent to a road where underground utilities are usually installed.

## **Line Markers**

49 Code of Federal Regulations §192.707 lists the requirements for installing and maintaining line markers for transmission lines and mains. Line markers were observed 1,800 feet southwest of the pipeline rupture location at the Nachusa Road crossing and approximately 1,750 feet to the east/northeast at the edge of the field. Two additional line markers were identified at the fence/tree line to the southwest for Illinois Lateral #2, with one approximately 275 feet and the other 360 feet from the point of the pipeline contact; however, these two line markers had not been maintained. Illinois Lateral #1 did not pass through the fence/ tree line. The first responders identified the pipeline owner from the line marker at Nachusa Road.

## **The Incident**

On the morning of December 5, 2017, two M&R employees and the two field-based M&R owners were installing drainage tile. One of the M&R Farms' owners was using a 500-horsepower (HP), rubber-tracked Challenger 865 tractor to pull a tiling plow that M&R Farms had purchased in 2016, about a year prior to the date of the incident. After installing approximately 400 feet of tile, the plow impacted the NGPL's natural gas transmission line known as Illinois Lateral #1. The operator did not know he had impacted a high-pressure natural gas pipeline; as such, the owners retrieved a second 450-HP Challenger 855 tracked tractor and placed it in front of the first tractor and tiling plow in an attempt to free them. A strap was attached between the two tractors to allow them to pull through the obstruction, a practice that had been utilized before on other tiling projects and resulted in successful liberation of lodged plows.

At the time of the incident, one employee was sitting in a Caterpillar 426b backhoe that had been used earlier in the day to look for existing drainage tile in the field, while the other employee was feeding the plow with drain tile. The two owners began pulling with both tractors, causing the pipeline to rupture. The employee who was feeding the plow with tile was launched from the area of the rupturing pipeline

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<sup>4</sup> Remote Ticket Entry is a free program that JULIE offers to excavators working in Illinois who want to enter and submit their own locate requests.

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and immediately began running to the south. This employee survived with only minor scratches. The blowing gas ignited shortly after this employee ran past the lead tractor. Both owners fled their tractors and ran in the same direction as the employee who had been feeding the plow, but were overcome by the heat of the fire and did not survive. The employee on the Caterpillar 426b backhoe ran to the west, receiving serious burns to 60 percent of his body. In addition to the two tractors, the tiling plow, and the backhoe, two pickup trucks and one tile spool trailer were destroyed. The value of this damaged equipment was estimated at approximately \$600,000.

## **Emergency Response**

The following is a summary of the Dixon Fire Department's response, as noted in their report:

On Tuesday, December 5, 2017, at 9:35 a.m. local time, Natural Gas Pipeline Company of America LLC's (NGPL) 20-inch pipeline, known as the Illinois Lateral No. 1, in Lee County, Illinois, was struck by third-party operating drain tile equipment. The incident occurred at approximately Station 2777+18 on the Illinois Lateral No. 1.

Dixon Rural B shift received a call for an explosion in the area of Nachusa Road and IL Route 38 from Lee County 911. First responders arrived on scene and confirmed that this was a natural gas fuel-driven fire. A safe area was established and roads closed when other units arrived on scene. Nicor gas was initially contacted. Nachusa Road was closed to traffic and an Incident Command site was established at the corner of Illinois State route 38 and Nachusa Road.

A Kinder Morgan/NGPL pipeline marker was identified on Nachusa Road, and the correct pipeline operator was contacted. The Fire Marshal's Office was contacted and an investigator was requested. At 10:40 a.m., a representative from NGPL arrived on scene. Safe zones were modified and a Unified Command was set up. NGPL personnel stated that the valves had been shut in. At 10:54 a.m., the fire began to dissipate. NGPL reported that there was less than 100 pounds per square inch (psi) remaining in the line. The line had been operating at 750 psi prior to the event. The fire eventually went out and, at 1:15 p.m., NGPL personnel advised the Fire Department and other first responders that it was now safe to enter the site. At 6:55 p.m., the Unified Command was terminated and the scene was left in control of NGPL.

## **Summary of Return-to-service**

On December 4, 2017, while looking for a drain tile to tie into, an employee of M&R Farms dug a trench over Illinois Lateral #2. The depth of cover for Illinois Lateral #2 in this location is 44 inches. PHMSA was uncertain if Illinois Lateral #2 was damaged by this excavation, and therefore examined the line prior to beginning repair work on Illinois Lateral #1. The trench scar was re-excavated and determined to be approximately 24 inches deep. It was determined that no contact had been made with Illinois Lateral #2 during the prior work done by the M&R Farms employee.

Illinois Lateral #1 was repaired with a new spool of replacement pipe that was pressure tested prior to installation. The segment was welded in place and the tie-in welds passed their x-ray tests. Illinois Lateral #1 was restarted on December 9, 2017, at 4:39 p.m. No restrictions were imposed for the return to service.

