

# STATE OF NEBRASKA



Pete Ricketts  
Governor



Jim Heine  
Fire Marshal

On January 9, 2016 an excavator conducting directional drill activities, near 422 South 11<sup>th</sup> Street, Omaha, NE, struck and damaged a 2" PE gas service line. At approximately 1450 hours there was a release of natural gas from the damaged natural gas service line which migrated into the basement of 422 South 11<sup>th</sup> Street. This release was ignited causing an explosion and ensuing fire. The first 911 call was received for this event at 1452 and emergency response personnel arrived on scene at 1454. The fire continued to be fueled by escaping natural gas until gas flow was stopped at approximately 1628 hours. MUD personnel responded to the scene to stop the gas flow. The fire continued to progress, eventually consuming the structure.

Starting on the evening of January 9, and continuing through August 26, 2016 the State Fire Marshal Agency conducted an investigation into the incident to determine the probable root cause that led to the damage to the pipeline and subsequent release of natural gas. The investigation included interviews with facility staff and excavator personnel, review of facility records and procedures, and physical examinations of the incident site. A portion of the investigation also included communicating with MUD regarding the initial determinations of the Agency. Detailed information on all portions of the investigation is included in the packet to be submitted to the Attorney General.

The State Fire Marshal Agency has concluded that the natural gas pipeline to 422 South 11<sup>th</sup> Street was not adequately marked in a manner to communicate to an excavator the existence of gas pipeline. Failure to mark the location of this natural gas pipeline is considered a violation of 49 Code of Federal Regulation Part 192.614 Damage Prevention Plan, as well as considered a violation of 49 CFR Part 192.605(a) by not following procedures.

**MAIN OFFICE**  
**DISTRICT A**  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-2027

**DISTRICT B**  
438 West Market  
Albion, NE 68620-1241  
(402) 395-2164

**FUELS DIVISION**  
**FLST** ■ Pipeline  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-9465

**TRAINING DIVISION**  
3347 W Capital Ave  
Grand Island, NE 68801  
(308) 385-6892

**BASIC TIME LINE FOR INVESTIGATION OF EVENT AT  
422 SOUTH 11<sup>TH</sup> STREET, OMAHA, NEBRASKA**

<b>DATE</b>	<b>EVENT</b>
January 9, 2016	Gas leak and explosion at 422 South 11 <sup>th</sup> Street, Omaha Interview with excavator, Dan Osterdyk Interview with gas operator, Mike Conrad and David Strobele
January 9-10, 2016	Initial investigation
January 12, 2016	Initial investigation (continued)
January 20, 2016	Investigation of street after removal of ice and snow
January 21, 2016	Investigation of damaged pipe Interview with equipment operator, Mike Kolterman
January 27, 2016	Inspection of MUD computer system mapping
January 29, 2016	Evidence collection
February 4, 2016	Interview with MUD locators, Dick Costello and Chris Sacco
February 8, 2016	Review of MUD's damage prevention program
March 4, 2016	Video interview with excavator, Dan Osterdyk
April 13, 2016	Investigation to verify that the release of gas caused the explosion
May 25, 2016	Investigation of regulators, meters, and associated piping from the meter set area under the sidewalk at 422 South 11 <sup>th</sup> Street
June 17, 2016	Notice of subpoena
June 23, 2016	Notice of probable violation sent via certified mail to MUD
July 21, 2016	SFM counsel and fuels division chief met with MUD regarding violation letter
August 12, 2016	Revised violation letter sent via certified mail to MUD
August 26, 2016	MUD response to violation letter received

## Pipeline Failure Investigation Report

Pipeline System: Distribution Operator: Metropolitan Utilities District  
 Operator ID: 12390 Unit Number: 15-00-000 Activity Number: IR# 160031  
 Location: 422 South 11<sup>th</sup> Street, Omaha NE Date of Occurrence: 01/09/2016  
 Material Released: Natural Gas Quantity: 50,762 cft  
 State Arrival Time & Date: 1838 Ct 01/09/16 Total Damages \$: >\$5,007,627  
 Investigation Responsibility: X State \_\_\_ PHMSA \_\_\_ NTSB \_\_\_ Other (NRC) Report Number: 11376

Company Reported Apparent	Company Reported Sub-Cause (from PHMSA Form 7000-
<input type="checkbox"/> Corrosion	
<input type="checkbox"/> Natural Force Damage	
X <input checked="" type="checkbox"/> Excavation Damage	(Failure to follow safe excavating practices)
<input type="checkbox"/> Other Outside Force Damage	
<input type="checkbox"/> Material Failure (Pipe, Joint,	
<input type="checkbox"/> Equipment Failure	
<input type="checkbox"/> Incorrect Operation	
<input type="checkbox"/> Other	

Accident/Incident Resulted in (check all that	Comments:
x <input checked="" type="checkbox"/> Rupture	Damaged PE 2" service line
x <input checked="" type="checkbox"/> Leak	Uncontrolled release
x <input checked="" type="checkbox"/> Fire	Yes
x <input checked="" type="checkbox"/> Explosion	Yes
x <input checked="" type="checkbox"/> Evacuation	Number of Persons: <u>100</u> Area: <u>structure</u>

### NARRATIVE SUMMARY

At approximately 1447 hours CST 01/09/2016, an excavator conducting bore operations was completing pull-back with a reamer in front of 422 South 11<sup>th</sup> Street in Omaha when they were informed of a strong odor of natural gas within the structure. Within minutes of this notice there was an explosion (1450 hours) within the structure. Excavator immediately contacted Omaha 911 (call received 1450). Omaha Fire Department along with Metropolitan Utilities District representatives responded to location. On fire department arrival, the explosion and ignition of natural gas had involved at least two levels (basement and 1<sup>st</sup> floor) of the four story structure. There was a natural gas fueled fire in the stairwell outside M's Pub (422 South 11<sup>th</sup> Street).

At approximately 1628 hours gas flow to the structure was shut off. Increasingly cold temperatures hampered fire department actions in controlling the fire. Eventually the fire destroyed the structure.

There is a kitchen/food preparation area in the basement.  
 There were two businesses located on street level (M's Pub & Nouvelle Eve).  
 Business offices occupied the second level and there were five apartments on third level with owner residence on top (fourth) floor.  
 Directly adjoining this structure is the Market House Restaurant on main level with 12 condos above Market House.  
 All occupants evacuated safely.

Region/State: Central / Nebraska Reviewed by: \_\_\_\_\_

Investigator: Arnie Bates Title: \_\_\_\_\_

Date: Jan. 9, 10, 12, 20, 21, 25, 26, 28; Feb. 4; March 4, 14, 29, 2016 Date: \_\_\_\_\_

## ***Pipeline Failure Investigation Report***

**DESCRIPTION:** On 01/09/2016 an excavator conducting directional drill activities, near 422 South 11<sup>th</sup> Street, Omaha, NE, struck and damaged a 2" PE gas service line. At approximately 1450 hours there was a release of natural gas from a damaged natural gas service line operating at 9 psig. This release of natural gas migrated into the basement of 422 South 11<sup>th</sup> Street and was ignited, causing an explosion and ensuing fire. The first 911 call received for this event was at 1452 hours. Emergency response personnel arrived on scene at 1454 hours. The fire continued to be fueled by escaping natural gas until gas flow was stopped at approximately 1628 hours. The fire continued to progress, eventually consuming the structure. There was no loss of life and no injuries that required over-night hospitalization. The estimated dollar loss is now reported as over 5.7 million dollars.

### **CONCLUSION:**

Gas Operator did not respond in an appropriate manner to a locate request as per the Gas Operator's Operation and Maintenance Manual (O&M).

Gas Operator failed to sufficiently mark gas pipeline as per Gas Operator's Operation and Maintenance Manual. Gas Operator failed to readily identify a gas service valve in order to promptly stop flow of natural gas from their pipeline.

Inadequacies with Gas Operator's mapping system contributed to the Gas Operator's inability to readily identify and promptly respond to this incident.

### **RECOMMENDATIONS:**

Gas Operator shall be given Notice of Probable Violation for failure to respond to a locate request.

Gas Operator shall be given Notice of Probable Violation for failure to follow O&M procedures.

## ***Pipeline Failure Investigation Report***

### **Body of Investigation:**

1. Visual observation of area indicated that the gas service for the property 422/424 S 11<sup>th</sup> Street was not recently located as per locate request dated 12/30/2015. Locator personnel did not respond to this location to refresh markings. Last known date that gas operator personnel were at this specific address was 12/10/2015.
2. Visual observation of area indicated that the gas service for the property 422/424 S 11<sup>th</sup> Street was not sufficiently marked as per Gas Operator's Operation and Maintenance Procedures.
3. The inability of the Gas Operator to readily identify the service valve for this structure and stop the flow of gas, hampered fire department actions in controlling the fire.

### **Role of locating/marketing pipelines:**

Investigation into the process of "locating" has indicated that this specific service for 422/424 S 11<sup>th</sup> Street was not located electronically, but located by use of maps (As Built Drawing) upon initial notification of excavation activities on or about 12/10/2015. The Operator did respond to each request for locate in this specific area in some fashion. Three specific notifications of excavation for this area were given prior to the event. On two prior occasions pipeline segments near this address were located and marked.

On the most recent request for locate, the individual assigned to locate gas facilities did not go to the site but rather communicated with excavator by phone to see if markings were still visible.

### **Was excavator notified of presence of a gas service for 422/424 South 11<sup>th</sup> Street?**

It appears that the excavator was left to determine if there was a service line for 422/424 S 11<sup>th</sup> Street. All other service line markings were communicated by yellow paint markings on brick streets, curb faces and sidewalks in the area. Markings for 422/424 S 11<sup>th</sup> Street were not consistent with other markings for mains and service lines in the area. At the time of this investigation there were no markings, upon the street or sidewalk, readily apparent to identify, or communicate, the presence of a gas pipeline for this address.

### **Contributing Factors:**

1. Congested area, working fire scene. Some service curb valve box(es) were not readily accessible due to parked vehicles near or upon service curb valve box(es). There is photographic evidence indicating that there was "no" vehicle parked on top of service valve for 422/424 South 11<sup>th</sup> Street.
2. Viewable computer mapping system did not show all services or service curb valves. Area for 422 S 11<sup>th</sup> Street does not have all services entered into GIS mapping system.
3. Viewable computer system link to location of service curb valve on primary screen may not give accurate information on location of service curb valve. The technician must look at additional screens for "active" service card information to obtain measurements to service curb valve.
4. As Built Drawings for this address were not accessible via computer at time of explosion. A copy of the "As Built Drawing" had to be hand delivered to this location so that locating the service valve and closure of the service valve could be completed.
5. An "orange dot" on the viewable screen contains "legacy" information for meter(s) and may not have all service line or service curb valve information.
  - a. Fifty-five and one-half percent (55.5%) of property lots have verified service line(s) identified.
  - b. Current computer system has 95% of all 201,153 service lines with record of service card information available.
  - c. Five percent (5%) of service lines have no information available.
  - d. Current service card was available and had information as to location of service curb valve.

## ***Pipeline Failure Investigation Report***

6. The structure at 422 S 11<sup>th</sup> Street had natural gas delivered at two different locations. One meter bank located underneath sidewalk in front of 422/424 S 11<sup>th</sup> Street and a second bank of meters located in the alley between South 11<sup>th</sup> and South 12<sup>th</sup> Streets – Harney and Howard Streets. While only one of the services was displayed on the active computer screen for M.U.D. personnel, this added to the confusion and delay in identifying and closing the proper gas valve.
7. On the date of the incident, the primary GIS was not operative due to system maintenance on one of the viewable screens. However, the remaining computer mapping system “Utilities Viewer” was operational and was where available information would have been accessed by the technicians to locate measurements that could have been used to locate the service valve for 422/424 South 11<sup>th</sup> Street.

### **Excavator actions:**

Excavator utilized Nebraska811 to give notice of excavation activities in the area of 422 South 11<sup>th</sup> Street, Omaha. Excavator continued to “refresh” excavation requests at appropriate intervals throughout the project. The most recent request was dated 12/30/2015 with work to begin in the area on 01/04/2016.

Excavator called 911 upon realization of the explosion/fire at this location. The first indication of odor in the air and the explosion/fire was within minutes of the damage to the gas line. Excavator had not determined that their activities had damaged a gas line by the time of the explosion. The excavator does not believe that he had prior knowledge of the possible presence of a gas line at 422 S 11<sup>th</sup>, by the time of the explosion.

Excavator gave notice of “damage” to Nebraska811 some six (6) hours after damage occurred. In a statement to this deputy the excavator was attempting to complete a call to Nebraska811 when the building exploded, the excavator dismissed the call to 811 and called 911 instead.

The opinion of this deputy is, the requirement of “immediate” notification to Nebraska811 was preempted by assuring of life safety first. A call to Nebraska811 “immediately” would have gained no efficient utilization of emergency response activities. The call to 911 was the appropriate “first call”.

### **Response of Gas Operator to notice of incident.**

Emergency 911 dispatch of explosion was at 1451 hours. Gas Operator personnel reported on scene at 1516 hours (24 minutes after notification). The time interval to identify and close a valve upon the gas service line which was fueling the fire was not a prompt response. The inability to identify and close a valve upon the gas service line which was fueling made fire suppression dangerous. With gas blowing into the building, fire personnel couldn’t extinguish the gas fueled fire in fear of generating an additional explosive condition. Responding promptly to an incident means more than just getting there quickly. Determining what needs to be done, formulating a plan, and completing the plan in a timely manner are also part of a prompt response. In this case the Gas Operator responded within an appropriate time interval to this location upon “notice” of possible gas related event at 422 S 11<sup>th</sup> Street.

Gas Operator personnel worked to identify and close gas valves from 1516 until 1628 to try and stop flow of gas to structure at 422/424 S 11<sup>th</sup> Street. I am of the opinion that without knowledge of the gas service to the front of structure (422/424 S 11<sup>th</sup> Street), Gas Operator personnel became convinced that the only gas line that could be involved was a 1½" PE main in the alley between Harney and Howard Streets west of South 11<sup>th</sup> Street. They were so convinced that they fixated on stopping the flow of gas to that main. It is my opinion that proper mapping and communication could have shortened the time interval for fire fighters to begin suppression.

Operator followed guidance in their Operations and Maintenance procedures to formulate a plan to close valves (shut down system) in an effort to limit interruption of service to other customers in the area.

Through a progressive process (close each valve individually to verify if gas was stopped to the fire), at least six valves were closed near 422 S 11<sup>th</sup> St until the service curb valve for 422/424 S 11<sup>th</sup> was identified and

## ***Pipeline Failure Investigation Report***

closed at 1628 hours 01/09/2016 (1 hour 38 minutes after event). I am of the opinion that with proper mapping available at the site, this time interval could have been shortened significantly.

Operator conducted leakage surveys in the area as prescribed in their Operations and Maintenance Procedures under leakage survey requirements and Emergency Plan.

Operator restored service to those customers not directly impacted by the event as early as practical, under current weather conditions.

Operator verified perceptible odorant levels in the supply of natural gas.

Operator started and continued to investigate the incident at commencement of emergency activities.

**Role of Operator Qualification and Procedures:** At this time it appears that personnel assigned the task of "locating pipeline" were qualified by the Gas Operator. A review of the qualifications for the task indicated that the evaluation of individuals included both written and hands-on proficiency. Documentation of both written and hands-on proficiency are available and meet requirements for documenting qualification. Re-qualification of individual is within acceptable time interval.

Procedures for completing the task are available to the individual within (Metropolitan Utilities District Engineering Services Locating Manual) revised August 2015.

The procedures clearly state guidance for straight facilities (as in the case for 422 S 11<sup>th</sup> Street). "Markings are to be made so at least three points are identified on each straight facility, the beginning, middle, and end. Intermediate markings should be made at approximately 20 foot intervals. The Locator may estimate or pace this distance. More frequent markings can be made at the Locator's discretion. Paint marking should be made to the facility is clearly marked but does not disturb the owner's property. When there is any doubt, make sure the facility is marked clearly."

The procedure does not give guidance as to size or shape of the paint marking to be used.

In the Operator's Operation and Maintenance Manual it states:

"The District's Locators are expected to locate all of the District's facilities in the work area as defined on the One Call ticket."

"The District's Locators have three methods to mark its facilities. These methods include paint, flags, and plastic line markers (whiskers). Each method has its own advantages. Paint has a degree of permanence, which is good, but that same permanence can cause complaints from residents. Flags are easily disturbed, but are highly visible. Plastic line markers are resistant to grass mowings and are not as visible as flags, and they can still be moved by others. Under no circumstance is the Locator to rely solely on verbal communication for the location of the District's facilities."

For the locate request dated 12/30/2015 the assigned Locator did not go to the specific site.

The Locator stated in correspondence that: "In projects of this type covering large areas, we normally call the Excavator to verify the exact location of services needed on that day". On this day the Locator contacted the excavator and was told that the marks on 11<sup>th</sup> Street were still good and that they didn't need him at 11<sup>th</sup> and Howard. The Excavator told the Locator at that time that they wanted the intersection of 13<sup>th</sup> and Leavenworth marked because that is where they would be going next.

## ***Pipeline Failure Investigation Report***

There are short cuts starting to creep into the general operating practices of the Locators; this activity needs to be corrected. In situations where there are large excavation projects covering multiple locate requests by the same excavator, there is a tendency for the Locator to contact (call by cell phone) excavator and inquire if locate marks are sufficient or readily apparent. However, this creates a safety problem because the excavator is not familiar with all of the Gas Operator's pipeline locations.

In the event of a refresh locate request, going to the site, reviewing the required mapping and visually observing that all gas facilities are or have been marked is the only way to verify the condition of markings and that those pipelines have been correctly marked.

In 2015 the gas operator responded to 96,129 locate requests. Records indicate that in 2015 the gas operator identified eight (8) instances where the root cause of the damage was "locating practices were not sufficient".

**Role of Damage Prevention:** Within CFR 49 Part §192.614, a damage prevention program is required. Each operator of a buried pipeline shall carry out, in accordance with this section, a written program to prevent damage to that pipeline by excavation activities. For the purpose of this section, "excavation activities" include excavation, blasting, boring, tunneling, backfilling, the removal of above ground structures by either explosive or mechanical means, or other earth moving operations.