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## Public Awareness Review

During the course of an interview, the surviving owner of M&R Farms showed PHMSA numerous NGPL mailings that M&R Farms had in their office. A review of Kinder Morgan's damage prevention program documents, including mass mailing records, showed that 10 mailings were sent to 1684 Nachusa Road in Dixon, Illinois—the M&R Farms office location—between 2011 and 2016. Each of the mailings included either an Excavator Contractor Brochure or an Affected Public Brochure. The dates of these mailings are as follows:

1. December 5, 2011: Mass Mailing 2011 – Excavator Contractor Brochure
2. December 7, 2012: Mass Mailing 2012 – Excavator Contractor Brochure
3. December 17, 2012: Mass Mailing 2012 – Natural Gas Affected Public Brochure
4. December 31, 2013: Mass Mailing 2013 – Excavator Contractor Brochure
5. December 23, 2014: Mass Mailing 2014 – Excavator Contractor Brochure
6. December 31, 2014: Mass Mailing 2014 – Natural Gas Affected Public Brochure
7. December 22, 2015: Mass Mailing 2015 – Excavator Contractor Brochure
8. December 22, 2015: Mass Mailing 2015 – Excavator Contractor Brochure
9. December 16, 2016: Mass Mailing 2016 – Excavator Contractor Brochure
10. December 20, 2016: Mass Mailing 2016 – Natural Gas Affected Public Brochure

There were two records of telephone calls with M&R Farms in Kinder Morgan's documentation:

1. August 6, 2012: Phone Call
  - Kinder Morgan discussed the importance of the One Call system and mailed an Excavator Handbook, a PA Toolkit, and a JULIE Handbook to M&R Farms.
2. February 25, 2014: Phone Call
  - Kinder Morgan discussed the importance of the One Call system and mailed both a PA Toolkit and a JULIE Handbook to M&R Farms.

There were 10 additional records of contact with M&R Farms in the NGPL's records, duplicated below:

1. 04/05/12: One Call Contact – Request #A0950648, Seq. #1+0404
  - Description: Farmer is going to reshape/regrade the waterway near and over our Illinois lateral lines. Pipelines are marked with yellow flags. He is going to work as soon as the locate is valid. He is aware of our policy and our pipelines, he will wait to work until a standby gets there on Friday 4-6-12. I checked marks that were already in place and found that they were 12-18 inches off. I re-marked and probed both lines. I was only able to hit the #1 line at 52 inches; the #2 line was 6 feet +.
  - Comments: M&R Farms used a box scraper and removed 6 inches of dirt in the waterway where a tile had been repaired.
2. 04/24/13: One Call Contact – Request #X1140111, Seq. #1+0424
  - Description: Marked both lines for ditch cleaning. Met M&R Farms and he decided that he only needed to clean the ditch near the intersection and gate field entrance, 150 feet south of the lines.
3. 04/20/15: One Call Contact – Request #A1062676, Seq. #00002
  - Comments: Locate is clear. I met with an M&R Farms owner at his shop and looked this job over on the KMOC mapping. His work will be over 1,400 feet southeast of the nearest pipeline. The footage was measured with the KMOC measuring tool. The owner is aware of our pipeline and will call me if his scope of work changes.
4. 08/22/17: One Call Contact – Request #X2340591, Seq. #00001
  - Comments: Notes added on 8/24/2017 at 8:23:20 a.m. I located about 300 feet of both

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- Illinois Lateral lines today. M&R Farms will be using a dirt scraper to remove high spots in the waterway. His deepest cut will be around 6 inches. The #2 line has 35 inches of cover, no dirt will be taken away on the #2 line. The #1 line has over 60 inches of cover. He is starting this job at 8:45 a.m. when his ticket is good. I will be on site until he is over 25 feet north of our lines going toward the drainage ditch.
- Reason for SME Review: SME is aware. Less than 6 inches of cover will be removed from both pipelines.
  - Notes added on 8/28/2017 at 2:13:08 p.m. This job was completed late afternoon on 8/24/17.
5. 03/22/17: One Call Contact – Request #X0811522, Seq. #00005
- Comments: Notes added on 3/22/2017 at 3:15:10 p.m. I located both Illinois Lateral lines today with yellow pin flags. Ryan will be removing silt from the existing water way over our lines for drainage. I spoke with M&R Farms on the phone. He is aware of our lines and will call prior to working.
  - Reason for SME Review: Work is less than 10 feet. SME is aware.
  - Notes added on 4/20/2017 at 6:56:59 a.m. Work for this job started and was observed on 4/12/17. Only a few inches of silt were removed from the waterway. The job is complete. A signed 200-71 form is attached.
6. 11/28/16: One Call Contact – Request #A3330340, Seq. #00001
- Comments: Notes added on 11/28/2016 at 2:19:17 p.m. Locate is clear. Our nearest pipeline is over 200 feet north and northwest of the locate. Measured with KMOC on 11/28/16.
7. 04/04/16: One Call Contact – Request #A0912407, Seq. #00002
- Comments: Locate is clear. Our nearest pipeline is over 300 feet north of the locate. Measured with the KMOC. Spoke with M&R Farms on the phone. They are trying to get a wet spot dried up in the corner of the field. If they need to go farther north, M&R Farms will call me.
8. 03/21/16: One Call Contact – Request #A0771804, Seq. #00001
- Comments: I contacted M&R Farms and the described work will be 3,500 feet southeast of the Illinois lateral lines.
9. 04/07/16: One Call Contact – Request #A0962475, Seq. #00005
- Comments: Located the #1 and #2 Illinois Lateral today on the east side of Nachusa Rd. M&R Farms will be removing an old farm fence. The owner is aware of our lines and will call prior to working for a standby.
  - Reason for SME Review: Work is less than 10 feet away.
  - 4/7/16: Emailed M&R Farms about this locate expiring. No excavation was done during the life of this ticket.
10. 04/06/16: One Call Contact – Request #X0953184, Seq. #00004
- Reason for SME Review: Need to put this locate in progress. Not able to access the work site due to wet conditions. The work site is 1/2 a mile from the nearest road. It is raining here again today. M&R Farms is aware of our lines and has no plans on starting this project this week. I will locate this ASAP when it dries up a little. I walked 2,000 feet from the road to the lines today because it was too muddy to drive. I marked both of the Illinois Lateral lines on both sides of the ditch with yellow pin flags on 4/7/16.
  - 5/2/16: Locate has expired. I emailed M&R Farms to let him know his ticket has expired and to refresh it if the work is still planned. No excavation was done during the life of this ticket.