This Gas Operator does have a "Damage Prevention Plan", within Metropolitan Utilities District O&M Procedure L614.0.

This Gas Operator is a member of the Nebraska One Call System.

This Gas Operator has a representative on the Nebraska One Call Board of Directors.

There is no reference to, or identification of, the specific guidance document (Metropolitan Utilities District Engineering Services Locating Manual) within the Damage Prevention plan.

There is inconsistency with statements within the Damage Prevention Plan and correlation/comparison with the Public Awareness Plan as to how the required information is delivered to the excavator/stakeholder audience.

Trenchless technology activities are not addressed within the current Damage Prevention Plan (O&M Procedure L614.0)

**Public Awareness Program:** This gas operator relies heavily on Nebraska811 to formulate and disseminate information to the excavator/stakeholder audience on a semi-annual basis. Current excavator list contains some 2,108 excavators.

### **The Role of Investigation of the Incident by gas operator to determine root cause.**

Gas operator conducted an investigation to determine root cause.

Gas operator indicated in a newspaper article that, in their opinion "Gas Facility Abandonment procedures were not followed in 2009, when the previous service was abandoned". If that procedure had been followed, there would have been less time committed to gaining entry into the abandoned service valve box and could have redirected effort in locating the existing and operational service valve. (The reference to procedures is: (M.727.0 Section D) "Abandonment of Vaults and Valve Boxes").





## Pipeline Failure Investigation Report

**Description of Property Damage:**

Damages to pipeline consisted of a 1½" x 1" oval opening upon a 2" service, necessitated removal of 33" of 2" PE piping, and loss of a "bank" of eight (8) meters and corresponding service regulators associated service valves and fittings.

Damages to "others" total loss of structure at 422 S 11<sup>th</sup> Street Omaha, NE

Customers out of Service:       Yes      \_\_\_ No      Number: 19

Suppliers out of Service:      \_\_\_ Yes       No      Number:

### Fatalities and Injuries   x

Fatalities:                      \_\_\_ Yes       No      Company:                      Contractor:

Public: Injuries - Hospitalization:      \_\_\_ Yes       No      Company:                      Contractor:

Public: Injuries - Non-Hospitalization:       Yes      \_\_\_ No      Company:                      Contractor:

Public: 2

Name	Job Function	Yrs. w/ Comp.	Yrs. Exp.	Type of Injury

### Drug/Alcohol Testing   N/A

Were all employees that could have contributed to the incident, post-accident tested within the 2 hour time frame for alcohol or the 32 hour time frame for all other drugs?

Yes       No      event happened outside of the 32 hour window

Job Function	Test Date & Time	Location	Results		Type of Drug
			Pos	Neg	

### System Description

**Describe the Operator's System:** Typical distribution piping system consisting of mains and services. A 6" coated steel main laying east and west on Harney street, interconnecting with 2" PE main tee'd from the 6" at Harney Street, lays south to Howard Street on east side of South 11<sup>th</sup> Street. A 1½" PE main interconnects with 2" PE main at alley between Harney and Howard laying east and west from S 12<sup>th</sup> Street to S 10<sup>th</sup> Street. The gas main was installed (inserted) into an abandoned 4" cast iron main in late 1960s. There is no tracer wire with this main.

There is a 2" PE gas service interconnected to the 2" PE main on east side of South 11<sup>th</sup> Street, serving a bank of meters eight (8) inside the structure at 422/424 S 11<sup>th</sup> Street.

M.U.D. mapping does not detail 2" PE service to 422/424 S 11<sup>th</sup> Street. There is an As-Built map available for the main and service line. GIS map of services in area of event is not consistent with actual piping arrangement.

All mains and services were operating at 9 psig at time of incident.

## Pipeline Failure Investigation Report

Pipe Failure Description	
Length of Failure (inches, feet, miles): _____ (1)	
Position (Top, Bottom, include position on pipe, 6 o'clock): (1) <b>(top) 10 o'clock to 1 o'clock segment of piping</b>	Description of Failure (Corrosion Gouge, Seam Split): (1) <b>Oval shaped segment of sidewall had been torn open upon the pipe sidewall.</b>
Laboratory Analysis:     ___ Yes <b><u>x</u></b> No	
Preservation of Failed Section or Component: <b><u>x</u></b> Yes     ___ No pipe <b>Segment has been removed from ground.</b> If Yes - Method: <b>Gas Operator has cut out segment and secure in storage, SFM has acquired pipe segment from operator</b>	
In Custody of: <b>Deputy State Fire Marshal 8738</b>	
Develop a sketch of the area including distances from roads, houses, stress inducing factors, pipe configurations, direction of flow, etc. Bar Hole Test Survey Plot, if included, should be outlined with concentrations at test points.	

Component Failure Description	
Component Failed: <b>2" PE pipe</b>	_____ <b>x</b> (1)
Manufacturer: <b>Driscoplex</b>	Model: <b>6500 Gas PE 100</b>
Pressure Rating: <b>MDPE 1250</b>	Size: <b>2"</b>
Other (Breakout Tank, Underground Storage):	

Pipe Data	
Material: <b>Polyethylene</b>	Wall Thickness/SDR: <b>11</b>
Diameter (O.D.): <b>2 375 sidewall 0.216</b>	Installation Date: <b>08/08/2009</b>
SMYS: <b>1250</b>	Manufacturer: <b>Driscoplex</b>
Longitudinal Seam: <b>NA</b>	Type of Coating: <b>na</b>
Pipe Specifications (API 5L, ASTM A53, etc.): <b>ASTMD2513</b>	

Joining	
Type:	_____ <b>NA</b>
Procedure:	
NDT Method: <b>pressure test</b>	Inspected: <b><u>x</u></b> Yes     ___ No

Pressure at Time of Failure at Failure Site				
Pressure Readings at Various Locations:			Direction from Failure Site	
Location/M.P./Station #	Pressure (psig)	Elevation (ft msl)	Upstream	Downstream
<b>11<sup>th</sup> &amp; Hickory</b>	<b>9 psig</b>		<b>x</b>	
<b>19<sup>th</sup> &amp; Manson</b>	<b>9 psig</b>		<b>x</b>	

## Pipeline Failure Investigation Report

Upstream Pump Station Data		__ N/A
Type of Product:	API Gravity:	
Specific Gravity:	Flow Rate:	
Pressure @ Time of Failure <sup>(4)</sup> :	Distance to Failure Site:	
High Pressure Set Point:	Low Pressure Set Point:	

Upstream Compressor Station Data		__ N/A
Specific Gravity:	Flow Rate:	
Pressure @ Time of Failure <sup>(4)</sup> :	Distance to Failure Site:	
High Pressure Set Point:	Low Pressure Set Point:	

Operating Pressure	
Max. Allowable Operating Pressure: 10 psig	Determination of MAOP: Pressure Test @ 100 psig 08/08/2009
Actual Operating Pressure: 9 psig	
Method of Over Pressure Protection: DRS (multiple feed)	Monitor type regulator system
Relief Valve Set Point: na	Capacity Adequate? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Integrity Test After Failure		SUI
Pressure test conducted in place? (Conducted on Failed Components or Associated Piping):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If No, tested after removal:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Method:		
Describe and failures during the test: <span style="background-color: yellow;">Test not yet completed, due to building collapse issues.</span> Damaged pipe segment removed 01/21/2016. Existing service line pipe capped, to be tested at latter date.		

Soil/water Conditions at Failure Site
Condition of and type of soil around Failure site (color, wet, dry, frost depth):

External Pipe or Component Examination	
External Corrosion? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>(1)</sup>	Coating Condition (Disbanded, Non-existent) PE material <sup>(1)</sup>
Description of Corrosion: Not an issue.	
Description of Failure Surface (Gouges, Arc Burns, Wrinkle Bends, Cracks, Stress Cracks, Chevrons, Fracture Mode, Point of Origin): Tear upon outer side wall (Oval) 1½" x 1" originating at 10 o'clock to 1 o'clock position upon pipe	
Above Ground: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>(1)</sup>	Buried: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <sup>(1)</sup>
Stress Inducing Factors: Directional drilling activities <sup>(1)</sup>	Depth of Cover: 34" <sup>(1)</sup>

## Pipeline Failure Investigation Report

<b>Cathodic Protection</b>		__ N/A
P/S (Surface): PE materials	P/S (Interface):	
Soil Resistivity: _____	pH: _____	Date of Installation: _____
Method of Protection: _____		
Did the Operator have knowledge of Corrosion before the Incident? ____ Yes ____ No		
How Discovered? (Close Interval Survey, Instrumented Pig, Annual Survey, Rectifier Readings, ECDA, etc.): _____		

<b>Internal Pipe or Component Examination</b>		__ SUI
Internal Corrosion: __ Yes __ <input checked="" type="checkbox"/> No PE material <sup>(1)</sup>	Injected Inhibitors: __ Yes ____ No	
Type of Inhibitors: _____	Testing: __ Yes ____ No	
Results (Coupon Test, Corrosion Resistance Probe): _____		
Description of Failure Surface (MIC, Pitting, Wall Thinning, Chevrons, Fracture Mode, Point of Origin): _____		
Cleaning Pig Program: __ Yes ____ No		
Gas and/or Liquid Analysis: __ Yes ____ No		

<b>Internal Pipe or Component Examination</b>		__ NA
Results of Gas and/or Liquid Analysis <sup>(6)</sup> _____		
Internal Inspection Survey: __ Yes ____ No	Results <sup>(7)</sup> _____	
Did the Operator have knowledge of Corrosion before the Incident? ____ Yes ____ No		
How Discovered? (Instrumented Pig, Coupon Testing, ICDA, etc.): _____		

<b>Natural Forces</b>
NA

## Pipeline Failure Investigation Report

Outside Force Damage		SUI
Responsible Party: North Central Service Inc		Telephone No.: 218-444-3855
Address: 5487 Hart Lane, Bemidji, MN 56601		
Work Being Performed: Directional Drilling Installation of fiber optic cable for United Private Networks		
Equipment Involved: Directional Drilling power Unit and drill stem with reamer. (1)	Called One Call System? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
One Call Name: Nebraska811	One Call Report # (8) 153640287 refresh	
Notice Date: 12/30/2015	Time: 11 50 am CST	
Response Date: 01/04/2016	Time:	
Details of Response: Gas operator locator did not travel to location and marked gas mains and services.		
Original locate request #153271405 Dated 11/23/2015 (locator was Dick Costello) Refresh Ticket #153430856 dated 12/09/2015 Locate entire west ROW North of South 11 <sup>th</sup> Street starting at Harney going south to Howard Street (locator was Chris Sacco) Refresh ticket #153640287 dated 12/30/15 work to begin 01/04/2016 (locator was Ron Jankowski) Indicated that locator is (regarding the refresh ticket #153640287). Ron Jankowski contacted excavator for MUD on 01/04/2016. Did not refresh area		
Was Location Marked According to Procedures? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Service for 422/424 was not located or marked		
Pipeline Marking Type: Paint on hard surface (1)	Location: All mains and services from Harney to Howard Street on South 11 <sup>th</sup> Street, and in alley between Harney & Howard between S 11 <sup>th</sup> and S 12 <sup>th</sup> Streets (1)	
State Law Damage Prevention Program Followed? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No State Law Operator failed to locate pipeline		
Notice Required: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Response Required: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Was Operator Member of State One Call? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Was Operator on Site? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Did a deficiency in the Public Awareness Program contribute to the accident? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is OSHA Notification Required? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No OSHA was notified		

Failure Isolation		X
Squeeze Off/Stopple Location and Method: (1)		
Service curb valve closed for 422/424 S 11 <sup>th</sup> St		
Valve Closed - Upstream:	I.D.:	
Time: 1628 CST	M.P.:	
Valve Closed - Downstream:	I.D.:	
Time:	M.P.:	
Pipeline Shutdown Method: <input checked="" type="checkbox"/> Manual <input type="checkbox"/> Automatic <input type="checkbox"/> SCADA <input type="checkbox"/> Controller <input type="checkbox"/> ESD		
Failed Section Bypassed or Isolated: Isolated		
Performed By: MUD	Valve Spacing: adequate	

## Pipeline Failure Investigation Report

Odorization <span style="float: right;">__ X</span>	
Gas Odorized: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Concentration of Odorant (Post Incident at Failure Site):
Method of Determination: <input type="checkbox"/> Yes <input type="checkbox"/> No <i>Public acknowledgement of odor in air prior to event.</i>	% LEL: <input type="checkbox"/> Yes <input type="checkbox"/> No    % Gas In Air: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Was Odorizer Working Prior to the Incident? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Time Taken: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>1/09/2016 – 1/10/2016</i>
Odorant Manufacturer: Model:	Type of Odorizer (Wick, By-Pass): <i>Injection</i>
Amount Injected:	Monitoring Interval (Weekly): <i>Daily Volume; Bi-Monthly for perception</i>
Odorization History (Leaks Complaints, Low Odorant Levels, Monitoring Locations, Distances from Failure Site): <i>Odorant perception test conducted after incident 01/09/2016 at 4 points around area in same gas system. Measuring 0.49 to 0.59 % gas in air. Odorant perception test conducted in area, most recently, 11/07/2015, 01/06/2016</i>	

Weather Conditions <i>1400 hrs 01/09/2016</i> <span style="float: right;">X</span>	
Temperature: <i>1200 hours to 1800 hours 11°F to 7°F</i>	Wind (Direction & Speed): <i>N/NNW (shifting) 23-22 gust 32</i>
Climate (Snow, Rain): <i>Mostly Cloudy</i>	Humidity: <i>67 to 70%</i>
Was Incident preceded by a rapid weather change? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>24 hours below 32°F</i>	
Weather Conditions Prior to Incident (Cloud Cover, Ceiling Heights, Snow, Rain, Fog): <i>cloud cover, 24 hours below 32°F</i>	

Gas Migration Survey <span style="float: right;">X</span>	
Bar Hole Test of Area: <input type="checkbox"/> Yes <input type="checkbox"/> No	Equipment Used:
Method of Survey ( <i>Foundations, Curbs, Manholes, Driveways, Mains, Services</i> )  <i>Area survey with RMLD &amp; FI no reported additional leaks</i> <span style="float: right;">(1)</span>	

Environment Sensitivity Impact <span style="float: right;">__ NA</span>	
Location (Nearest Rivers, Body of Water, Marshlands, Wildlife Refuge, City Water Supplies that could be or were affected by the medium loss): <i>Negative</i> <span style="float: right;">(1)</span>	
OPA Contingency Plan Available? <input type="checkbox"/> Yes <input type="checkbox"/> No	Followed? <input type="checkbox"/> Yes <input type="checkbox"/> No

Class Location/High Consequence Area <span style="float: right;">__ X</span>	
Class Location: 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input checked="" type="checkbox"/>	HCA Area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
Determination: <i>Distribution System</i>	Determination:
Odorization Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<i>Distribution System</i>

## Pipeline Failure Investigation Report

<b>Pressure Test History</b> <span style="float: right;">_ x</span>						
<i>(Expand List as Necessary)</i>						
	Req'd <sup>(10)</sup> Assessment Deadline Date	Test Date	Test Medium	Pressure (psig)	Duration (hrs)	% SMYS
Installation		08/08/2009	air	100	1/2	1250
Next						
Next						
Most Recent						
Describe any problems experienced during the pressure tests. <span style="color: red;">No remarks of issues</span>						

<b>Internal Line Inspection/Other Assessment History</b> <span style="float: right;">_ N/A</span>					
<i>(Expand List as Necessary)</i>					
	Req'd <sup>(10)</sup> Assessment Deadline Date	Assessment Date	Type of ILI Tool <sup>(11)</sup>	Other Assessment Method <sup>(12)</sup>	Indicated Anomaly If yes, describe below
Initial					_ Yes _ No
Describe any previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions. <span style="float: right;">_ x</span>					

<b>Pre-Failure Conditions and Actions</b>
Was there a known pre-failure condition requiring <sup>(10)</sup> the operator to schedule evaluation and remediation? <input type="checkbox"/> Yes (describe below or on attachment) <input checked="" type="checkbox"/> No
If there was such a known pre-failure condition, had the operator established and adhered to a required <sup>(10)</sup> evaluation and remediation schedule? Describe below or on attachment. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Prior to the failure, had the operator performed the required <sup>(10)</sup> actions to address the threats that are now known to be related to the cause of this failure? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A List below or on an attachment such operator identified threats, and operator actions taken prior to the accident.
Describe and previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions. <span style="color: red;">Scheduled periodic leak survey, most recent completed 09/10-11/2015, no leaks indicated</span>

<b>Maps and Records</b> <span style="float: right;">_ x</span>
Are Maps and Records Current? <sup>(13)</sup>
Comments: <span style="color: red;">GIS system availability, gas service line does not show on GIS mapping As-Built Drawing is available.</span>



## Pipeline Failure Investigation Report

### Leak Survey History

Leak Survey History (Trend Analysis, Leak Plots):

Old Market area leak surveyed 9/10-11/2015 no reported underground leaks

### Pipeline Operation History

Description (Repair or Leak Reports, Exposed Pipe Reports):

Service replaced on 08/08/2009 (service card available). Old service abandoned in place (card available).

Did a Safety Related Condition Exist Prior to Failure?  Yes  No

### Operator/Contractor Error

\_\_\_ N/A

Name: Ron Jankowski

Job Function: Locator

Title: Field Services Technician (Locator)

Years of Experience: >5

Training (Type of Training, Background): Computer based training, 1 week classroom, 2 weeks in field OJT with other Operator Qualified individual, locator seminars.

Was the person "Operator Qualified" as applicable to a precursor abnormal operating condition?  Yes  No  N/A

Was qualified individual suspended from performing covered task  Yes  No  N/A

Type of Error (Inadvertent Operation of a Valve): Failed to locate pipeline

Procedures that are required: recommended procedures from (metropolitan Utilities District Engineering Services Locating Manual. Subsection 5

Actions that were taken:

Pre-Job Meeting (Construction, Maintenance, Blow Down, Purging, Isolation):

Prevention of Accidental Ignition (Tag & Lock Out, Hot Weld Permit):

Procedures conducted for Accidental Ignition:

Was a Company Inspector on the Job?  Yes  No

Was an Inspection conducted on this portion of the job?  Yes  No

Additional Actions (Contributing factors may include number of hours at work prior to failure or time of day work being conducted): Contacted excavator by phone inset of going to site

Training Procedures:

Operation Procedures:

Controller Activities: Not a contributing factor

Name	Title	Years Experienc	Hours on Duty Prior to Failure	Shift

Alarm Parameters:

High/Low Pressure Shutdown:

Flow Rate:

Procedures for Clearing Alarms:

Type of Alarm:

Company Response Procedures for Abnormal Operations:

## Pipeline Failure Investigation Report

### Additional Actions

Make notes regarding the emergency and Failure Investigation Procedures (Pressure reduction, Reinforced Squeeze Off, Clean Up, Use of Evacuators, Line Purging, closing Additional Valves, Double Block and Bleed, Continue Operating downstream Pumps):

Additional valves closed, limiting interruption of service to other customers.  
 Leak survey conducted in immediate area.  
 Odorant perception survey conducted.

### Additional Information

Agency	Name	Title	Phone Number
Police:			
Fire Dept.: Omaha	Douglas Krysl	Battalion Chief/Fire Investigations Unit	402-444-1952
	David Sobotka Jr.	Omaha Fire Investigations	
	Donald Dooley	Omaha Fire Investigations	
	Gregory Greave	Omaha Fire Investigations	
	Jay Davis	Omaha Plans/ Bldg. Inspections	
State Fire Marshal:	Stephen Lucas	Deputy State Fire Marshal	
	Regina Shields	General Counsel/State Fire Marshal	
	Kevin Bumgardner	Deputy State Fire Marshal	
	Clark Conklin	Chief, Fuels Division	
NTSB:			
EPA:			
USCG:			
FBI:			
ATF:			
OSHA:	Scott Jacobson		
Insurance Co.:	Ken Scurto	Investigator	
FRA:			
MMS:			
Television:			
Newspaper:			
Other:	Chuck Hoffman	Investigator	

## Pipeline Failure Investigation Report

### Persons Interviewed

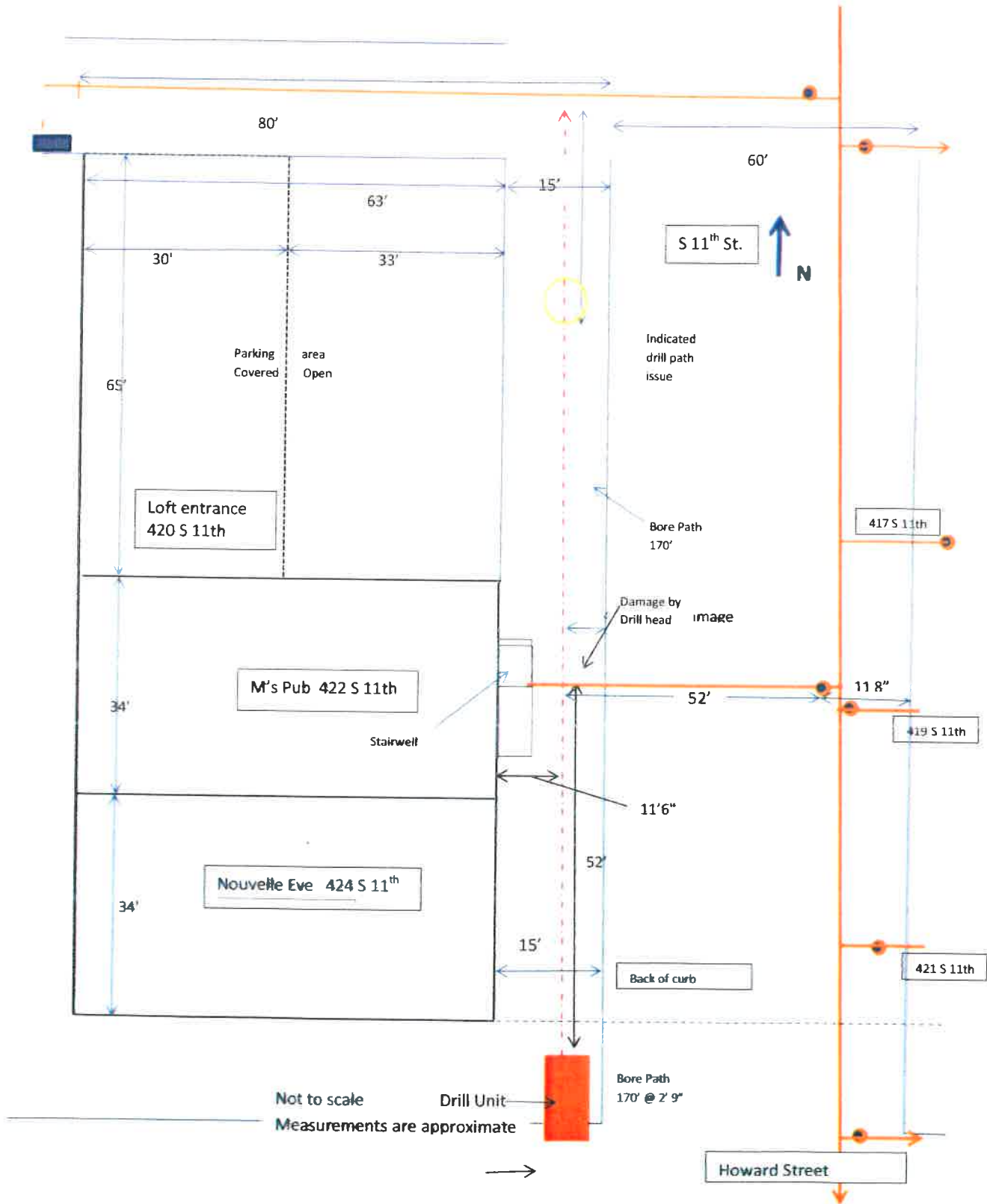
Name	Title	Phone Number
Dan Osterdyk	Supervisor/North Central Services	
Mike Conrad	Supervisor/Metropolitan Utilities District	
Mike Kolterman	Directional drill locator/North Central Services	
Denise Dolezal	Senior Gas Design Engineer-Compliance/GIS	
David Stroebele	Supervisor, Field Engineering /M.U.D.	
Dick Costello	Locator/ M.U.D.	
Chris Sacco	Locator/ M.U.D.	
Ron Jankowski (statement)	Locator/ M.U.D.	
Steve Osmera (written)	Field Technician/ M.U.D.	
Al Kruse	Field Services/M.U.D.	
Ron Charvat	Special Customer Service Technician/M.U.D.	

### Failure Investigation Documentation Log

Operator: Metropolitan Utilities District		Unit #: MUD	CPF #:	Date: 2016	
Appendix Number	Documentation Description	Date		FOI	
		Received		Yes	N
	Map segment "Old Market Area (PDF)	01/19/16			
	11 <sup>th</sup> & Hickory Pressure chart (copy) PDF	01/19/16			
	19 <sup>th</sup> & Mason Pressure chart (copy) PDF	01/19/16			
	422 S 11 <sup>th</sup> Fire Odorant test 1-09-16 (PDF)	01/20/16			
	422 S 11 <sup>th</sup> Fire Odorant test 1-11-16 (PDF)	01/20/16			
	Copy of Fire Area Odorant tests 2015 XLS	02/03/16			
	422/424 S 11 <sup>th</sup> St -0.75 Aldyl-A Service Card 1969 cut off (PDF)	01/19/16			
	422/424 S 11 <sup>th</sup> St -1.5 Galvanized LP - Recon 10 psig Service Card	01/19/16			
	422/424 S 11 <sup>th</sup> St -2.0 MD PE 10 psig Service Card (PDF)	01/19/16			
	081115 Field Service leak survey (PDF)	01/19/16			
	MUD Night Clerk Report (PDF)	01/13/16			
	PG-92 Operator Qualification Chris Sacco (PDF)	01/19/16			
	PG-92 Operator Qualification Dick Costello (PDF)	01/19/16			
	PG-92 Operator Qualification Ron Jankowski (PDF)	01/20/19			
	Steve Osmera statement (PDF)	01/21/16			
	M.U.D. 8 2015 Locating Guidelines	02/04/16			
	M.U.D. Operation and Maintenance Procedures	01/11/16			
	M.U.D. Emergency Notification Procedures	01/13/16			
	Ron Janowski correspondence	01/22/16			
	Chain of custody report	01/25/16			
	M.U.D. Public Awareness Plan	01/26/16			

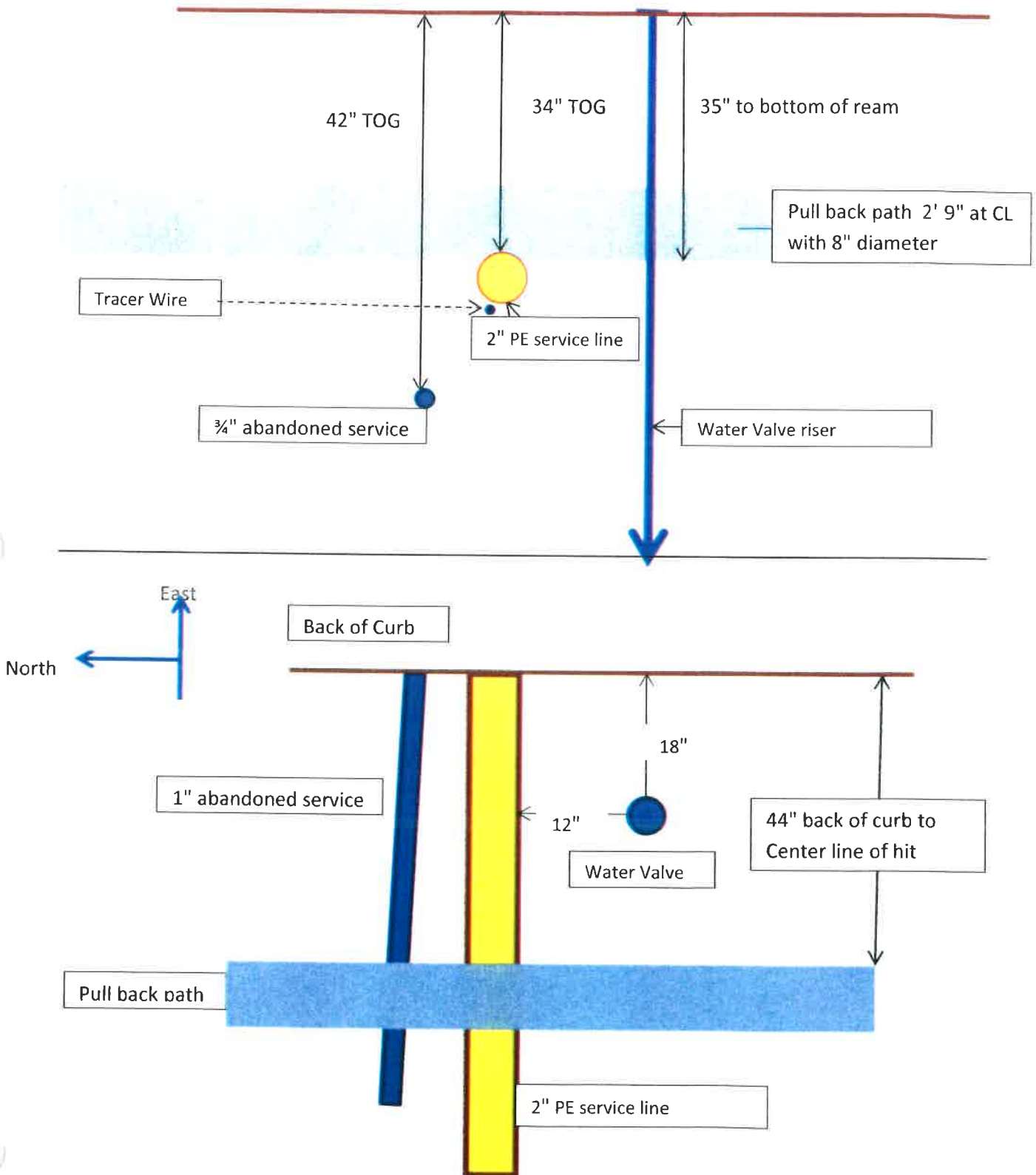


# Pipeline Failure Investigation Report



# Pipeline Failure Investigation Report

DIAGRAM of visual examination of damage area





search indicated that North Central Service followed the one-call requirements and was in compliance with the one-call statutes for excavation in Nebraska. A search of the Metropolitan Utility District response ticket documentation, showed that Ron Jankowski responded to ticket number 153640287 ( a request by North Central Service to refresh the marks) with the comment of "unable to locate/marked from previous ticket." This refresh ticket was submitted by North Central Service on December 30<sup>th</sup> at 11:50 am by Daryl Holter and was responded to by MUD January 4<sup>th</sup> around 1:38 pm.

I also inspected the Damage Prevention and the Public Awareness Plan of Metropolitan Utility District and found the concerns detailed below.

In the Damage Prevention Plan, I found the plan does not reference the public awareness program requirements for communicating with excavators for safe excavation as well as no reference to directional drilling or other trenchless technology when operations are conducted in proximity to underground gas pipeline facilities per ADB-99-04 advisory bulletin issued by United States Department of Transportation's Pipeline and Hazardous Material Safety Administration (PHMSA). PHMSA issued this advisory bulletin to owners and operators of natural gas and hazardous liquid pipeline systems to advise them to review, and amend if necessary, their written damage prevention program to minimize the risks associated with directional drilling and other trenchless technology operations near buried pipelines. The issuance of the advisory bulletin followed several pipeline incidents involving trenchless technology operations which resulted in loss of life, injuries, and significant property damage. It also corresponded to National Transportation Safety Board (NTSB) Safety Recommendation P-99- 1, which suggested that PHMSA ensure that the operators' damage prevention programs include actions to protect their facilities when directional drilling operations are conducted in proximity to those facilities. This advisory bulletin emphasizes the importance of having procedures to mitigate the risks of directional drilling and other trenchless technology.

The incident investigation from Deputy Bates included photographs of the incident at M's Pub. The investigation report shows evidence that MUD failed to mark their facilities. My investigation of the one-call ticket search shows that there were three separate requests from North Central Service requesting that the underground utilities, including the natural gas service, be marked in the area of 442 S 11<sup>th</sup> Street.

### **CONCLUSION:**

On January 9<sup>th</sup> around 2:45 pm, North Central Service hit and damaged an unmarked natural gas service line operating at 9 psi causing a release of natural gas which resulted in an explosion and fire that destroyed a structure at 422 S 11<sup>th</sup> Street Omaha, NE. An investigation into this incident was conducted by the State Fire Marshal Agency. This investigation resulted in the following determinations:

There were no violations of the requirements of the One Call Notification System Act committed by North Central Service.

I believe there is probable violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 191, 192, 199, & 40 by MUD.

MUD failed to mark their facilities as required by Neb. Rev. Stat. 76-2323. MUD is in non-compliance with Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Title 49 Code of Federal Regulations Part 192.605 and 192.614

MUD personnel did not travel to 422 S 11<sup>th</sup> Street for locating and marking the natural gas pipeline supplying natural gas to this structure for locate request ticket 153640287.



MUD personnel failed to mark the gas pipeline for 422 S 11<sup>th</sup> Street per procedure in the Metropolitan Utilities District Operations and Maintenance Procedures.

**§192.605 Procedural manual for operations, maintenance, and emergencies**

Each operator shall include the following in its operating and maintenance plan:

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

**§192.614 Damage prevention program.**

(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:

(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins

**76-2323. Underground facilities; mark or identify.**

(1) Upon receipt of the information contained in the notice pursuant to section 76-2321, an operator shall advise the excavator of the approximate location of underground facilities in the area of the proposed excavation by marking or identifying the location of the underground facilities with stakes, flags, paint, or any other clearly identifiable marking or reference point and shall indicate if the underground facilities are subject to section 76-2331. The location of the underground facility given by the operator shall be within a strip of land eighteen inches on either side of the marking or identification plus one-half of the width of the underground facility. If in the opinion of the operator the precise location of a facility cannot be determined and marked as required, the operator shall provide all pertinent information and field locating assistance to the excavator at a mutually agreed to time. The location shall be marked or identified using color standards prescribed by the center. The operator shall respond no later than two business days after receipt of the information in the notice or at a time mutually agreed to by the parties.

(2) The marking or identification shall be done in a manner that will last for a minimum of five business days on any nonpermanent surface and a minimum of ten business days on any permanent surface. If the excavation will continue for longer than five business days, the operator shall remark or reidentify the location of the underground facility upon the request of the excavator. The request for remarking or reidentification shall be made through the center.

(3) An operator who determines that it does not have any underground facility located in the area of the proposed excavation shall notify the excavator of the determination prior to the date of commencement of the excavation.