**Metallurgical Report**

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Kinder Morgan contracted with An-Tech Laboratories in Houston, Texas, to perform a metallurgical analysis of the failed pipe. The conclusion from that report is excerpted below:

“On December 5, 2017, NGPL Illinois Lateral #1 fractured in the pipe body due to mechanical damage caused by an external force at approximately Station 2777+20 in Lee County, Illinois. The metallurgical analysis confirmed that the pipe was punctured between the 9:08 and 10:05 circumferential positions. Additional mechanical damage consisted of adjacent gouges exhibiting cold work and cracking at the base of the gouges. The metallurgical analysis further confirmed that the fracture in the pipe body was not caused by corrosion or other preexisting pipeline integrity issues.”

**Findings and Contributing Factors**

PHMSA’s investigation concluded that the cause of the failure was third-party damage. The pipeline was buried at a depth greater than that required by new construction regulations, while the tiling work was carried out at a depth of approximately 4 feet. Despite M&R Farms’ familiarity with excavation notices and their receipt of public awareness documentation—including excavation safety information—provided by Kinder Morgan, no excavation notice was provided for this tiling work. It is possible that this incident might have been prevented if such a notice was provided.

**Appendices**

- A. Photographs and Map
- B. National Response Center (NRC) Report, December 5, 2017
- C. Accident Report (30 Day Report)/PHMSA Form 7000.2, January 3, 2018
- D. Metallurgical Report, March 12, 2018
- E. M&R Farm One Call Notifications 2016 and 2017

Appendix A  
Photographs and Map



Looking SW at the two tractors used to pull the tiling plow with ruptured pipeline.



Looking East at the NGPL line marker and down the ROW from Nachusa Road. Rupture occurred at tree line in photo, see arrow.



Looking NE at Rupture site. Yellow arrows are pointing at the two unmaintained line markers for line 2. Yellow locating flags can be seen for the two lines. The lines were marked and located after the accident.



Looking NE at the rupture site. Line locating flags can be seen that were installed after accident. Backhoe on the left, two tractors, two trucks and a tiling spool trailer can be seen damaged. NGPL is currently excavating line 2 and checking for possible damage prior to working on line 1.



Looking North at the tractor that was pulling the tiling plow and the tiling plow can be seen blown to the side of the tractor. Backhoe is in back ground.

(b) (7)(F)



Map of accident site. Red arrow points to the line hit location. The two yellow arrows show the locations of the nearest line markers for Line 1. Green arrows show the two line marker locations for line 2. Dixon IL is 3 miles West of Nachusa Rd.

Appendix B  
National Response Center (NRC) Report,  
December 5, 2017



Pipeline & Hazardous Materials Safety Administration

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NRC Number: 1198853 Call Date: 12/05/2017 Call Time: 11:33:00

Caller Information

Form fields for Caller Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE), Is caller the spiller? (Yes/No/No Response), Confidential (Yes/No/No Response)

Discharger Information

Form fields for Discharger Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE)

Spill Information

Form fields for Spill Information: State (IL), County (LEE), Nearest City (NACHUSA), Zip Code

Location text area

Form fields for Spill Details: Spill Date (12/05/2017), Spill Time (09:35:00), DTG Type (-> Select DTG Type ->), Incident Type (ALL), Reported Incident Type (PIPELINE)

Description text area: CALLER REPORTS A RELEASE OF AN UNKNOWN AMOUNT OF NATURAL GAS INTO AIR CAUSED BY AN UNKNOWN REASON FROM A PIPELINE.

Materials Involved table with columns: Material / Chris Name, Chris Code, Total Qty., Water Qty. Row: NATURAL GAS, ONG, 0 UNKNOWN AMOUNT

Form fields for Medium Information: Medium Type (-> Select Medium Type ->), Additional Medium Information (ATMOSPHERE)

Form fields for Incident Statistics: Injuries (3), Fatalities, Evacuations (Yes/No/Unknown), Damages (Yes/No/Unknown), Federal Agency Notified (Yes/No/Unknown), State Agency Notified (Yes/No/Unknown), Other Agency Notified (Yes/No/Unknown)

Remedial Actions

UNKNOWN, INVESTIGATION UNDERWAY

Additional Info

Latitude

Degrees:  Minutes:  Seconds:  Quadrant:

Longitude

Degrees:  Minutes:  Seconds:  Quadrant:

Distance from City:   Direction:

Section:  Township:

Range:  Milepost:

Rescinded Comments (max 250 characters)

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NRC Number: 1198866 Call Date: 12/05/2017 Call Time: 13:34:00

Caller Information

Form fields for Caller Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN- NGPL CO.), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE), Is caller the spiller? (No), Confidential (No).

Discharger Information

Form fields for Discharger Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN- NGPL CO.), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE).

Spill Information

Form fields for Spill Information: State (IL), County (LEE), Nearest City (NACHUSA), Zip Code.

Location: NEAR STATION- LINE#1

Form fields for Spill Details: Spill Date (12/05/2017), Spill Time (09:35:00), DTG Type (<- Select DTG Type ->), Incident Type (ALL), Reported Incident Type (PIPELINE).

Description: MILES OF PIPE WAS ISOLATED IN RESPONSE TO THE INCIDENT. \*\*ORIGINAL NRC# 1198853\*\* CALLER REPORTS A RELEASE OF AN UNKNOWN AMOUNT OF NATURAL GAS INTO AIR CAUSED BY AN UNKNOWN REASON FROM A PIPELINE.