<b>Deputy Name:</b> Kevin Bumgardner	<b>Signature:</b>		
<b>Agency Address:</b> 246 South 14 <sup>th</sup> Street	<b>City:</b> Lincoln	<b>State:</b> NE	<b>Zip:</b> 68508

**END OF REPORT**

NEBRASKA STATE FIRE MARSHAL  
246 S. 14<sup>th</sup> Street  
Lincoln, NE 68508

**INVESTIGATIVE SUPPLEMENTAL REPORT**

**Case #:** IR# 160031

**Date of Report:** 04/15/16

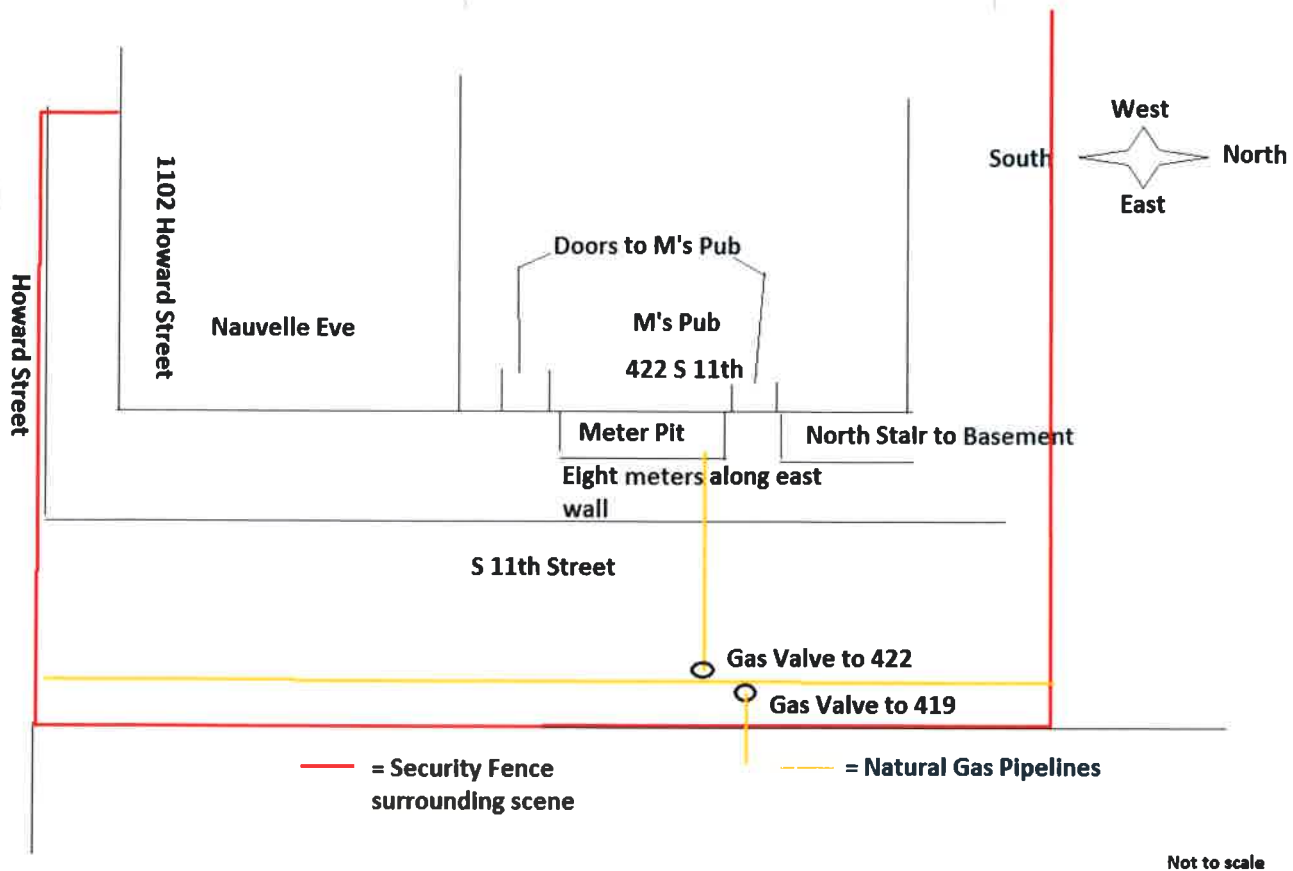
**Date of Incident:** 01/09/16

**BODY OF REPORT:**

On April 13<sup>th</sup>, Deputy Arnie Bates, Deputy Kevin Bumgardner, insurance investigators and property owners were present at 422 S 11<sup>th</sup> Street, Omaha to look at accessing the meter sets that supply natural gas to the 422 S 11<sup>th</sup> and adjoining buildings. The group conducted a safety meeting starting at 9:00 am and then allowed photographs to be taken at stages leading up to uncovering the meter pit in front of 422. The day progressed slowly allowing every event to be documented. At around 9:40 am, Deputy Bates brought in the damaged PE pipe secured as evidence to be photographed by investigators. Around 10:15 am, the City of Omaha crew started preparations to remove the steel plate approximately four foot by eight foot that covered the meter pit in front of the structure. While waiting for the meters to be uncovered, this deputy took photos of the sign in sheets to record the individuals present this day. Around 10:30 am the city crew had raised the east side of the steel plate approximately six inches to allow a view into the meter pit. This deputy took a few photos however the exposed area was difficult to photograph. Around 10:45 am the crew started to cut the steel plate in half to gain access to the meter pit. Around 11:20 am, the north half of the steel plate was removed and investigators got their first look at the meter pit. By 12:00 pm the south half of the steel plate was removed. Everyone broke for lunch and was to return by 1:15 pm. The afternoon safety meeting started at 1:15 pm, the plan was to access the meter pit by ladder to inspect and photograph the meter sets. A concern was brought up about confined space and if it was safe to enter the pit by ladder, the City of Omaha contacted the Omaha Fire Department Confined Space team to inspect the meter pit. Around 3:00 pm, investigators had access to the meter pit and were using a ladder to access the pit for inspection and photographs. Around 4:00, Deputy Bates and I completed the investigation and left the scene.

**CONCLUSION:**

On April 13<sup>th</sup> the City of Omaha allowed access to the site of 422 S 11<sup>th</sup> Street, by afternoon the meter pit in front of 422 had the steel plate removed to allow access to inspect the natural gas meters that supplied natural gas to the building as well as adjacent building. This allowed investigators to inspect and photograph the meter sets involved in this incident. Photographs were taken throughout the day.



<b>Deputy Name:</b> Kevin Bumgardner	<b>Signature:</b>
<b>Agency Address:</b> 246 South 14 <sup>th</sup> Street	<b>City:</b> Lincoln
<b>State:</b> NE	<b>Zip:</b> 68508

**END OF REPORT**

# Pipeline Failure Investigation Report

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## Pipeline Failure Investigation Report

### Attachment 1A: Basic time line for event at 422 S 11<sup>th</sup> Street, Omaha, Nebraska

Based upon available information from verbal statements, not all time intervals have been independently confirmed at this time. January 09, 2016

- 1435 (unsubstantiated) Beckie Lefler, who lives in the condominiums above the Market House restaurant on Howard Street, said she smelled gas before the explosion. She said when she came home on Saturday, about 2:35 p.m.; she was hit by a wave of gas fumes when she got out of her car. She said she knew something was wrong and rushed into the building to warn her neighbors. There are 12 condos above Market House; there was one business office/apartment; five apartments; and a private living area above M's Pub.
- 1450 Call made from Dan Osterdyk (North Central Services Inc.) to Omaha 911, reporting the explosion. Second call logged in at Douglas County 911 Center.
- 1451 Omaha Fire: Fire crews were dispatched to a possible explosion at 422 S. 11th St. "Upon arrival, crews found fire coming from the basement of the building and could smell natural gas at that time in the area."
- 1452 MUD's Dispatch Office heard on the scanner of a working fire at 422 S. 11th St., with a possible building explosion with natural gas involved.
- 1453 MUD Dispatch notified technicians.
- 1516 MUD technician (Steve Osmera) arrived on scene and proceeds with the process to shut down the gas main and services.
- 1518 MUD technician contacts MUD dispatch, indicates to call all available personnel.
- 1519 MUD dispatch contacts Mike Conrad.
- 1524 MUD technicians concentrate efforts on removing valve cover on (abandoned service) in front of 422 S 11<sup>th</sup> Street. Valve is turned, fire does not suppress. Technicians consult with excavator about main in alley. Technicians still only see valves on main from computer screen; believe gas is being fed from main in alley. MUD technicians close service valve feeding bank of meters for (M's Pub) 422 S 11<sup>th</sup> St. Fire does not suppress.
- 1530-1630 (approximately) additional MUD technicians were on site to check atmosphere levels in the adjoining buildings, underground vaults and sewers. Technicians completed a gas leak survey of the surrounding area and detected no leaks. This is part of the procedure to ensure people are not put into further danger at the incident site. MUD technicians also drove a gas leak survey truck to check sewers and vaults about a block and a half around the affected area, and no leaks were detected.
- 1537 MUD closes valve on 2" main at alley South 11<sup>th</sup> Street between Harney and Howard Streets (feed to meter bank) fire does not suppress.
- 1538 MUD Dispatch contacts State Fire Marshal Deputy Arnie Bates (SFM 8738).
- 1539 DSFM Bates to Fuels Division Chief Clark Conklin in reference to 422 S 11<sup>th</sup> St., Omaha.
- 1540 MUD Mike Conrad, at Harney and 11<sup>th</sup> St, initiates action to get As-Built Drawing to this location. (As-Built Drawing is located at 3100 S 61<sup>st</sup> Street).

## Pipeline Failure Investigation Report

- 1543 Omaha Fire: A second alarm was called.
- 1600 Additional personnel arrive on scene.
- 1610 MUD technicians close valve (GV 3000623) on main at South 12<sup>th</sup> Street between Harney and Howard (west feed to main in alley) and closes valve (GV 30010652) on main feeding gas from east into alley. Fire does not suppress.
- 1615 DSFM Bates in route to Omaha.
- 1622 DSFM Bates to SFM Call Out Phone.
- 1627 MUD identifies, locates and closes Service Curb valve for meter # 440599 (inside meter) 422/424 South 11<sup>th</sup> Street.
- 1628 Omaha Fire: Fire Department said the Metropolitan Utilities District controlled the natural gas.
- 1645-1650 MUD technicians close service valves for meters in alley (between S 11<sup>th</sup> and S 12<sup>th</sup>).
- 1700 MUD representative Mike Conrad contacts NRC for reporting incident.
- 1800 MUD personnel restore gas pressure to main in alley (between S 11<sup>th</sup> & S 12<sup>th</sup>).
- 1824 Omaha Fire reports: One person slipped on the ice and was transported to a hospital.
- 1830-1115 MUD personnel have figured out what all has been shut off and begin restoring service to apartments on Harney Street.
- 1838 DSFM Bates on scene Harney and S 11<sup>th</sup> St.
- 1848 DSFM Bates contacts Incident Commander at Howard and S 11<sup>th</sup> St IC.
- 1910 DSFM Bates initial contact with MUD.
- 1916 DSFM Bates interview with excavator (North Central Services Inc.: Dan Osterdyk).
- 1925 DSFM Bates checks voice mails.
- 1926 Omaha Fire: called a third alarm – calling additional engines and firefighters to the scene.
- 1927 DSFM Bates call to Chief Conklin.
- 1957 DSFM Bates interview with MUD Mike Conrad.
- 2049 DSFM Bates call to Chief Conklin
- 2115 DSFM Bates departs area.
- 2230 Omaha Fire: The roof of the M's Pub building collapsed

Reported one (1) individual transported by ambulance, one (1) individual transported by private vehicle to University Medical Center (Inv. Dullely, Omaha Fire has more information) later reported "treated & released".

firefighter injuries were reported.

# Pipeline Failure Investigation Report

## Attachment 2: Hourly Weather History and Observations starting January 8, 2016 12:52 AM thru 11:52 PM January 9, 2016

Time (CST)	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	24.1 °F	9.4 °F	19.0 °F	81%	30.05 in	10.0 mi	North	20.7 mph		N/A		Overcast
1:20 AM	21.9 °F	8.2 °F	18.0 °F	85%	30.02 in	10.0 mi	North	16.1 mph		N/A		Scattered Clouds
1:37 AM	23.0 °F	9.2 °F	19.0 °F	85%	30.02 in	10.0 mi	NNW	17.3 mph		N/A		Mostly Cloudy
1:52 AM	23.0 °F	9.6 °F	17.1 °F	78%	30.06 in	10.0 mi	NNW	16.1 mph		N/A		Mostly Cloudy
2:52 AM	21.9 °F	6.2 °F	16.0 °F	78%	30.06 in	10.0 mi	North	21.9 mph		N/A		Overcast
3:52 AM	19.9 °F	3.2 °F	15.1 °F	81%	30.04 in	10.0 mi	North	23.0 mph	28.8 mph	N/A		Overcast
4:52 AM	18.0 °F	1.7 °F	12.0 °F	78%	30.13 in	10.0 mi	NNW	19.6 mph		N/A		Overcast
5 AM	14.0 °F	-3.0 °F	8.1 °F	77%	30.17 in	10.0 mi	NNW	18.4 mph		N/A		Overcast
6:52 AM	12.0 °F	-5.6 °F	6.1 °F	77%	30.17 in	10.0 mi	NNW	18.4 mph		N/A		Overcast
7:52 AM	9.0 °F	-10.5 °F	3.9 °F	80%	30.18 in	10.0 mi	NNW	20.7 mph		N/A		Scattered Clouds
8:52 AM	8.1 °F	-12.6 °F	1.9 °F	76%	30.22 in	10.0 mi	NNW	23.0 mph		N/A		Scattered Clouds
9:52 AM	9.0 °F	-11.8 °F	1.9 °F	73%	30.23 in	10.0 mi	North	24.2 mph	28.8 mph	N/A		Scattered Clouds
10:52 AM	10.0 °F	-9.1 °F	3.0 °F	73%	30.24 in	9.0 mi	NNW	20.7 mph	28.8 mph	N/A		Mostly Cloudy
11:52 AM	10.9 °F	-10.6 °F	3.0 °F	70%	30.22 in	10.0 mi	NNW	28.8 mph	33.4 mph	N/A		Scattered Clouds
12:41 PM	10.9 °F	-8.3 °F	3.0 °F	70%	30.17 in	10.0 mi	North	21.9 mph		N/A		Mostly Cloudy
12:52 PM	10.9 °F	-8.8 °F	3.0 °F	70%	30.22 in	10.0 mi	North	23.0 mph		N/A		Mostly Cloudy



## Pipeline Failure Investigation Report

Time	Temp.	Windchill	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
1:52 PM	10.9 °F	-8.3 °F	3.0 °F	70%	30.22 in	10.0 mi	NNW	21.9 mph	-	N/A	-	Mostly Cloudy
2:52 PM	10.0 °F	-9.5 °F	1.0 °F	67%	30.24 in	10.0 mi	North	21.9 mph	32.2 mph	N/A	-	Mostly Cloudy
3:52 PM	10.0 °F	-9.1 °F	1.9 °F	70%	30.26 in	10.0 mi	NNW	20.7 mph	-	N/A	-	Mostly Cloudy
4:52 PM	10.0 °F	-9.1 °F	1.0 °F	67%	30.27 in	10.0 mi	NNW	20.7 mph	-	N/A	-	Mostly Cloudy
5:52 PM	7.0 °F	-13.6 °F	-0.9 °F	70%	30.29 in	10.0 mi	NNW	21.9 mph	-	N/A	-	Mostly Cloudy
6:28 PM	5.0 °F	-15.7 °F	-2.0 °F	73%	30.24 in	10.0 mi	NNW	20.7 mph	-	N/A	-	Scattered Clouds
6:52 PM	3.9 °F	-15.0 °F	-2.9 °F	73%	30.32 in	10.0 mi	NNW	16.1 mph	-	N/A	-	Scattered Clouds
7:52 PM	3.0 °F	-18.8 °F	-5.1 °F	69%	30.34 in	10.0 mi	NNW	21.9 mph	-	N/A	-	Scattered Clouds
8:52 PM	1.9 °F	-17.5 °F	-5.1 °F	72%	30.35 in	10.0 mi	NNW	16.1 mph	-	N/A	-	Scattered Clouds
9:52 PM	1.9 °F	-19.2 °F	-6.0 °F	69%	30.35 in	10.0 mi	NNW	19.6 mph	-	N/A	-	Partly Cloudy
10:52 PM	-0.0 °F	-23.3 °F	-8.0 °F	69%	30.36 in	10.0 mi	NNW	23.0 mph	-	N/A	-	Clear
11:52 PM	-0.0 °F	-20.1 °F	-8.0 °F	69%	30.37 in	10.0 mi	NNW	16.1 mph	-	N/A	-	Clear

Longitude / Latitude of drill line

### Measurements

Start of drill point	Hit	End point of drill
Latitude	41.255592	41.255701 45.256041
Longitude	-95.930659	95.930657 95.930669

## Pipeline Failure Investigation Report

<b>Attachment 3A: Photo Documentation of Initial Investigation, January 9 &amp; 10, 2016</b>			
<b>Photo Documentation <sup>(1)</sup></b>			
Photo No.	422 South 11 <sup>th</sup> Street Omaha Description 1/09/16	Photo No.	Description 1/10/16
0834	Omaha Fire SOU.	0871	From center of S 11 <sup>th</sup> Street at Howard look north at southwest corner of M's Pub.
0835	Harney/ South 11 <sup>th</sup> .	0872	From center of S 11 <sup>th</sup> Street at Howard look north at southwest corner of M's Pub.
0836	Look west on Howard.	0873	From center of S 11 <sup>th</sup> Street at Howard look north at southwest corner of M's Pub.
0837	MUD vehicle Howard/S 11 <sup>th</sup> .	0874	From southeast corner Howard/S 11 <sup>th</sup> Street look at Northwest corner of M's Pub.
0838	Mike Conrad vehicle.	0875	From southeast corner Howard/S 11 <sup>th</sup> Street look at Northwest corner of M's Pub.
0839	From alley Howard/Harney on S 11 <sup>th</sup> East side towards SE corner of M's Pub	0876	From northeast corner of Howard & S 11 <sup>th</sup> look at center of M's Pub.
0840	East side of S 11 <sup>th</sup> , look west at center of M's Pub	0877	1019 Howard Street, south side.
0841	East side S 11 <sup>th</sup> , look southwest corner of M's Pub.	0878	Service for 1019 Howard Street.
0842	East side of 11 <sup>th</sup> /Harney Street, look southwest corner of M's Pub: bore machine stem in ground.	0879	Previous exposed crossing gas service 1019 Howard Street.
0843	West side of Howard/ Northside of S 11 <sup>th</sup> : look north along front of M's Pub.	0880	East side of South 11 <sup>th</sup> Street across from M's Pub.
0844	Howard / S 11 <sup>th</sup> .	0881	Look north at M's Pub, to bottom of pic is service curb valve for M's Pub (422/424 S 11 <sup>th</sup> )
0845	Look north from Howard / west S 11 <sup>th</sup> at rear of bore unit.	0882	Look north at M's Pub, to bottom of pic is service curb valve for M's Pub (422/424 S 11 <sup>th</sup> ).
0846	Front of bore unit, stem in ground.	0883	Valve for M's Pub centered, other valve for the boutique (419 S 11 <sup>th</sup> )
0847	Bore unit trailer tag.	0884	Marking under ice for the boutique service 419 S 11 <sup>th</sup> Street.
0848	Bore truck tag.	0885	Two inches of ice on east side of street (valve box for 419 S 11 <sup>th</sup> Street).

## Pipeline Failure Investigation Report

0849	Operator of bore equipment.	0886	This would be area of gas line/bore crossing.
0850	From SE corner Harney/S 11 <sup>th</sup> look southwest positioning another ladder platform.	0887	Paint on curb for the Boutique (419 S 11 <sup>th</sup> ).
0851	From SE corner Harney/S 11 <sup>th</sup> look southwest positioning another ladder platform.	0888	From alley, east side of S 11 <sup>th</sup> St. between Harney/Howard look west into street Lines markings for gas and Valve covers. Valve closest to fire hose was close during this event.
0852	From SE corner Harney/S 11 <sup>th</sup> look southwest positioning another ladder platform. In operation.	0889	From alley, east side of S 11 <sup>th</sup> St. btw Harney/Howard look west into street Lines markings for gas and Valve covers. Valve closest to fire hose was close during this event.
0853	Alley Btw Harney/Howard on 11 <sup>th</sup> look at front of M's Pub ground lines	0890	Valve to east side for feed to S 10 <sup>th</sup>
0854	West side 11 <sup>th</sup> Street look south along sidewalk in front of JAM's, backhoe in alley.	0891	West side of S 11 <sup>th</sup> St. btw Harney/Howard look west into alley, exposed area for 2" main crossing.
0855	West side of S 11 <sup>th</sup> / Harney plywood covers excavation for bore.	0892	West side of S 11 <sup>th</sup> St. between Harney/Howard look south towards Howard.
0856	West side of S 11 <sup>th</sup> / Harney OPPD marking.	0893	West side of S 11 <sup>th</sup> St. btw Harney/Howard look south towards Howard.
0857	From center of S 11 <sup>th</sup> Street, looking at west side of 11 <sup>th</sup> at alley between Howard / Harney.	0894	North bank of meters just east of S 12 <sup>th</sup> between Harney & Howard.
0858	From center of S 11 <sup>th</sup> Street, looking at west side of 11 <sup>th</sup> at alley between Howard / Harney.	0895	Lock on service.
0859	From center of S 11 <sup>th</sup> Street, looking at west side of 11 <sup>th</sup> at alley between Howard / Harney.	0896	In alley btw Harney/Howard West of S 11 <sup>th</sup> look at bank of meters for two upper floors above M's Pub.
0860	Yellow paint mark for gas line in alley between Harney/ Howard on 11 <sup>th</sup> St east side.	0897	Service valve off/ each meter valve off and locked.

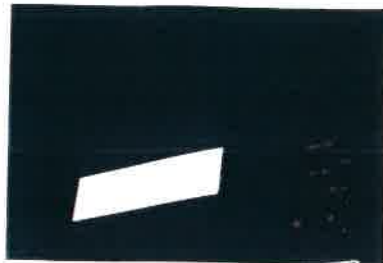
## Pipeline Failure Investigation Report

0861	Yellow paint mark for gas line, valves for main near alley between Harney/Howard on 11 <sup>th</sup> St east side. Valve in center of pic not closed.	0898	Service valve off/ each meter valve off and locked.
0862	Look from east side of alley between Harney/Howard on 11 <sup>th</sup> St (exposed excavation for main crossing.	0899	In alley between Harney/Howard West of S 11 <sup>th</sup> look at bank of meters for two upper floors above M's Pub. Service valve off. Each meter valve off and locked.
0863	Second floor, M's Pub.	0900	Look east towards S 11 <sup>th</sup> Street, from bank of meters.
0864	Look at west side of S 11 <sup>th</sup> St at mini track hoe in alley btw Howard/Harney.	0901	S 12 <sup>th</sup> & Harney.
0865	Look at northeast corner of M's Pub.	0902	Valve box on S 12 <sup>th</sup> Street (center of street near alley between Harney & Howard).
0866	Look west at center of M's Pub some windows in tack.	0903	Looking west, in alley between Harney/Howard look west to center of S 12 <sup>th</sup> Street.
0867	Look southwest corner of M's Pub.	0904	From S 12 <sup>th</sup> look east towards S 11 <sup>th</sup> on Howard.
0868	From Southside of Howard look north at front of M's Pub.	0905	West side of S 11 <sup>th</sup> look east from Howard to southwest corner of M's Pub.
0869	From center of S 11 <sup>th</sup> Street look north at southwest corner of M's Pub.	0906	West side of S 11 <sup>th</sup> south side of Howard looking in front of bore equipment to an area near where gas service and bore cross.
0870	Wind shift from center of S 11 <sup>th</sup> Street at Howard look north.		
Camera Type: Canon EOS 70D			

# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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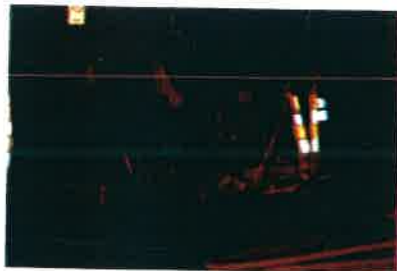
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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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## Pipeline Failure Investigation Report

### Attachment 3B: Exposing Street from Ice and Snow, January 20, 2016

#### Photo Documentation <sup>(1)</sup>

Photo No.	422 South 11 <sup>th</sup> Street Omaha NE Description 1/20/16	Photo No.	Uncovering streets Description 1/20/16
0907	From southeast corner of S 11 <sup>th</sup> and Howard Street looking northwest perimeter fencing and heater.	0957	10' west of east curb, East side of S 11 <sup>th</sup> Street looking south, faint yellow mark , center of picture.
0908	Look North east side of street in front of Le Wonderland 421 S 11 <sup>th</sup> Street.	0958	Close up 10' west of east curb, East side of S 11 <sup>th</sup> Street looking south , faint yellow mark , center of picture.
0909	Le Wonderland 421 S 11 <sup>th</sup> Street	0959	Standing on faint yellow line 10' west of east curb, East side of S 11 <sup>th</sup> Street looking south.
0910	Look west from Le Wonderland 421 S 11 <sup>th</sup> Street towards 422 S 11 <sup>th</sup> Street M's Pub.	0960	10' west of east curb, East side of S 11 <sup>th</sup> Street looking south, service curb box(s) 419 to left, 422/424 to right.
0911	Same, from above fence.	0961	At east curb looking west , East side of S 11 <sup>th</sup> Street looking at service curb box(s) 419 to lower, 422/424 upper.
0912	Pull back full frontal picture 422 S 11 <sup>th</sup> .	0962	Street level, looking west from East side of S 11 <sup>th</sup> Street looking south, service curb box(s) 419 to lower, 422/424 upper.
0913	Fence being removed.	0963	West side of S 11 <sup>th</sup> Street, south of 422 S 11 <sup>th</sup> , red paint markings in street.
0914	Supports for fence removed, clear plastic show condition of street.	0964	10' west of east curb, East side of S 11 <sup>th</sup> Street looking south , faint yellow mark , center of picture
0915	From stoop at "All about Me" directly east of 422 S 11 <sup>th</sup> St. looking southwest (Investigator Dooley).	0965	10' west of east curb, East side of S 11 <sup>th</sup> Street looking south, service curb box(es) 419 to left, 422/424 to right.
0916	From stoop at "All about Me" directly east of 422 looking west, center of picture, approximated area of gas service line.	0966	Standing at 422 S 11 <sup>th</sup> service curb box, looking south.
0917	From stoop at "All about Me" directly east of 422 looking northeast, ground heater used to melt ice. Mike Conrad to right.	0967	Standing at 422 S 11 <sup>th</sup> service curb box, looking south. GIS mark on gas main.

## **Pipeline Failure Investigation Report**

0918	From northeast corner of Howard & S 11 <sup>th</sup> looking northwest, condition of street, ground heater and prep for removing tarps.	0968	Faint yellow mark for gas main east side of S 11 <sup>th</sup> Street.
0919	Receiver for GIS locating equipment (Longitude/Latitude).	0969	Faint yellow mark for gas main east side of S 11 <sup>th</sup> Street.
0920	Transceiver for GIS locating equipment) Leica.	0970	Faint yellow mark for gas main east side of S 11 <sup>th</sup> Street.
0921	Carrying cases.	0971	Faint yellow mark for gas main east side of S 11 <sup>th</sup> Street.
0922	Setting up transceiver for GIS locating equipment.	0972	15' east of west curb looking into 422 S 11 <sup>th</sup> Street.
0923	1 <sup>st</sup> location ID point (Service valve box 419 S 11 <sup>th</sup> ).	0973	15' east of west curb looking at curb line 422 S 11 <sup>th</sup> Street.
0924	Yellow paint on bricks for service line for 419 S 11th Street.	0974	15' east of west curb looking at curb line 422 S 11th Street angled to left, blue marking for water to right of pic (no yellow markings).
0925	Uncover area, service valve box cover for 419 S 11th (east side of Street) bottom center of pic.	0975	15' east of west curb looking at curb line 422 S 11th Street (no fresh yellow markings).
0926	Tarp pulled from west curb line directly in front of 422 S 11th (M's Pub).	0976	Close up from 15' east of west curb looking at sidewalk 422 S 11th Street (no fresh yellow markings).
0927	Close up west curb line directly in front of 422 S 11th (M's Pub).	0977	Close up from 15' east of west curb looking at sidewalk slight angle to left of 422 S 11th Street (no fresh yellow markings).
0928	More tarps being removed.	0978	Close up from 15' east of west curb looking at sidewalk slight angle to right of 422 S 11 <sup>th</sup> Street (no fresh yellow markings).
0929	Action shot.	0979	From 15' east of west curb looking east towards center of street (no visible yellow markings)
0930	West side of clear tarp, street cleared west of service valve box for 422 S 11 <sup>th</sup> .	0980	From 15' east of west curb looking north towards Harney west side of S 11 <sup>th</sup> .
0931	Center of S 11th street, surveying for yellow markings.	0981	From north build line for M's Pub looking south towards Howard.
0932	From centerline of S 11th Street, Chief Krystal top center of pic. Presumed area of service line near west curb.	0982	From parking area of north build line for M's Pub looking south towards Howard, blue marking lower center of picture.

## **Pipeline Failure Investigation Report**

0933	Error.	0983	Close up from parking area of north build line for M's Pub looking south towards Howard. Blue marking lower center of picture.
0934	From center line of S 11th street east of 422 S 11th Street, looking west at curb line and side walk in front of M's Pub. Notice color of blue marking.	0984	Additional blue mark, west side of S 11th east of M's Pub.
0935	15' east of west curb at 422 S 11th Street, looking west at curb line and side walk in front of M's Pub. Notice color of blue marking approx. 3' to right is abandoned service valve box for previous service line. Service replace in 08/2009.	0985	Additional blue mark, west side of S 11 <sup>th</sup> east of M's Pub.
0936	Close up of abandoned service valve box for previous service line.	0986	Close up of additional blue mark, west side of S 11th east of M's Pub 422 S 11 <sup>th</sup> .
0937	15' east of west curb at 422 S 11th Street, looking east at center of street, surveying for yellow markings.	0987	Close up of curb line in front of M's Pub, (422 S 11th) water line to the left, abandoned gas service valve box to right.
0938	From center line of S 11th street east of 422 S 11th Street, looking west at curb line, ID point for red paint on street.	0988	Tom Vacek explains to GIS locator how the gas line locate will happen and how it will be marked.
0939	Close up from center of S 11th Street, looking west at curb line and side walk in front of M's Pub. Notice color of blue marking approx. 3' to right is abandoned service valve box for previous service line.	0989	Tom Vacek opening service valve box for 422/424 S 11th Street.
0940	Close up from center of S 11th Street, looking west at curb line and side walk in front of M's Pub. Notice color of blue marking approx. 3' to right is abandoned service valve box for previous service line.	0990	Tracer wire for the PE service line from main to 422/424 S 11th Street. Tracer from service valve box.
0941	Center of street looking east towards 419 S 11th Street, center of pic is service curb valve box for 422/424 S 11th Street. Yellow mark on east curb.	0991	Tracer wire for the PE service line from main to 422/424 S 11th Street. End of wire has not had insulation stripped for connection to locate equipment.

## *Pipeline Failure Investigation Report*

0942	Close up, center of street looking east towards 419 S 11th Street. Center of pic is service curb valve box for 422/424 S 11th Street, yellow mark for main.	0992	Tracer wire for the PE service line from main to 422/424 S 11th Street. End of wire has not had insulation stripped for connection to locate equipment.
0943	Close up, center of street looking east towards 419 S 11th Street, center of pic is service curb valve box for 419 S 11th Street, yellow mark for service.	0993	Look down service valve box to top of valve, tracer wire extending to PE service. (422/424 S 11th Street).
0944	Glass from explosion.	0994	Metrotech hand held transceiver for locating.
0945	Center of street looking east towards 419 S 11th Street, center of pic is MUD personnel, Mike Conrad, Dave Stroebel, surveying area for markings.	0995	Bottom of picture equipment grounded, transmitter in black bag, cable from transmitter to connection at tracer wire.
0946	Standing in front of "all about me" (419 S 11th) east side of S 11th Street, looking west towards 422 S 11th, yellow marking on side walk, service curb valve box in center of pic	0996	Metrotech transceiver.
0947	Standing in front of "all about me" (419 S 11th) east side of S 11 <sup>th</sup> Street, looking west towards 422 S 11th, yellow marking on side walk, service curb valve box in center of pic	0997	Tom Vacek explaining what is happening.
0948	Closer look at markings near service valve box(s) 419 S 11th at bottom of picture, service valve box for 422/424 under hoses.	0998	Locator placing first flag verifying location of gas PE service line.
0949	Closer look at markings near service valve box 422/424 at center of picture, under hoses. Yellow marking for main (markings around 422 service valve box.	0999	Locator placed first flag verifying location of gas PE service line, now decision on how to GIS ID point
0950	Stand at service valve box looking west towards 422 S 11th, no yellow markings on street.	1000	Half way across locate zone.
0951	Stand at centerline of Street, looking west towards 422 S 11th, no yellow markings on street.	1001	¾ way across locate zone.
0952	25' east of west curb for S 11th Street, looking west towards 422 S 11th, no yellow markings on street.	1002	From east curb looking to west curb, yellow flags indicate location of PE service line.

## ***Pipeline Failure Investigation Report***

0953	GIS ID point for abandoned gas service valve box.	1003	Located to west curb line, GIS final point.
0954	10' west of east curb, East side of S 11th Street looking south, GIS receiver near gas main.	1004	Located gas service line to west curb line, right side is abandoned gas service curb valve box.
0955	10' west of east curb, East side of S 11th Street looking south, GIS receiver near gas main.	1005	For designation only no measurement implied.
0956	10' west of east curb, East side of S 11th Street looking south, GIS receiver near gas main.	1006	Completed locate no yellow marking along this route.
	Camera Type: Canon EOS 70D		

# Pipeline Failure Investigation Report



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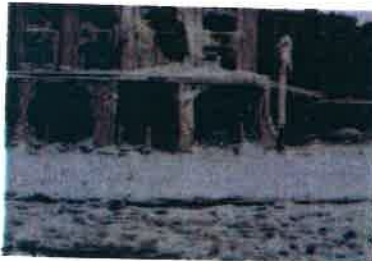
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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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## Pipeline Failure Investigation Report



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**Pipeline Failure Investigation Report**



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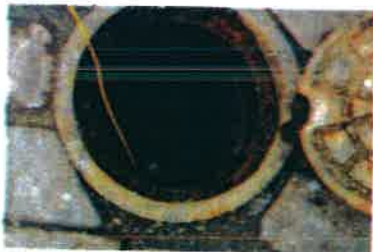
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# Pipeline Failure Investigation Report



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**Attachment CC: Exposing pipe damage area January 21, 2016**  
**Photo Documentation**

Photo No.	422 South 11 <sup>th</sup> Street Omaha NE Exposing pipe 1/21/16	Photo No.	Exposing pipe Description 1/21/16
1007	Look west towards 422 S 11 <sup>th</sup> from sidewalk on east side of S 11 <sup>th</sup> , trench box for protection	1036	From inside trench box, north side of trench box, at west curb line of S 11 <sup>th</sup> looking west, Water valve approximately 18" west of back of curb (to top of picture at base of railing, directly west of water valve is yellow paint dot.
1008	Look west southwest from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD providing update to new arrivals	1037	From inside trench box, north side of trench box, at west curb line of S 11 <sup>th</sup> looking west, approx. 8' west of back of curb, directly west of water curb valve, is yellow paint dot (almost center of picture
1009	Look north northwest from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD providing instruction to contractor for trench box	1038	From inside trench box, north side of trench box, at west curb line of S 11 <sup>th</sup> looking west, Water valve approximately 18" west of back of curb (to top of picture at base of railing, directly west of water valve is yellow paint dot.
1010	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD providing instruction to update to new arrivals	1039	Set back in trench box to better see an additional yellow dot just west of back of curb, west side of S 11 <sup>th</sup> St. (lower right corner of picture. Notice color difference between flag and paint.)
1011	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD providing instruction to update to new arrivals	1040	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" (area closed, excavation process started) Melting ice near bottom of support.