Table with 4 columns: Material / Chris Name, Chris Code, Total Qty, Water Qty. Row 1: NATURAL GAS, ONG, 3000000 CUBIC FEET.

Form fields for Medium Information: Medium Type (<- Select Medium Type ->), Additional Medium Information (/ATMOSPHERE).

Form fields for Incident Statistics: Injuries (2), Fatalities (2), Evacuations (No), Damages (Unknown), Federal Agency Notified (Unknown), State Agency Notified (Unknown), Other Agency Notified (Unknown).

Remedial Actions

LINE#1 WAS ISOLATED AND SECURED. RP STATED THAT THERE IS A SECOND LINE IN THE AREA (LINE#2) AND THE OPERATING PRESSURE WAS LOWERED AND IT HAS APPARENTLY NOT BEEN IMPACTED.

Additional Info

\*\*THIS IS AN UPDATE TO NRC# 1198853.\*\*

Latitude

Degrees:  Minutes:  Seconds:  Quadrant:

Longitude

Degrees:  Minutes:  Seconds:  Quadrant:

Distance from City:   Direction:

Section:  Township:

Range:  Milepost:

Rescinded **Comments** (max 250 characters)

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NRC Number: 1199018 Call Date: 12/06/2017 Call Time: 18:16:00

Caller Information

Form fields for Caller Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN- NGPL CO.), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE), Is caller the spiller? (Yes/No/No Response), Confidential (Yes/No/No Response)

Discharger Information

Form fields for Discharger Information: First Name (STEPHEN), Last Name (DINES), Company Name (KINDER MORGAN- NGPL CO.), Address (2 NORTH NEVADA AVE), City (COLORADO SPRINGS), State (CO), Country (USA), Zip (80904), Phone 1 (7193295633), Phone 2 (7193514199), Organization Type (PRIVATE)

Spill Information

Form fields for Spill Information: State (IL), County (LEE), Nearest City (NACHUSA), Zip Code

Location: SEE LAT/LONG

Spill Date: 12/05/2017 (mm/dd/yyyy) Spill Time: 09:35:00 (24hh:mm:ss) DTG Type: <- Select DTG Type -> Incident Type: ALL Reported Incident Type: PIPELINE

Description: \*\*\*48 HOUR PHMSA UPDATE FOR REPORT 1198866\*\*\* ORIGINAL REPORT: \*\*UPDATE TO A PREVIOUS NRC REPORT\*\* THE RP IS REPORTING A RELEASE OF NATURAL GAS DUE TO A THIRD PARTY STRIKING AN UNDERGROUND PIPELINE. THE INCIDENT INVOLVES A FARMING TILING MACHINE. RP REPORTS THERE WAS AN IGNITION DUE TO THE STRIKE AND THE LOCAL FD REPORTS THAT THERE WERE TWO (2) INJURIES AND

Table with 4 columns: Material / Chris Name, Chris Code, Total Qty, Water Qty. Row 1: NATURAL GAS, ONG, 12.972 MIL CBF

Medium Type: <- Select Medium Type -> Additional Medium Information: ATMOSPHERE RELEASE

Injuries: 2 Fatalities: 2 Evacuations: Yes/No/Unknown No. of Evacuations: Damage Amount: 50000 Federal Agency Notified: Yes/No/Unknown State Agency Notified: Yes/No/Unknown Other Agency Notified: Yes/No/Unknown

Remedial Actions

LINE#1 WAS ISOLATED AND SECURED. RP STATED THAT THERE IS A SECOND LINE IN THE AREA (LINE#2) AND THE OPERATING PRESSURE WAS LOWERED AND IT HAS APPARENTLY NOT BEEN IMPACTED.

Additional Info

\*\*\*48-HOUR PHMSA UPDATE FOR REPORT 1198866\*\*\*  
FINAL DAMAGE ESTIMATE WILL BE PROVIDED WITH 30 DAY REPORT TO PHMSA.

Latitude

Degrees:  Minutes:  Seconds:  Quadrant:

Longitude

Degrees:  Minutes:  Seconds:  Quadrant:

Distance from City:   Direction:

Section:  Township:

Range:  Milepost:

Rescinded **Comments** (max 250 characters)

<< Previous

3..3 of 3

<< Save >>

Appendix C  
Accident Report (30 Day Report)/  
PHMSA Form 7000.2,  
January 3, 2018

NOTICE: This report is required by 49 CFR Part 191. 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: 2137-0522  
EXPIRATION DATE: 8/31/2020



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

**Original Report Date:**

01/03/2018

**No.**

20180005 - 17546

(DOT Use Only)

### INCIDENT REPORT - GAS TRANSMISSION AND GATHERING 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 2137-0522. All responses to this collection of information are mandatory. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

#### INSTRUCTIONS

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

#### PART A - KEY REPORT INFORMATION

Report Type: (select all that apply)	Original:	Supplemental:	Final:
	Yes		
Last Revision Date:			
1. Operator's OPS-issued Operator Identification Number (OPID):	13120		
2. Name of Operator	NATURAL GAS PIPELINE CO OF AMERICA (KMI)		
3. Address of Operator:			
3a. Street Address	1001 LOUISIANA ST, STE 1000		
3b. City	HOUSTON		
3c. State	Texas		
3d. Zip Code:	77002		
4. Local time (24-hr clock) and date of the Incident:	12/05/2017 09:35		
5. Location of Incident:			
Latitude:	41.841387		
Longitude:	-89.385505		
6. National Response Center Report Number (if applicable):	1198853		
7. Local time (24-hr clock) and date of initial telephonic report to the National Response Center (if applicable):	12/05/2017 10:33		
8. Incident resulted from:	Unintentional release of gas		
9. Gas released: (select only one, based on predominant volume released)	Natural Gas		
- Other Gas Released Name:			
10. Estimated volume of commodity released unintentionally - Thousand Cubic Feet (MCF):	12,972.00		
11. Estimated volume of intentional and controlled release/blowdown - Thousand Cubic Feet (MCF)	16,538.00		
12. Estimated volume of accompanying liquid release (Barrels):			
13. Were there fatalities?	Yes		
- If Yes, specify the number in each category:			
13a. Operator employees	0		
13b. Contractor employees working for the Operator	0		
13c. Non-Operator emergency responders	0		
13d. Workers working on the right-of-way, but NOT associated with this Operator	2		
13e. General public	0		
13f. Total fatalities (sum of above)	2		
14. Were there injuries requiring inpatient hospitalization?	Yes		
- If Yes, specify the number in each category:			
14a. Operator employees	0		
14b. Contractor employees working for the Operator	0		
14c. Non-Operator emergency responders	0		
14d. Workers working on the right-of-way, but NOT associated with this Operator	2		
14e. General public	0		
14f. Total injuries (sum of above)	2		
15. Was the pipeline/facility shut down due to the incident?	Yes		
- If No, Explain:			

- If Yes, complete Questions 15a and 15b: (use local time, 24-hr clock)	
15a. Local time and date of shutdown	12/05/2017 10:44
15b. Local time pipeline/facility restarted	12/09/2017 16:39
- Still shut down? (* Supplemental Report Required)	
16. Did the gas ignite?	Yes
17. Did the gas explode?	Yes
18. Number of general public evacuated:	0
19. Time sequence (use local time, 24-hour clock):	
19a. Local time operator identified Incident– effective 10-2014, changed from "Incident" to "failure"	12/05/2017 09:35
19b. Local time operator resources arrived on site	12/05/2017 10:47
<b>PART B - ADDITIONAL LOCATION INFORMATION</b>	
1. Was the origin of the Incident onshore?	Yes
- Yes (Complete Questions 2-12)	
- No (Complete Questions 13-15)	
<b>If Onshore:</b>	
2. State:	Illinois
3. Zip Code:	61057
4. City	Not Within a Municipality
5. County or Parish	Lee
6. Operator designated location	Milepost/Valve Station
Specify:	Stn: 2777+18
7. Pipeline/Facility name:	Illinois Lateral No. 1
8. Segment name/ID:	CS 110 to Genoa City 2
9. Was Incident on Federal land, other than the Outer Continental Shelf (OCS)?	No
10. Location of Incident :	Pipeline Right-of-way
11. Area of Incident (as found) :	Underground
Specify:	Under soil
Other – Describe:	
Depth-of-Cover (in):	45
12. Did Incident occur in a crossing?	No
- If Yes, specify type 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 Incident:	
Select:	
<b>If Offshore:</b>	
13. Approx. water depth (ft) at the point of the Incident:	
14. Origin of Incident:	
- If "In State waters":	
- State:	
- Area:	
- Block/Tract #:	
- Nearest County/Parish:	
- If "On the Outer Continental Shelf (OCS)":	
- Area:	
- Block #:	
15. Area of Incident:	
<b>PART C - ADDITIONAL FACILITY INFORMATION</b>	
1. Is the pipeline or facility: - Interstate - Intrastate	Interstate
2. Part of system involved in Incident:	Onshore Pipeline, Including Valve Sites
3. Item involved in Incident:	Pipe
- If Pipe – Specify:	Pipe Body
3a. Nominal diameter of pipe (in):	20
3b. Wall thickness (in):	.281
3c. SMYS (Specified Minimum Yield Strength) of pipe (psi):	40,000

3d. Pipe specification:	API 5L
3e. Pipe Seam – Specify:	Other
- If Other, Describe:	EFW
3f. Pipe manufacturer:	AO Smith
3g. Year of manufacture:	1940
3h. Pipeline coating type at point of Incident – Specify:	Other
- If Other, Describe:	CTE
- If Weld, including heat-affected zone – Specify:	
- If Other, Describe:	
- If Valve – Specify:	
- If Mainline – Specify:	
- If Other, Describe:	
3i. Mainline valve manufacturer:	
3j. Year of manufacture:	
- If Other, Describe:	
4. Year item involved in Incident was installed:	1941
5. Material involved in Incident:	Carbon Steel
- If Material other than Carbon Steel or Plastic – Specify:	
6. Type of Incident involved:	Other
- If Mechanical Puncture – Specify Approx. size:	
in. (axial) by	
in. (circumferential)	
- If Leak - Select Type:	
- If Other – Describe:	
- If Rupture - Select Orientation:	
- If Other – Describe:	
Approx. size: in. (widest opening):	
by in. (length circumferentially or axially):	
- If Other – Describe:	
	Approximately a 9.5 foot segment of pipe was torn from existing pipe from a 3rd-party operating a drain tiling machine over the pipeline right-of-way.
<b>PART D - ADDITIONAL CONSEQUENCE INFORMATION</b>	
1. Class Location of Incident:	Class 1 Location
2. Did this Incident occur in a High Consequence Area (HCA)?	No
- If Yes:	
2a. Specify the Method used to identify the HCA:	
3. What is the PIR (Potential Impact Radius) for the location of this Incident? Feet:	390
4. Were any structures outside the PIR impacted or otherwise damaged due to heat/fire resulting from the Incident?	No
5. Were any structures outside the PIR impacted or otherwise damaged NOT by heat/fire resulting from the Incident?	Yes
6. Were any of the fatalities or injuries reported for persons located outside the PIR?	No
7. Estimated Property Damage :	
7a. Estimated cost of public and non-Operator private property damage paid/reimbursed by the Operator – effective 6-2011, "paid/reimbursed by the Operator" removed	\$ 650,000
Estimated cost of gas released unintentionally – effective 6-2011, moved to item 7f	
Estimated cost of gas released during intentional and controlled blowdown – effective 6-2011, moved to item 7g	
7b. Estimated cost of Operator's property damage & repairs	\$ 226,200
7c. Estimated cost of Operator's emergency response	\$ 5,000
7d. Estimated other costs	\$ 7,500
Describe:	Survey and Metallurgical examination.
7e. Property damage subtotal (sum of above)	\$ 888,700
<b>Cost of Gas Released</b>	
7f. Estimated cost of gas released unintentionally	\$ 37,160
7g. Estimated cost of gas released during intentional and controlled blowdown	\$ 47,381
7h. Total estimated cost of gas released (sum of 7.f & 7.g above)	\$ 84,541