## Pipeline Failure Investigation Report

1012	Look west southwest from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD prepping to move trench box, yellow flags are from previous day locating existing 2" PE service	1041	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" (area closed, excavation process started) Melting ice near bottom of support. Worker in center of picture has pressure hose in hand)
1013	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , FD prepping to move trench box, yellow flags are from previous day locating existing 2" PE service	1042	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" (area closed, excavation process completed, moving vacuum device.
1014	Close up, Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , Trench box being positioned	1043	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" (area closed, excavation process completed, moving heating device, Fire Department survey area)
1015	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , Unite personnel part of new arrivals	1044	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" (area closed, excavation process completed, Fire Department/Building inspectors visualizing area).
1016	Close up, Look west from center of block (400) from center of S 11 <sup>th</sup> , Trench box being positioned	1045	Break in activities Approaching trench box
1017	Look west southwest from center of block (400) from center of S 11 <sup>th</sup> Location of drill unit and bore stem just west of west curb	1046	Initial picture inside trench box looking at depth of measurement to top of "abandoned" gas service (black pipe) Top of Grade (TOG) at 3' 6" (42")

## Pipeline Failure Investigation Report

1018	Closer look at drill unit with of reamer on end of drill stem "8" diameter"	1047	Look down into excavation zone. Measure device resting on top of abandoned gas service (black pipe). Yellow pipe is existing 2" PE gas service line. (damage visually apparent on yellow pipe at center of picture. To bottom center of picture is water service valve riser.
1019	Close up of reamer with turn buckle	1048	Close look down into excavation zone. Measure device resting on top of abandoned gas service (black pipe). Yellow pipe is existing 2" PE gas service line. (damage visually apparent on yellow pipe at center of picture. Bottom of picture is water service valve riser.
1020	Look west from in front (north side) of drill unit	1049	Close up, look down from northwest side of excavation at damaged pipe segment
1021	Ditch Witch drill Unit #DB28	1050	Close up, look down from northwest side of excavation at damaged pipe segment, (coloring on yellow pipe?)
1022	From northwest corner of S 11 <sup>th</sup> & Howard St. looking north. (bore path approximately 3' west of west curb line of S 11 <sup>th</sup> St.)	1051	Repositioned, close up, look down from northwest side of excavation at damaged pipe segment.
1023	Look west from west curb at door way to (left) Nouvelle Eve (right) M's Pub "422 S 11 <sup>th</sup> St.. Stairwell behind grates	1052	On east side of excavation, looking down , to right is opening from bore path
1024	Look west from west curb at door way to door way of M's Pub (422 S 11 <sup>th</sup> ) at bottom of picture yellow flag above 2" PE service, blue for water service (extreme right bottom corner "service valve for abandoned service ie 2009"	1053	Reposition to west side of excavation, top of picture is tape measure. Water service valve cover to upper right. (indicating that yellow pipe is approximately 13" from center of water valve to center of yellow pipe



## Pipeline Failure Investigation Report

1025	From street, west curb line , doorway for M's Pub center of picture	1054	Close, top of picture is tape measure. Water service valve cover to upper right. (measurement indicating that yellow pipe is approximately 13" from center of water valve to center of yellow pipe
1026	Look north northwest from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , "stand by equipment"	1055	Close Top of picture is tape measure. Water service valve cover to upper right. (indicating that yellow pipe is approximately 12" from center of water valve to edge of yellow pipe
1027	Look west from center of block (400) from east side of S 11 <sup>th</sup> , Trench box being positioned	1056	Reposition southwest corner of excavation zone, look down Stephen Lucas setting tape measure
1028	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" Zoom to look at support column in front of M's Pub	1057	Depth of yellow pipe to top of grade (34")
1029	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" ..lcc load above area to be excavated.	1058	Bad alignment of camera (top of yellow pipe to top of grade (34")
1030	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" zoom to see entrance to apartments above M's Pub (420 S 11 <sup>th</sup> St.)	1059	West end excavation zone, look east. End of tape positioned against back of curb (west side of S 11 <sup>th</sup> Street) Water valve at 18" west of back of curb
1031	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" zoom to see entrance to apartments above M's Pub (420 S 11 <sup>th</sup> St.)	1060	West end excavation zone, look east. End of tape positioned against back of curb (west side of S 11 <sup>th</sup> Street) Water valve at 18" west of back of curb Damage to top of yellow pipe, at 44" west of back of curb.

## Pipeline Failure Investigation Report

1032	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> , top step of "All About Me Boutique" ... Vacuum truck being positioned	1061	Reposition to southwest corner of excavation zone. Look east. End of tape positioned against back of curb (west side of S 11 <sup>th</sup> Street) Damage to top of yellow pipe, at 44" west of back of curb.
1033	Look west from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> zoom to see positioning of vacuum stem for excavation.	1062	Slip ( look down over railing in front of M's Pub into stairwell (full of water now frozen)
1034	Look north northwest from center of block (400) from sidewalk on east side of S 11 <sup>th</sup> at curb line on east side of S 11 <sup>th</sup> (Vacuum truck in position )	1063	Look west from trench box, down over railing in front of M's Pub into stairwell (full of water now frozen)
1035	From inside trench box, south side of trench box, at west curb line of S 11 <sup>th</sup> looking west at door way to M's Pub in upper left of picture		
Camera Type:            Cannon EOS 70D			

# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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# Pipeline Failure Investigation Report



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# ***Pipeline Failure Investigation Report***

## **Attachment 4A: Interview with Excavator**

Interview with Dan Osterdyk "Superintendent" North Central Services Inc. (excavator)  
1916 hrs 01/09/2016 located at northwest corner of Harney & South 11<sup>th</sup> Street.

Asked if he was the operator of the bore equipment? Dan indicated that he was the "Superintendent" of the company doing the work. He presented me with his company card.

Were you present when event occurred? Dan indicated that he was parked directly in front of the building when explosion occurred.

I asked him for the events prior to and up through explosion?

Dan indicated that his crew had completed bore from Howard Street to the alley between Howard and Harney (west side of South 11<sup>th</sup> Street). They had attached a back-reamer and conduit and were pulling back to drill unit (located at northwest corner of Howard & S 11<sup>th</sup> St) when there was an issue about 30' into pull back, "we push back the reamer and exposed area, removed some concrete, disconnected conduit and proceeded to pull back reamer towards drill unit. We were nearing end of the pull back when we received indications from an individual maybe a cook, that they smelled gas in the building."

Dan indicating: I'm guessing by the number of sticks in rack, that the back-reamer had passed the front door of building. I was trying to understand if we had hit something. Within seconds, maybe a minute the building exploded. Told everybody to shut down and move to end of block.

Did you call 911? Dan indicating that he did, indicating that the individual taking the call stated that there had been several calls already.

Can you tell me the time of the call? Dan indicating (as he worked his phone) that the call wasn't showing up! (Later verified call was made.)

Do you have a current dig ticket? Dan indicating that he did – #15640287. (Later – 01/12/2016 – verified ticket dated 12/30/2015 to begin work 01/04/2016. Ticket includes instruction for locate and polygon of area).

Were any of your crew members hurt in the explosion? Dan stated, No injuries to crew.

Do you know of injuries from the explosion? Dan indicating he was unaware of any injuries.

Was there a gas line marked in the area? I do not recall seeing any marks for gas lines in front of the building.

Where there were other gas lines? There were marks and we exposed the gas line before boring.

Did you call Nebraska811 and report damage? I tried to call but every time someone or something has interrupted me.

I stated: When you call Nebraska811 and report damage, be sure to tell them it has already happened! Yes (call was made 2025 hrs 01/09/2016)

## ***Pipeline Failure Investigation Report***

Have you been contacted by Omaha Fire Department? Yes

Have you been contacted by Metropolitan Utilities District? Yes, Mike Conrad

At this point I ended the interview and provided my card for contact information.

On 01/11/2016 I received call from Dan on home phone. Dan wanted to know when the gas line would be looked at. I told him I didn't know and that he would have to work that out with MUD and Omaha Fire. Omaha Fire would have to (OK) any work around the building.

1236 hrs 01/11/2016 I called Dan and left message for him to call me.

1359 hrs 01/11/2016 received call from Dan Osterdyk, he had just finished interview with Capt. Dooley (Omaha Fire Investigations).

During the phone interview I asked him, "when" did you call 911?

Dan was able to tell me that Verizon had verified the phone call to Omaha 911, it was at 1450 hrs on 01/09/16 and lasted 55 seconds. Verizon is sending hard copy to me, and if you want a copy, when I get it I'll be in touch. Verizon does not show 911 calls on cell phone "not a billable call".

Dan indicated that Capt. Dooley had the Omaha 911 call log and verified receipt of that call.

I asked "when did the public tell you of the gas odor"? Dan stated that a woman from the clothing store came to him and complained of gas odor inside the building, Dan stating; this was a couple of minutes (maybe two) before the explosion.

01/11/2016

("Woman" later identified by Omaha World Herald as Susie Keuck, owner of Nouvelle Eve, 1102 Howard Street, Omaha)

01/20/2016

I contacted Dan and asked if he had received verification of call from Verizon? Dan explained that the hard copy had been mailed to his home office. Dan explained that he had email verification of call. I asked that he have that email forwarded to me. (Received forwarded email 01/20/2016.)



## Pipeline Failure Investigation Report

### Attachment 4B: Verification of call from excavator to 911

Received email from

**Fwd: FW: Call Detail Information** from: dan osterdyk [ddiggerdan@hotmail.com](mailto:ddiggerdan@hotmail.com)  
**Sent: Wed 1/20/2016 10:12 AM**

----- Forwarded message -----

From: Kristen <[ncs@ncsmn.com](mailto:ncs@ncsmn.com)>

Date: Jan 11, 2016 11:08 AM

Subject: FW: Call Detail Information

To: 'dan osterdyk' <[ddiggerdan@hotmail.com](mailto:ddiggerdan@hotmail.com)>

Cc:

From: Wright, Sierra M [<mailto:Sierra.Wright@VerizonWireless.com>]

Sent: Monday, January 11, 2016 10:59 AM

To: 'ncs@ncsmn.com'

**Subject:** Call Detail Information

Hello Kristin,

The information we have in reference to the call made on January 9<sup>th</sup> 2016 is as follows:

That call was originated at 14:50:17 and was 55 seconds to 911.

Any other information would be included with the documents being processed.

Thank you. Have a great day.



Sierra Wright  
Phone Support Coordinator - BGCO  
Verizon Enterprise Solutions

O 800.922.0204

[sierra.wright@verizonwireless.com](mailto:sierra.wright@verizonwireless.com)

# Pipeline Failure Investigation Report

## Attachment 4C: Interview with Gas Operator

Initial contact with Metropolitan Utilities District: 1910 hours 01/09/2016  
Met with Mike Conrad and David Stroebele

Verified that gas had been turned off to fire scene. One valve on main at alley between Harney & Howard on South 11<sup>th</sup>, one valve 500' north of Howard on S 12<sup>th</sup>, service valves to all structures in this ½ block and a service curb valve for M's Pub. Gas was confirmed off to fire at 1628, after closing service curb valve.

Verified that gas leak surveys were being completed in area.

Verified knowledge of excavator working in area. Excavator installing fiber optic in front of 422 S 11<sup>th</sup>

Verified location of excavator personnel. White pickup on S 11<sup>th</sup> Street at Harney about 30' away.

Has NRC been contacted? Yes, call made around 1700 hours

1957 hours 01/09/2016 interview with Mike Conrad (MC)  
Verified address, acquired Mike's business card.

I was contacted by MUD dispatch; do you know who that was? MC indicated: That he believed it was Jeremy. Don't remember his last name right now.

Do you know who is conducting investigation for Omaha Fire? MC indicated: Capt. Dooley

Have you communicated with excavator? MC indicated: Yes

Are you aware of injuries associated with event? MC indicated that he was told (by Dooley) that one (1) individual was transported by ambulance to UNMC (University of Nebraska Medical Center) may have been one of the cooks and one transported by private vehicle to same hospital. Indicated they were reported as "minor injuries".

What do you know of the event? MC indicated: I was contacted by MUD dispatch at 1519, they indicated possible excavation issue. I arrived on scene at 1540 and at that time personnel were closing gas valves. (There is a working kitchen and prep area in the basement and working kitchen on main level). We first closed the service valve in alley between 11<sup>th</sup> & 12<sup>th</sup> to a bank of meters for upper level apartments, condominiums and meter for part of M's Pub (kitchen). Then we closed valve on main on 12<sup>th</sup> for feed to other portion of ½ block. Then we closed valve on main in alley between Harney/Howard on east side of S 11<sup>th</sup>. Finally we closed the service curb valve for 422 S 11<sup>th</sup> Street. Gas was confirmed off by Omaha Fire at 1628 hours.

Are any of the gas lines cast iron? MC indicated: No, I believe they are all PE. We have had a lot of renovation/replacement in this area.

Was MUD contacted for any leak calls in the area recently? MC indicating: We did not have any odor or leak calls in area prior to explosion.

## ***Pipeline Failure Investigation Report***

Do you know if all gas lines were located and marked? MC indicating: That this was an ongoing project for installing fiber, there have been many locates in this area. I believe that this crew has current "refresh" ticket. MUD information indicates that locates were completed, and all lines marked. I believe we had someone down here when they exposed the 1½" gas main crossing in the alley (west side of S 11<sup>th</sup>).

Do you know that the service line for 422 S 11<sup>th</sup> was located and marked? MC indicating: From here I can't confirm that the line was located or marked.

What is your impression of what happened? MC indicating: I believe that the excavator clipped the service going to 422 S 11<sup>th</sup> Street.

Later contacted Mike by phone (2008 hrs) asking that material information, size of gas mains and services in the area, be sent to me.

## ***Pipeline Failure Investigation Report***

### **Attachment 4D: Correspondence received from Ron Jankowski**

Ron Jankowski, 02/04/2016. This excavator was not interviewed concerning locating and marking of mains and services in the area of 422 S 11<sup>th</sup> Street (because he never went to the site).

01/20/2016

Regarding the refresh ticket #153640287, Ron Jankowski responded (via phone) for MUD on January 4, 2016. In projects of this type covering large areas, we normally call the Excavator to verify the exact location of services needed on that day. Ron called North Central Service and spoke to Dan Osterdyk. North Central Service (Dan) told Ron that the marks on 11<sup>th</sup> Street were still good and that they didn't need him at 11<sup>th</sup> & Howard. North Central Service (Dan) told Ron at that time that they wanted the intersection of 13<sup>th</sup> & Leavenworth marked because that is where they would be going next.

Ron noted on the ticket "Unable to locate – See Comments: added by Ron Jankowski, Locate Time: {2016-01-04 13:37:47} Notes: marked from previous ticket".

01/21/2016

There is a drop-down menu for completion notes in the IRTH ticket system that contains 21 different choices. The "Unable to Locate – See Comments" choice was used here but really is a misnomer. At the present time, it is one of two choices in the list that directs the reader to see the comments section. The other choice is "Partially Located – See Comments" which doesn't really fit either. Ron Jankowski thought it was important to note that he was sent elsewhere by NCS.

There is not a choice in the ticket system that says "Contractor dismissed locator", as would be completely accurate to describe what happened here on the last locate ticket. We have been trying to work with the IRTH software people to modify this list since last October, and have been getting almost zero help from them.

On 01/22/2016, I concluded from these responses that the locator for Metropolitan Utilities District (Ron) never went to the location to view and verify that locating marks were accurate and inclusive for all pipeline in the requested area, and communicated to the excavator that all pipelines were marked.

# ***Pipeline Failure Investigation Report***

## **Attachment 4E: Interview with Equipment Operator**

Foreman, Mike Kolterman at 1015 hours on 01/21/2016

Interview with Mike Kolterman (identified as the directional drill locator) verified employee of North Central Services.

What do you do? Mike Kolterman (MK) indicated: I locate the bore head when we are making a bore, and give direction to drill operator on adjustments.

So you are out in front of the drill unit tracking the movement of the drill? MK indicated: Yes.

So you would be moving back and forth along the drill path? MK indicated: Yes.

You were present when the bore was made Saturday, January 9<sup>th</sup>? MK indicated: Yes.

Tell me what took place prior to the event on Saturday.

MK indicated: We had completed the bore shot from Howard Street to the alley between Howard and Harney (west side of South 11<sup>th</sup> Street). We disconnected the drill head and attached the reamer head and conduit to the stem. We were pulling back to drill unit (located at northwest corner of Howard & S 11<sup>th</sup> St) when there was an issue about 30' into pull back, we tried to maneuver the reamer but could not pull back any further. We pushed the reamer forward about one stem and exposed the area where we had the issue. There were some concrete chunks in the way of the bore so we removed some concrete, disconnected the conduit and proceeded to pull back reamer towards drill unit. We were nearing the unit when I was told by a person, that they smelled gas in the building. I went over and told Dan that we may have hit something, a gas line maybe. Then there was an explosion and fire.

Were you rotating the reamer as you pulled back? MK indicated: Yes.

Were you still pulling back when the explosion occurred? MK indicated: Yes.

Ended interview

## **Pipeline Failure Investigation Report**

### **Attachment 4F: Interview with Gas Operator Locator**

For 02/04/2016: These questions were directed at the locator of record, for the gas mains and services in the area of 422 S 11<sup>th</sup> Street. Reply or answer by Dick Costello labeled as (DC).

<b>Date</b>	<b>Who</b>	<b>Nebraska811 request ticket number</b>
<b>11/23/2015</b>	<b>Dick Costello</b>	<b>153271405</b>

This interview will be recorded.

Statement: There will be questions about gas mains and gas services in an area from Harney Street to Howard Street, on South 11<sup>th</sup> Street. The questions will include your process of locating and marking the gas main(s) and gas service lines in this area. Other questions will address the general characteristics of the M.U.D. gas system or specific questions of procedures or processes for making changes to the gas system.

You work for Metropolitan Utilities District? **(DC) yes**

Your primary work assignment is to locate natural gas mains/services and water lines for M.U.D.? **(DC) yes**

How long have you been locating underground lines? **(DC) I think 12 years now**

What training have you received to perform your primary work assignment? **(DC) classroom, in field training, (OJT) locating seminar(s) computer based training. We qualify every three years, refresher training yearly.**

On average, how many locates will you conduct for a day? **(DC) On average I would guess 25 to 30**

What make of locating equipment do you generally use? **(DC) A couple of different units, the Metro-Tech 9800 primarily, the 810 & 890 and a Radio Detection unit. Maybe 50/50 Metro and Radio Detection.**

Is that the equipment that you used on (date) to locate the gas main and services for the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alley approach between Harney and Howard Street on S 11<sup>th</sup> Street? **(DC) Yes, I believe Metro Tech located in alley, and north on 11<sup>th</sup> Street.**

The alley between Howard and Harney / 12<sup>th</sup> to ? **(DC) 12<sup>th</sup> to 10<sup>th</sup>.**

What frequency setting do you generally use to locate gas mains and services? **(DC) 9.8 Hz**

Are these gas mains and services steel or PE? **(DC) PE with tracer.**

There is tracer wire with the PE? **(DC) Main in alley is PE with tracer, Main on 11<sup>th</sup> Street is PE inserted in cast iron.**

## ***Pipeline Failure Investigation Report***

Can you highlight on this map, where you located the gas mains and services in response to the locate request from North Central Service, for your specific ticket number in the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alley approach between Harney and Howard Street on S 11<sup>th</sup> Street? **(DC) Indicating that he located gas pipeline in alley between Howard & Harney / S 12<sup>th</sup> to S 10<sup>th</sup> Street and on east side of S 11<sup>th</sup> from alley north to Harney Street.**

Can you indicate on the map where you connected your transmitter? **(DC) Indicating and verbally stating that, at that date (11/23/15), he connected to the tracer wire located in the alley at the rear of Market House.**

Are all of the gas services in this area, electronically continuous with the mains? **(DC) Yes, what I located.**

Did you locate gas piping for the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alleys or alley approach between Harney and Howard Street on S 11<sup>th</sup> Street? **(DC) Not south of the alley.**

Did you locate the service line from South 11<sup>th</sup> Street into M's Pub identified as 422/424 South 11<sup>th</sup>? **(DC) No**

Did you locate the service line to the meter set in the alley west of 11<sup>th</sup> Street, between South 12<sup>th</sup> Street and South 11<sup>th</sup> Street, between Harney and Howard Street? **(DC) In alley and to north on 11<sup>th</sup> Street to Harney, nothing south of alley.**

How did you mark the location of this line? **(DC) With paint.**

You have access to a (computer) to allow you to visually see a mapped area? **(DC) Yes.**

This program is Utilities Viewer or GIS screen? **(DC) Generally the GIS Screen, if not there then we need to get the as-built drawing.**

Visually, where on your computer do you look for information about a service line? **(DC) Either on the GIS screen or the as-built drawing.**

Are there service lines within the system that do not show on the mapping system? **(DC) Yes.**

Have you ever encountered a situation where a gas service is not showing on your mapping system? **(DC) Yes.**

What is the process for you to report a service line that is not on the mapping system? **(DC) Try to locate.**

Are there service lines in the system that you can't electronically locate? **(DC) yes**

What is the process to locate and mark this type of service line? **(DC) Try to locate, try to get in if it's an inside meter, check the service card, and find the as built drawing.**

## ***Pipeline Failure Investigation Report***

When there are multiple locate requests for a "large project" similar to the project for installing fiber optic in the Old Market area, what process do you use when there is a refresh request, to locate or mark existing gas facilities? **(DC) Locate and mark what is required, consult with the excavator.**

Do you ever call an excavator for clarification on where to locate? **(DC) Yes.**

Do you ever call an excavator to see if they need paint marks refreshed? **(DC) Yes.**

(Statement) Since you didn't locate and mark anything south of the alley on S 11<sup>th</sup> Street, for your locate request, I believe I am done. Are there any questions for anyone else? **(No).**

We have completed this interview you can go back to work.



## Pipeline Failure Investigation Report

### Attachment 4G: Interview with M.U.D. Locator Chris Sacco

For 02/04/2016: These questions will be directed at the locators of record, for the gas mains and services in the area of 422 S 11<sup>th</sup> Street. Reply or answers are labeled as (CS) for this interview.

Date	Who	Nebraska811 request ticket number
12/09/2015	Chris Sacco	153430856 Refresh

Identification verified.

This interview will be recorded.

Statement: There will be questions about gas mains and gas services in an area from Harney Street to Howard Street, on South 11<sup>th</sup> Street. The questions will include your process of locating and marking the gas main(s) and gas service lines in this area. Other questions will address the general characteristics of the M.U.D. gas system or specific questions of procedures or processes for making changes to the gas system.

You work for Metropolitan Utilities District? **(CS): Yes.**

Your primary work assignment is to locate natural gas mains/services and water lines for M.U.D.? **(CS): Yes.**

How long have you been locating underground lines for M.U.D.? **(CS): Three (3) years.**

Interrupted by Dave Stroebale: You need to tell him what you did before coming to work for M.U.D. **(CS) I worked for Great Plains services, for about 10-11 years. I worked as a splicer, worked with installing underground cable and then about 90% of time I located underground utilities.**

What training have you received to perform your primary work assignment? **(CS) Computer based training, two (2) weeks OJT, classroom, locating seminars, qualification.**

On average, how many locates will you conduct for a day? **(CS) It depends, on average maybe 30.**

Dave Stroebale: Chris is assigned an area in the Old Market section, if you look at a map of Omaha you could divide it into six (6) areas, each locator has an assigned area and then covers for other locators when there is need.

What is your general process for locating and marking gas mains and/or services? **(CS): We attach the unit and locate where we can, if there is a problem or an area we can't use equipment then we use maps, service cards or as-built drawings.**

What make of locating equipment do you generally use? **(CS): Radio Detection RD8000**

## ***Pipeline Failure Investigation Report***

Is that the equipment that you used on (date) to locate the gas main and services for the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alley approach between Harney and Howard Street on S 11<sup>th</sup> Street ? **(CS): Yes, Harney to Howard then east on Howard.**

What frequency setting do you generally use to locate gas mains and services? **(CS): Eight (8) mHz**

Are these gas mains and services steel or PE? **(CS): PE mains. The main on east side of S 11<sup>th</sup> Street is Aldyl-A , when it was installed it was inserted into the (existing) cast iron main. From experience of trying to locate that main there is no tracer wire, so we have to use maps to locate the main and then measurements and ground features to locate the services.**

There is tracer wire with the PE? **(CS): No.**

Can you highlight on this map, where you located the gas mains and services in response to the locate request from North Central Service, for your specific ticket # in the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alley approach between Harney and Howard Street on S 11<sup>th</sup> Street ? **(CS) indicated and verbally stated: On December 9<sup>th</sup> I located and marked the gas lines and water for the area from south of Harney Street from the 6" on Harney, south to Howard at the southeast corner of intersection. As I said from previous experience we couldn't locate the 2" PE inside the cast iron. I had to use maps and measurements to locate the gas main. I had to use the as-built drawing so I had measurements to go by. I painted locate marks above the main and services.**

Can you indicate on the map where you connected your transmitter? **(CS) For the 2" PE main crossing S 11<sup>th</sup> Street I was able to connect to the tracer wire at Market House riser and at Omaha Prime then double checked this with a connection at JAMS. I used the map for the cross-over of the two mains.**

For clarification, Market House riser is in the alley west of 11<sup>th</sup> and Omaha Prime is in the alley on the east side of S 11<sup>th</sup> Street. And JAMS is in the alley west of S 11<sup>th</sup> Street? **(CS): Yes.**

Are all the gas services in this area, electronically continuous with the mains? **(CS): No. Like I said, the 2" main inside the cast iron is not locatable with equipment.**

If not continuous, where would you attach your equipment to locate a gas service? **(CS) I used the as-built drawing.**

Did you locate gas piping for the area between Harney Street and Howard Street for the ROW of S 11<sup>th</sup> Street and alleys or alley approach between Harney and Howard Street on S 11<sup>th</sup> Street ? **(CS): Yes.**

Did you locate the service line from South 11<sup>th</sup> Street into M's Pub identified as 422/424 South 11th? **(CS): I couldn't connect to it, so I used the as-built and measurements.**

How did you mark the location of this line? **(CS): The map measurements then paint.**

## ***Pipeline Failure Investigation Report***

Did you locate the service line to the meter set in the alley west of 11<sup>th</sup> Street, between South 12<sup>th</sup> Street and South 11<sup>th</sup> Street, between Harney and Howard Street? **(CS): Yes.**

If yes, what date? **(CS): On the 9<sup>th</sup>.** (December 9, 2015)

How did you mark the location of this line? **(CS): With paint.**

Did you locate the service for 417 S 11<sup>th</sup> Street? **(CS): No, not on list.**

Did you locate the service for 419 S 11<sup>th</sup> Street? **(CS): Yes. With paint on the street, the curb and side walk.**

Did you locate the service for 421 S 11<sup>th</sup> Street? **(CS): Yes. With paint on the street, the curb and side walk.**

Do you see any of these service lines for 417, 419, 421, or 422 South 11<sup>th</sup> Street, on your mapping system? **(CS): You can see 419 but the others aren't on the basic map, you have to use the as-built map.**

Did you locate and mark the service line for 422/424 S 11<sup>th</sup> Street? **(CS): Yes, I remember that service because there was a car parked over the service valve box. We had to set out cones and work behind the vehicles. For 422 I used the map to locate and mark the 2" service line. I painted marks on the street then on the side walk I used a couple of small paint dots.**

Why small paint dots? **(CS): The locate area where I work, there are a lot of high end residences and stores. They don't like all the paint on their sidewalks. I've gotten in trouble about this before and had to go out and remove the paint by hand, steel brush the paint off.**

Was this with M.U.D.? **(CS): No, it was from a previous employer.**

Do you generally mark the curb line, where? **(CS): Yes.**

You have access to a (computer) to allow you to visually see a mapped area? **(CS): Yes.**

This program is Utilities Viewer or GIS screen? **(CS): I use both.**

Visually, where on your computer do you look for information about a service line? **(CS): The premise point, the little flame symbol, located on the map, this shows information about the service.**

Are there service lines within the system that do not show on the mapping system? **(CS): Yes.**

Have you ever encountered a situation where a gas service is not showing on your mapping system? **(CS): Yes.**

What is the process for you to report a service line that is not on the mapping system? **(CS): Generally, if we can't locate it with equipment, or use maps for measurements, we let the supervisor know we have a problem.**

## ***Pipeline Failure Investigation Report***

Are there service lines in the system that you can't electronically locate? **(CS): Yes.**

When there are multiple locate requests for a "large project" similar to the project for installing fiber optic in the Old Market area, what process do you use when there is a refresh request, to locate or mark existing gas facilities? **(CS): Go there and locate.**

Do you ever call an excavator for clarification on where to locate? **(CS): Yes.**

Do you ever call an excavator to see if they need paint marks refreshed? **(CS): Yes.**

If they say "no" do you recheck the area anyway? **(CS): Not generally.**

# Pipeline Failure Investigation Report

## Attachment 4H: Steve Osmera written statement

1-9-16

1500 Dispatch Calls Explosion 424-58 11<sup>th</sup>  
Arrive 1516 Fire Captain gets me 1st Thank  
1518 Call Dispatch Tell Jermie Call Everyone  
1524 Walked up to Fire See gas Stop Bx at Curb  
in front of Building where Fire is going  
Kery Shows up. we Break Stop Bx Top off  
Shut gas off at this SB.  
Chief Says <sup>Fire</sup> Still going look up Map only See  
gas Main going up Alley.  
I talk to Contractor He said We did not Hit Main in  
Alley He Had that Main Expose.  
Miller Avenue look up Valve to the Alley.  
GV # 3000623 on 11<sup>th</sup> St GV # 30010652 on 12<sup>th</sup> St  
610 Carrea Arrives Help Kery Shut off GV 30010652.  
Shut off all MTRs in Alley - Miller & I  
around 1630 Conrad Shows Kerys C.C Box across Street  
From 424/422 Kery & Davis Shut off this  
Stop Box Kills the gas to this Service  
We Figure what gas is off to what Building and  
1800 get 1115 Harney Apts ~~to~~ Backcom.  
1652 Miller & I Shut off All MTRs in Alley.  
1800 Carrea Turned Gas on in Alley  
1845 Miller & I Shut off gas to 1102 Howard go SB  
end 2130 1124 Howard go CC Bx  
Steven P. Osmera Employee # 3872

## ***Pipeline Failure Investigation Report***

### **Attachment 5: Locate request tickets for the area by North Central Service**

Submitted by email to me from DSFM Kevin Bumgardner

Looking at the videos and photos, there looks to be a boring machine and a spool of fiber sleeve at the site of the fire. I searched damage tickets from January 1, 2015 to today, only two tickets are in the system, both in the area of M's Pub: 160060153 and 16009027. I searched the one call system and found the following tickets:

<b>Ticket #</b>	<b>Type</b>	<b>Call Date</b>	<b>Excavator Company</b>	<b>Addr</b>	<b>Street</b>	<b>City</b>
<a href="#">153271392</a>	ITIC	11/23/15 16:46:49	NORTH CENTRAL SERVICE		HARNEY	OMAHA
<a href="#">153271395</a>	ITIC	11/23/15 16:47:57	NORTH CENTRAL SERVICE		HARNEY	OMAHA
<a href="#">153271403</a>	ITIC	11/23/15 16:49:22	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153271405</a>	ITIC	11/23/15 16:49:38	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153271407</a>	ITIC	11/23/15 16:49:53	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153271410</a>	ITIC	11/23/15 16:51:21	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153271412</a>	ITIC	11/23/15 16:53:56	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153430787</a>	Phone	12/09/15 14:03:20	NEBRASKA PLUMBING		HOWARD	OMAHA
<a href="#">153430856</a>	ITIC	12/09/15 14:47:28	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153430859</a>	ITIC	12/09/15 14:48:01	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153430861</a>	ITIC	12/09/15 14:49:23	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153430863</a>	ITIC	12/09/15 14:50:17	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153430865</a>	ITIC	12/09/15 14:51:18	NORTH CENTRAL SERVICE		HARNEY	OMAHA
<a href="#">153430867</a>	ITIC	12/09/15 14:51:47	NORTH CENTRAL SERVICE		HARNEY	OMAHA
<a href="#">153430870</a>	ITIC	12/09/15 14:52:42	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153640287</a>	ITIC	12/30/15 11:50:33	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153640288</a>	ITIC	12/30/15 11:51:12	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">153640292</a>	ITIC	12/30/15 11:53:41	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153640294</a>	ITIC	12/30/15 11:55:14	NORTH CENTRAL SERVICE		HOWARD	OMAHA
<a href="#">153640295</a>	ITIC	12/30/15 11:56:35	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">160060153</a>	Phone	01/06/16 09:45:27	NORTH CENTRAL SERVICE		11TH	OMAHA
<a href="#">160070360</a>	ITIC	01/07/16 12:14:32	OLSSON ASSOCIATES		HOWARD ST	OMAHA
<a href="#">160070361</a>	ITIC	01/07/16 12:15:05	OLSSON ASSOCIATES		HOWARD ST	OMAHA
<a href="#">160090027</a>	Phone	01/09/16 20:30:01	NORTH CENTRAL SERVICE		11TH	OMAHA

# Pipeline Failure Investigation Report

Attachment 6: Locate Request #153640287

## Nebraska811

<b>Ticket No:</b>	153640287	<b>REFRESH</b>	
<b>Request Date:</b>	12/30/15 11:50 am	<b>Type:</b>	Web
<b>Begin Date:</b>	01/04/16 12:00 pm		
<b>Relocate Counter:</b>	2	<b>Renewal of:</b>	153430856

### Caller Information

<b>Requested By:</b>	DARYL HOLTER	<b>Phone:</b>	(218)444-3855
<b>Company Name:</b>	NORTH CENTRAL SERVICE		
<b>Address:</b>	5487 HART LN BEMIDJI, MN 56601		
<b>Onsite Contact:</b>	DAN OSTERDYK	<b>Phone:</b>	(218)779-4152
<b>Fax Clears To:</b>	(218)444-6930		
<b>Email Clears To:</b>	lrallen810@gmail.com		

### Excavation Information

<b>Type of Work:</b>	INSTALL FIBER OPTIC CABLE		
<b>Work Done For:</b>	UNITE PRIVATE NETWORKS		
<b>Horizon Boring Excav:</b>	Y	<b>Explosives:</b>	N
		<b>Area Marked:</b>	N
		<b>Depth:</b>	8FT