Total of all costs	\$ 973,241
<b>PART E - ADDITIONAL OPERATING INFORMATION</b>	
1. Estimated pressure at the point and time of the Incident (psig):	706.00
2. Maximum Allowable Operating Pressure (MAOP) at the point and time of the Incident (psig):	800.00
Added 10-2014 2a. MAOP established by 49 CFR section:	192.619(a)(1)
- If Other, specify:	
3. Describe the pressure on the system or facility relating to the Incident:	Pressure did not exceed MAOP
4. Not including pressure reductions required by PHMSA regulations (such as for repairs and pipe movement), was the system or facility relating to the Incident operating under an established pressure restriction with pressure limits below those normally allowed by the MAOP?	No
- If Yes - (Complete 4a and 4b 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:	Automatic
5c. Length of segment isolated between valves (ft):	72,108
5d. Is the pipeline configured to accommodate internal inspection tools?	No
- If No – Which physical features limit tool accommodation? (select all that apply)	
- Changes in line pipe diameter	
- Presence of unsuitable mainline valves	Yes
- 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 build-up	
- Low operating pressure(s)	
- Low flow or absence of flow	
- Incompatible commodity	
- Other	
- If Other, Describe:	
5f. Function of pipeline system:	Transmission System
6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Incident?	Yes
- If Yes:	
6a. Was it operating at the time of the Incident?	Yes
6b. Was it fully functional at the time of the Incident?	Yes
6c. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume or pack calculations) assist with the detection of the Incident?	Yes
6d. Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Incident?	Yes
7. How was the Incident initially identified for the Operator?	Notification from Emergency Responder
- If Other – Describe:	
7a. If "Controller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 7, specify:	
8. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Incident?	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: <i>(provide an explanation for why the operator did not investigate)</i>	No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: Third-party strike on pipeline from use of drain tiling machine on right-of-way. No One-Call notification provided/received.
<b>- If Yes, Describe investigation result(s) (select all that apply):</b>	
- 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	
<b>- Provide an explanation for why not:</b>	
- 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:	
<b>PART F - DRUG &amp; ALCOHOL TESTING INFORMATION</b>	
1. As a result of this Incident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	No
<b>- If Yes:</b>	
1a. How many were tested:	
1b. How many failed:	
2. As a result of this Incident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug & Alcohol Testing regulations?	No
<b>- If Yes:</b>	
2a. How many were tested:	
2b. How many failed:	
<b>PART G - APPARENT CAUSE</b>	
<i>Select only one box from PART G in the shaded column on the left representing the APPARENT Cause of the Incident, and answer the questions on the right. Describe secondary, contributing, or root causes of the Incident in the narrative (PART H).</i>	
<b>Apparent Cause:</b>	G3 - Excavation Damage
<b>G1 - Corrosion Failure</b> - only one <b>sub-cause</b> can be picked from shaded left-hand column	
<b>Corrosion Failure – Sub-cause:</b>	
<b>- If External Corrosion:</b>	
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:	
4a. Was failed item considered to be under cathodic protection at the time of the incident?	
- If Yes, Year protection started:	
4b. Was shielding, tenting, or disbonding of coating evident at the point of the incident?	
4c. Has one or more Cathodic Protection Survey been conducted at the point of the incident?	
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?	
<b>- If Internal Corrosion:</b>	
6. Results of visual examination:	
- If Other, Describe:	
7. Cause of corrosion (select all that apply):	
- Corrosive Commodity	
- Water drop-out/Acid	
- Microbiological	
- Erosion	
- Other	
- If Other, Describe:	
8. The cause(s) of corrosion selected in Question 7 is based on the following (select all that apply):	
- Field examination	
- Determined by metallurgical analysis	
- Other	
- If Other, Describe:	
9. Location of corrosion (select all that apply):	
- Low point in pipe	
- Elbow	
- Drop-out	
- Other	
- If Other, Describe:	
10. Was the gas/fluid 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?	
<b>Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Incident" (from PART C, Question 3) is Pipe or Weld.</b>	
14. Has one or more internal inspection tool collected data at the point of the Incident?	
14a. 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 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:
	If Other, Describe:

15. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Incident?	
- If Yes,	
Most recent year tested:	
Test pressure (psig):	
16. Has one or more Direct Assessment been conducted on this segment?	
- If Yes, and an investigative dig was conducted at the point of the Incident:	
Most recent year conducted:	
- If Yes, but the point of the Incident was not identified as a dig site:	
Most recent year conducted:	
17. Has one or more non-destructive examination been conducted at the point of the Incident since January 1, 2002?	
17a. 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 examined:	
- Guided Wave Ultrasonic	
Most recent year examined:	
- Handheld Ultrasonic Tool	
Most recent year examined:	
- Wet Magnetic Particle Test	
Most recent year examined:	
- Dry Magnetic Particle Test	
Most recent year examined:	
- Other	
Most recent year examined:	
If Other, Describe:	
<b>G2 - Natural Force Damage</b> - only one <i>sub-cause</i> can be picked from shaded left-handed column	
<b>Natural Force Damage – Sub-Cause:</b>	
- If Earth Movement, NOT due to Heavy Rains/Floods:	
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 Other Natural Force Damage:	
5. Describe:	
<b>Complete the following if any Natural Force Damage sub-cause is selected.</b>	
6. Were the natural forces causing the Incident 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:	
<b>G3 - Excavation Damage</b> only one <i>sub-cause</i> can be picked from shaded left-hand column	
<b>Excavation Damage – Sub-Cause:</b>	Excavation Damage by Third Party
<b>- If Previous Damage Due to Excavation Activity: Complete Questions 1-5 ONLY IF the "Item Involved in Incident" (From Part C, Question 3) is Pipe or Weld.</b>	
1. Has one or more internal inspection tool collected data at the point of the Incident?	No
1a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:	
- Magnetic Flux Leakage	Year:
- Ultrasonic	Year:

- Geometry	Year:	
- Caliper	Year:	
- Crack	Year:	
- Hard Spot	Year:	
- Combination Tool	Year:	
- Transverse Field/Triaxial	Year:	
- Other:	Year:	
Describe:		
2. Do you have reason to believe that the internal inspection was completed BEFORE the damage was sustained?	No	
3. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Incident?	Yes	
- If Yes:		
Most recent year tested:		1977
Test pressure (psig):		1,073.50
4. Has one or more Direct Assessment been conducted on the pipeline segment?	No	
- If Yes, and an investigative dig was conducted at the point of the Incident:		
Most recent year conducted:		
- If Yes, but the point of the Incident 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 Incident since January 1, 2002?	No	
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	Year:	
- Guided Wave Ultrasonic	Year:	
- Handheld Ultrasonic Tool	Year:	
- Wet Magnetic Particle Test	Year:	
- Dry Magnetic Particle Test	Year:	
- Other	Year:	
Describe:		
<b>Complete the following if Excavation Damage by Third Party is selected as the sub-cause.</b>		
6. Did the operator get prior notification of the excavation activity?	No	
6a. If Yes, Notification received from (select all that apply):		
- One-Call System		
- Excavator		
- Contractor		
- Landowner		
<b>Complete the following mandatory CGA-DIRT Program questions if any Excavation Damage sub-cause is selected.</b>		
7. Do you want PHMSA to upload the following information to CGA-DIRT ( <a href="http://www.cga-dirt.com">www.cga-dirt.com</a> )?	No	
8. Right-of-Way where event occurred (select all that apply):		
- Public		
	- If Public, Specify:	
- Private		Yes
	- If Private, Specify:	Private Landowner
- Pipeline Property/Easement		Yes
- 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 :	Agriculture
12. Was the One-Call Center notified? - Yes - No	No
12a. If Yes, specify ticket number:	
12b. If this is a State where more than a single One-Call Center exists, list the name of the One-Call Center notified:	
13. Type of Locator:	
14. Were facility locate marks visible in the area of excavation?	
15. Were facilities marked correctly?	
16. Did the damage cause an interruption in service?	Yes
16a. If Yes, specify duration of the interruption: (hours)	102
17. Description of the <b>CGA-DIRT Root Cause</b> (select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, then one predominant second level CGA-DIRT Root Cause as well):	
- Predominant first level CGA-DIRT Root Cause:	One-Call Notification Practices Not Sufficient
- If One-Call Notification Practices Not Sufficient, Specify:	No notification made to the One-Call Center
- If Locating Practices Not Sufficient, Specify:	
- If Excavation Practices Not Sufficient, Specify:	
- If Other/None of the Above, Explain:	
<b>G4 - Other Outside Force Damage - only one sub-cause can be selected from the shaded left-hand column</b>	
<b>Other Outside Force Damage – Sub-Cause:</b>	
<b>- If Damage by Car, Truck, or Other Motorized Vehicle/Equipment NOT Engaged in Excavation:</b>	
1. Vehicle/Equipment operated by:	
<b>- If Damage by Boats, Barges, Drilling Rigs, or Other Maritime Equipment or Vessels Set Adrift or Which Have Otherwise Lost Their Mooring:</b>	
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:	
<b>- If Previous Mechanical Damage NOT Related to Excavation: Complete Questions 3-7 ONLY IF the "Item Involved in Incident" (from PART C, Question 3) is Pipe or Weld.</b>	
3. Has one or more internal inspection tool collected data at the point of the Incident?	
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 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:
	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 Incident?	
- 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 Incident :	
Most recent year conducted:	
- If Yes, but the point of the Incident 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 Incident 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:	
<b>- If Intentional Damage:</b>	
8. Specify:	
- If Other, Describe:	
<b>- If Other Outside Force Damage:</b>	
9. Describe:	
<b>G5 - Pipe, Weld, or Joint Failure</b>	<b>Use this section to report material failures ONLY IF the "Item Involved in Incident" (from PART C, Question 3) is "Pipe" or "Weld."</b>
	Only one <b>sub-cause</b> can be selected from the shaded left-hand column
<b>Pipe, Weld or Join Failure – Sub-Cause:</b>	
1. The sub-cause shown above 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 ( <i>Supplemental Report required</i> )	
<b>- If Construction-, Installation- or Fabrication</b>	
2. List contributing factors: ( <i>select all that apply</i> )	
- Fatigue or Vibration related:	
Specify:	
- If Other, Describe:	
- Mechanical Stress	
- Other	
- If Other, Describe:	
<b>- If Environmental Cracking-related:</b>	
3. Specify:	
- If Other, Describe:	
<b>Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.</b>	
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 Incident?	
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:
	Describe:
6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Incident?	
- 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 Incident:	Most recent year conducted:
- If Yes, but the point of the Incident 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 Incident 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:
<b>G6 - Equipment Failure</b> - only one <b>sub-cause</b> can be selected from the shaded left-hand column	
<b>Equipment Failure – Sub-Cause:</b>	
<b>- If Malfunction of Control/Relief Equipment:</b>	
1. Specify:	
- Control Valve	
- Instrumentation	
- SCADA	
- Communications	
- Block Valve	

- Check Valve	
- Relief Valve	
- Power Failure	
- Stopple/Control Fitting	
- Pressure Regulator	
- ESD System Failure	
- Other	
- If Other, Describe:	
<b>- If Compressor or Compressor-related Equipment:</b>	
2. Specify:	
- If Other, Describe:	
<b>- If Threaded Connection/Coupling Failure:</b>	
3. Specify:	
- If Other, Describe:	
<b>- If Non-threaded Connection Failure:</b>	
4. Specify:	
- If Other, Describe:	
<b>- If Other Equipment Failure:</b>	
5. Describe:	
<b>Complete the following if any Equipment Failure sub-cause is selected.</b>	
6. Additional factors that contributed to the equipment failure <i>(select all that apply)</i>	
- Excessive vibration	
- Overpressurization	
- No support or loss of support	
- Manufacturing defect	
- Loss of electricity	
- Improper installation	
- Mismatched items (different manufacturer for tubing and tubing fittings)	
- Dissimilar metals	
- Breakdown of soft goods due to compatibility issues with transported gas/fluid	
- Valve vault or valve can contributed to the release	
- Alarm/status failure	
- Misalignment	
- Thermal stress	
- Other	
- If Other, Describe:	
<b>G7 – Incorrect Operation - only one sub-cause can be selected from the shaded left-hand column</b>	
<b>Incorrect Operation – Sub-Cause:</b>	
<b>- If Underground Gas Storage, Pressure Vessel, or Cavern Allowed or Caused to Overpressure:</b>	
1. Specify:	
- If Other, Describe:	
<b>- If Other Incorrect Operation:</b>	
2. Describe:	
<b>Complete the following if any Incorrect Operation sub-cause is selected.</b>	
3. Was this Incident related to: <i>(select all that apply)</i>	
- Inadequate procedure	
- No procedure established	
- Failure to follow procedure	
- Other:	
- If Other, Describe:	
4. What category type was the activity that caused the Incident:	
5. Was the task(s) that led to the Incident 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)?	
<b>G8 - Other Incident Cause - only one sub-cause can be selected from the shaded left-hand column</b>	
<b>Other Incident Cause – Sub-Cause:</b>	

<b>- If Miscellaneous:</b>	
1. Describe:	
<b>- If Unknown:</b>	
2. Specify:	
<b>PART - H NARRATIVE DESCRIPTION OF THE INCIDENT</b>	
<p>On Tuesday, December 5, 2017 at 9:35 am local time, Natural Gas Pipeline Company of America LLC's (NGPL) 20-inch pipeline, known as the Illinois Lateral No. 1 in Lee County, Illinois, was struck by a third party operating drain tile equipment. The incident occurred at approximately Station 2777+18 on the Illinois Lateral No. 1. Upon confirmation that the third-party strike caused a rupture and fire resulting in the deaths of two (2) persons and injuries to two (2) others, who were immediately hospitalized, NGPL issued a revised NRC notice (No. 1198866). One of the injured persons was released on December 6, 2017, and the other was listed as being in stable condition on the day following the incident.</p> <p>Two automatic valves (I-9 and I-10) on the Illinois Lateral No. 1 began to close upon the detection of a pressure loss and isolate the damaged portion of pipeline, as designed. Valve I-9 required additional manual operation to fully close the valve. This was completed by 10:44 am local time, with the flow of gas shut off, the fire contained, and later extinguished.</p> <p>As a precautionary measure, NGPL also reduced the pressure of the adjacent Illinois Lateral No. 2 to 485 psig pending an investigation to determine if it sustained any damage as a result of the incident. Upon arrival at the site, a PHMSA representative requested that NGPL further reduce the operating pressure of Illinois Lateral No. 2 to 450 psig, which NGPL did. Results of the Illinois Lateral No. 2 investigation revealed that no damage was sustained and NGPL began re-pressuring Illinois Lateral No. 2 to normal operating pressure, consistent with PHMSA regulatory reviews and approvals.</p> <p>On Wednesday, December 6, 2017, NGPL began repairs to Illinois Lateral No. 1. A final 48-hour confirmation NRC report No. 1199018 was provided that same day with a final estimated volume of the release.</p> <p>Repair work consisted of the replacement of 41 feet of 20-inch pipe on the Illinois Lateral No. 1 with pre-pressure tested pipe and was completed on December 9, 2017, and at 4:39 pm Central Time, NGPL placed Illinois Lateral No. 1 back into full service.</p> <p>This 30-Day Incident Report will be updated with the results of NGPL's investigation of the incident to include an overview of the metallurgical results of pipe samples collected and submitted for analysis.</p>	
<b>PART I - PREPARER AND AUTHORIZED SIGNATURE</b>	
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Date	01/03/2018

Appendix D  
Metallurgical Report, March 12, 2018

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Appendix E  
M&R Farm One Call Notifications 2016 and 2017

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