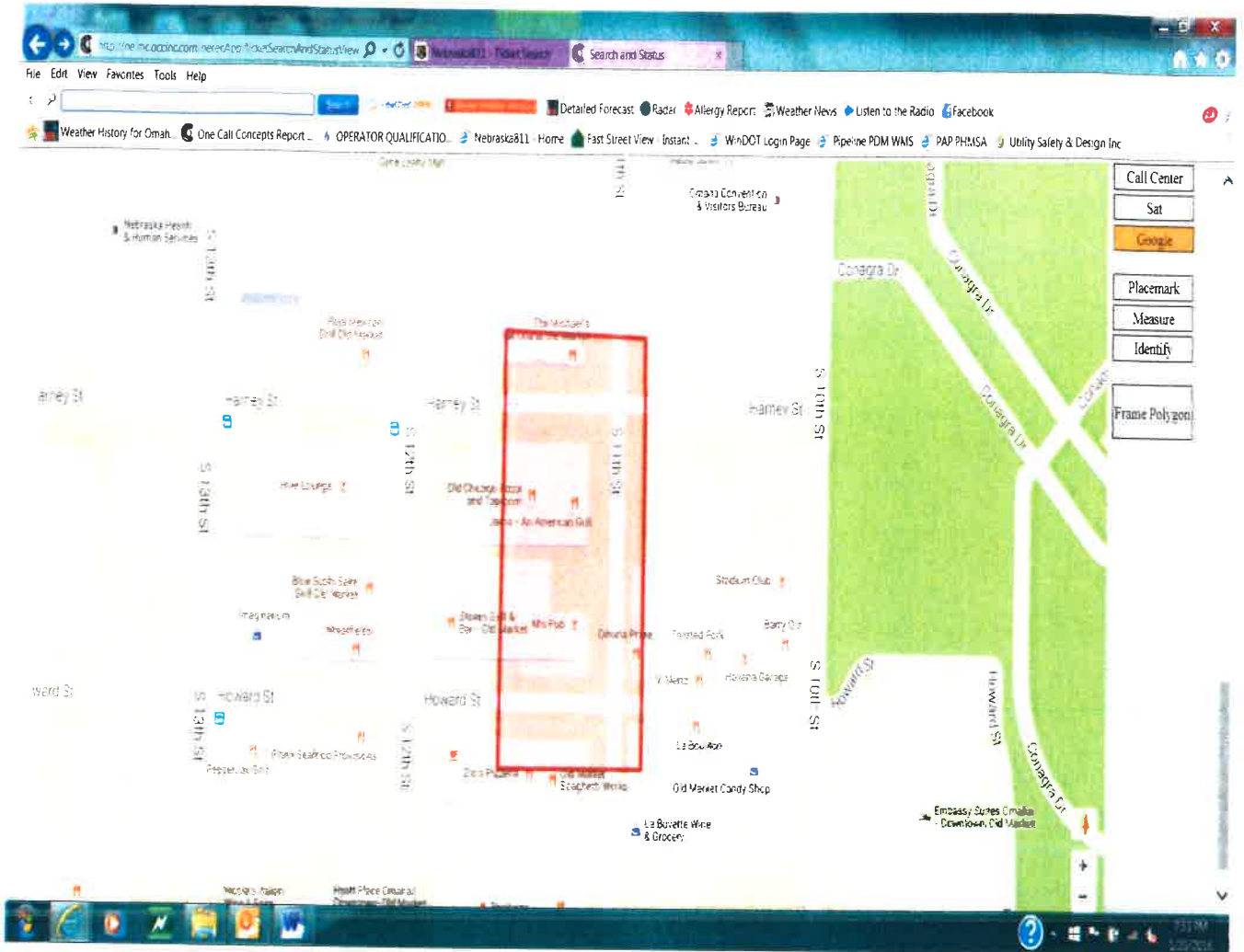
### Dig Site Location

<b>County:</b>	DOUGLAS		
<b>City:</b>	OMAHA	<b>City Limits:</b>	Y
<b>Work is on or along:</b>	S 11TH ST		
<b>Intersecting:</b>	HARNEY ST		
<b>Location Info:</b>			
<b>Remarks:</b>			
<b>Caller Twp:</b>		<b>Range:</b>	
<b>Map Twp:</b>	15N	<b>Range:</b>	13E
		<b>Sect-Qtr:</b>	22-SE-NE
<b>Map Coord NW Lat:</b>	41.2567848	<b>Lon:</b>	-95.9313050
		<b>SE Lat:</b>	41.2552235
		<b>Lon:</b>	-95.9303735

### MEMBERS NOTIFIED:

District	Utility Name	Utility Types	Status
	ALT850	WINDSTREAM COMMUNICATIONS	TEL Clear/No conflict
	COXCATV	COX COMMUNICATIONS	TV Marked
	DOCOINFS	DOUGLAS COUNTY	TEL Does not participate in Ticket Check
	MCINEB	MCI TELECOMMUNICATIONS	TEL Does not participate in Ticket Check
	MUD01	METROPOLITAN UTILITIES DIST	G,W Not yet responded
	OMAHACOF	CITY OF OMAHA	E,FO,TEL Marked
	OPPDGPR5	OMAHA PUBLIC POWER DISTRICT	ELEC Marked
	QLNNE1C	CTLQL - CENTURYLINK	TEL Marked
	QWESTNE	CTLQN - CENTURYLINK	TEL Clear/No conflict
	SPRINTNE	SPRINT	T Does not participate in Ticket Check
	UNITE	UNITE PRIVATE NETWORKS LLC	FO Does not participate in Ticket Check

# Pipeline Failure Investigation Report





# Pipeline Failure Investigation Report

## Attachment 7: Locate Request tickets from MUD

Print Tickets

Page 1 of 6

Folder: N/A; Assigned To: Dick Costello

DIGGERS HOTLINE OF NEBRASKA  
Ticket No : 153271405                      NORMAL                      NEW  
Send To : MUD01                      Seq No: 66                      Map Ref:

Link To Tkt : <http://ne.itic.occinc.com/57N3-QZP-2YU-A8P>

Transmit Date : 11/23/15 4:50 PM  
Request Date : 11/23/15 4:49 PM                      Type: WEB  
Begin Date : 11/29/15 4:00 PM

County : DOUGLAS  
City : OMAHA                      City Limits: Y  
Address/Street: S 11TH ST  
Intersecting : HARNEY ST  
Location Info : LOCATE ENTIRE WEST ROW NOF S 11TH ST STARTINGA T HARNEY GOING SOUTH TO HOWARD ST

Remarks :

Caller Twp :                      Range:                      Sect-Qtr:  
Map Twp : 15N                      Range: 13E                      Sect-Qtr: 22-SE-NE  
Caller Lat/Lon:                      Nad:                      Zone:  
Map NW Lat/Lon: 41.2567848 -95.9313050                      SE Lat/Lon: 41.2552235 -95.9303735

Ticket Contact: DAN OSTERDYK                      Phone: (218) 779-4152  
Email Clear To: lrallen810@gmail.com  
Fax Clear To : (218) 444-6930

Requested By : DARYL HOLTER                      Phone: (218) 444-3855  
Company Name : NORTH CENTRAL SERVICE  
Address : 5487 HART LN  
                    BEMIDJI, MN 56601

Type of Work : INSTALL FIBER OPTIC CABLE  
Work Done For : UNITE PRIVATE NETWORKS  
Horiz Boring : Y                      Explosives: N  
Area Marked : N                      Depth: 8FT

DISTRICT	COMPANY NAME	UTILITY TYPE
ALT850	WINDSTREAM COMMUNICATIONS	TEL
COXCATV	COX COMMUNICATIONS	TV
DOCOINFS	DOUGLAS COUNTY	TEL
MCINEB	MCI TELECOMMUNICATIONS	TEL
MUD01	METROPOLITAN UTILITIES DIST	G,W
OMARACOF	CITY OF OMAHA	E, FO, TEL
OPPDGPR5	OMAHA PUBLIC POWER DISTRICT	ELEC
QLNNE1C	CTLQL - CENTURYLINK	TEL
QWESTNE	CTLQN - CENTURYLINK	TEL
SPRINTNE	SPRINT	T
UNITE	UNITE PRIVATE NETWORKS LLC	FO

### Audit History:

**11/23/2015 4:51:51 PM:** Received  
*DETAILS:* Ticket received for registration code MUD01

**11/23/2015 4:51:51 PM:** Assigned  
*DETAILS:* Assigned to Ron Jankowski by auto process  
*NOTE:* Auto Processed per All Tickets

**11/24/2015 3:53:41 PM:** Re-Assigned  
*DETAILS:* Re-Assigned from Ron Jankowski to Dick Costello by Ron Jankowski

**12/4/2015 3:47:10 PM:** Responded

*from Alley to North  
Did not locate  
in front of MisPub  
DC*

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

# Pipeline Failure Investigation Report

Print Tickets

Page 2 of 6

*DETAILS:* Painted and Flagged by As-Built: added by Dick Costello, Locate Time: 12/4/2015 11:50:21 AM

**12/4/2015 3:47:10 PM:** Positive Response to Center Queued

*DETAILS:* Positive Response to Center queued for delivery

**12/4/2015 3:47:27 PM:** Positive Response to Center Delivered

*DETAILS:* Positive Response to Center successfully sent

**12/4/2015 3:57:27 PM:** Positive Response Result

*DETAILS:* Success

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

# Pipeline Failure Investigation Report

Print Tickets

Page 3 of 6

Folder: N/A; Assigned To: Chris Sacco

DIGGERS HOTLINE OF NEBRASKA  
Ticket No : 153430956 REFRESH RELOCATE  
Original No : 153271405  
Send To : MUD01 Seq No: 30 Map Ref:

Link To Tkt : <http://ne.itic.occinc.com/C82N-DQY-P2D-ZJM>

Transmit Date : 12/09/15 2:48 PM  
Request Date : 12/09/15 2:47 PM Type: WEB  
Begin Date : 12/11/15 3:00 PM

County : DOUGLAS  
City : OMAHA City Limits: Y  
Address/Street: S 11TH ST  
Intersecting : HARNEY ST  
Location Info : LOCATE ENTIRE WEST ROW NOF S 11TH ST STARTINGA T HARNEY GOING SOUTH TO HOWARD ST

Remarks :

Caller Twp : Range: Sect-Qtr:  
Map Twp : 15N Range: 13E Sect-Qtr: 22-SE-NE  
Caller Lat/Lon: Nad: Zone:  
Map NW Lat/Lon: 41.2567848 -95.9313050 SE Lat/Lon: 41.2552235 -95.9303735

Ticket Contact: DAN OSTERDYK Phone: (218)779-4152  
Email Clear To: lrallen810@gmail.com  
Fax Clear To : (218)444-6930

Requested By : DARYL HOLTER Phone: (218)444-3855  
Company Name : NORTH CENTRAL SERVICE  
Address : 5487 HART LN  
BEMIDJI, MN 56601

Type of Work : INSTALL FIBER OPTIC CABLE  
Work Done For : UNITE PRIVATE NETWORKS  
Horiz Boring : Y Explosives: N  
Area Marked : N Depth: 8FT

DISTRICT	COMPANY NAME	UTILITY TYPE
ALT850	WINDSTREAM COMMUNICATIONS	TEL
COXCATV	COX COMMUNICATIONS	TV
DOCOINFS	DOUGLAS COUNTY	TEL
MCINEB	MCI TELECOMMUNICATIONS	TEL
MUD01	METROPOLITAN UTILITIES DIST	G,W
OMAHACOF	CITY OF OMAHA	E, FO, TEL
OPPDGPR5	OMAHA PUBLIC POWER DISTRICT	ELEC
QLNNE1C	CTLQL - CENTURYLINK	TEL
QWESTNE	CTLQN - CENTURYLINK	TEL
SPRINTNE	SPRINT	T
UNITE	UNITE PRIVATE NETWORKS LLC	FO

**Audit History:**

**12/9/2015 2:49:06 PM:** Received

*DETAILS:* Ticket received for registration code MUD01

**12/9/2015 2:49:06 PM:** Assigned

*DETAILS:* Assigned to Ron Jankowski by auto process

*NOTE:* Auto Processed per All Tickets

**12/9/2015 4:08:24 PM:** Re-Assigned

*DETAILS:* Re-Assigned from Ron Jankowski to Chris Sacco by Chris Sacco

*Gas locator  
for Howard - Harney  
on 11th*

*CS*

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

# Pipeline Failure Investigation Report

Print Tickets

Page 4 of 6

**12/10/2015 4:41:52 PM:** Responded

*DETAILS:* Painted and Flagged by As-Built: added by Chris Sacco, Locate Time: 12/10/2015 4:41:41 PM

**12/10/2015 4:41:52 PM:** Positive Response to Center Queued

*DETAILS:* Positive Response to Center queued for delivery

**12/10/2015 4:42:02 PM:** Positive Response to Center Delivered

*DETAILS:* Positive Response to Center successfully sent

**12/10/2015 4:52:06 PM:** Positive Response Result

*DETAILS:* Success

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

# Pipeline Failure Investigation Report

Print Tickets

Page 5 of 6

Folder: N/A; Assigned To: Ron Jankowski

DIGGERS HOTLINE OF NEBRASKA  
Ticket No : 153640287 REFRESH RELOCATE  
Original No : 153430856  
Send To : MUD01 Seq No: 22 Map Ref:

Link To Tkt : <http://ne.itic.occinc.com/XDFY-P2N-BQZ-82Y>

Transmit Date : 12/30/15 11:50 AM  
Request Date : 12/30/15 11:50 AM Type: WEB  
Begin Date : 1/04/16 12:00 PM

County : DOUGLAS  
City : OMAHA City Limits: Y  
Address/Street : S 11TH ST  
Intersecting : HARNEY ST  
Location Info : LOCATE ENTIRE WEST ROW NOF S 11TH ST STARTINGA T HARNEY GOING SOUTH TO HOWARD ST

Remarks :

Caller Twp : Range: Sect-Qtr:  
Map Twp : 15N Range: 13E Sect-Qtr: 22-SE-NE  
Caller Lat/Lon: Nad: Zone:  
Map NW Lat/Lon: 41.2567848 -95.9313050 SE Lat/Lon: 41.2552235 -95.9303735

Ticket Contact: DAN OSTERDYK Phone: (218) 779-4152  
Email Clear To: lrallen810@gmail.com  
Fax Clear To : (218) 444-6930

Requested By : DARYL HOLTER Phone: (218) 444-3855  
Company Name : NORTH CENTRAL SERVICE  
Address : 5487 HART LN  
BEMIDJI, MN 56601

Type of Work : INSTALL FIBER OPTIC CABLE  
Work Done For : UNITE PRIVATE NETWORKS  
Eoriz Boring : Y Explosives: N  
Area Marked : N Depth: 8FT

DISTRICT	COMPANY NAME	UTILITY TYPE
ALT850	WINDSTREAM COMMUNICATIONS	TEL
COXCATV	COX COMMUNICATIONS	TV
DOCOLNFS	DOUGLAS COUNTY	TEL
MCINEB	MCI TELECOMMUNICATIONS	TEL
MUD01	METROPOLITAN UTILITIES DIST	G, W
OMAHACOP	CITY OF OMAHA	E, FO, TEL
OPPDGPRS	OMAHA PUBLIC POWER DISTRICT	ELEC
QLNNE1C	CTLQL - CENTURYLINK	TEL
QWESTNE	CTLQN - CENTURYLINK	TEL
SPRINTNE	SPRINT	T
UNITE	UNITE PRIVATE NETWORKS LLC	FO

## Audit History:

**12/30/2015 11:51:30 AM:** Received

*DETAILS:* Ticket received for registration code MUD01

**12/30/2015 11:51:30 AM:** Assigned

*DETAILS:* Assigned to Ron Jankowski by auto process

*NOTE:* Auto Processed per All Tickets

**12/30/2015 2:12:20 PM:** Re-Assigned

*DETAILS:* Re-Assigned from Ron Jankowski to Chris Sacco by Chris Sacco

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

*RJ*  
*Told by Contractor,  
Not need to remark*

# Pipeline Failure Investigation Report

Print Tickets

Page 6 of 6

**12/31/2015 8:11:43 AM:** Re-Assigned

DETAILS: Re-Assigned from Chris Sacco to Ron Jankowski by Chris Sacco

**1/4/2016 1:38:23 PM:** Responded

DETAILS: Unable to locate - See Comments: added by Ron Jankowski, Locate Time: 1/4/2016 1:37:47 PM

v9/16★

NOTE: marked from previous ticket : Unable to locate

**1/11/2016 9:07:13 AM:** Ticket Queued

DETAILS: Ticket queued for delivery to denise\_dolezal@mudnebr.com. Reason: Ticket Email Requested.

**1/11/2016 9:07:20 AM:** Ticket Delivered

DETAILS: Ticket successfully sent to denise\_dolezal@mudnebr.com

**1/20/2016 8:01:12 AM:** Ticket Queued

DETAILS: Ticket queued for delivery to denise\_dolezal@mudnebr.com. Reason: Ticket Email Requested.

**1/20/2016 8:01:15 AM:** Ticket Delivered

DETAILS: Ticket successfully sent to denise\_dolezal@mudnebr.com

<http://irtpwh01/IRTHNet/TicketManager/Print/Ticket.aspx?withHeader=1&withAudit=1&...> 1/27/2016

# Pipeline Failure Investigation Report

## Attachment 8: Mapping System Inspection

Inspection of computer system mapping  
Denise Dolezal, Senior Engineer GIS mapping / Compliance  
01/27/2016 at approximately 1500 hours

*Arnie Bates' summary of system mapping ... M.U.D. organized in 1911 a combination of multiple gas system operators (4). The use of the term "field technicians" is a broad categorization of the different operations, maintenance and service personnel that can have access to the portable computer units.*

*Some records date back to 1911 while there are records with missing data or information. Prior to 1980 most all documentation was in hard copy (paper documents) map(s), service card and/or construction documentation.*

*Since 1980 there are some documents that have been entered into some type of data base.*

*Around 1988 documentation on gas valves and some service line information were entered into a program referred to as Valves and Service Location (VASL) this is a home grown data base containing basic information, such as size, type and gives measurements from fixed objects to the valve box location, this includes all valves; key (emergency), convenience valves (valves on main to provide for maintenance, isolation of sections) and service curb valves.*

*Around 1991 the paper mapping system started to be converted to a Computer Aided Design (CAD) program.*

*During 1992 the programs (VASL and CAD) needed to be link together for technicians in the field. Technicians still using hard copy in the field contacted support personnel in the main operations center who then brought information up on computer and relayed it to the field.*

*In 2012 M.U.D. implemented a new map system; **Geographic Information System (GIS)** based software, in order to bring multiple levels of data and information into the map system. (In a general sense, the term describes any [information system](#) that integrates stores, edits, analyzes, shares, and displays [geographic](#) information. [GIS applications](#) are tools that allow users to create interactive queries [user-created searches], analyze spatial information, edit data in maps, and present the results of all these operations). This included introduction of computer operations into the scope of field technicians.*

*Still today much of the field documentation is captured in paper form then brought to "mapping" for the information to be entered into the mapping system.*

*In 2015 M.U.D. started scanning service card documents and linking these documents to the mapping system.*

## ***Pipeline Failure Investigation Report***

...Basic information as indicated by Denise Dolezal... Started placing mains into CAD in 1991.....

At this time we were able to draw lines, but that was about it.

Now with the GIS map system we can input GIS information and data attributed to main, fittings, transitions and similar field data.

The construction, maintenance, material and location data is still gathered in the field and brought to (us) so that we can input the information into the GIS map system.

In the field, technicians have access to multiple data bases and other information; they generally are able to see (two) screens, GIS and Utilities viewer. The maps seen on the screen for the two views are essentially the same.

Originally we had CAD for drawing lines, another data base contained information for the valves and service line (VASL). Starting in about 1988 we started bringing information from hard copy into VASL; moving some 450,000 inputs to designate valves and some service lines. This project was completed by 1992, and it became apparent that another program would be required to manage all the data. This system does allow information to be searched by (address, meter number and some other site information). While GIS is the main viewer screen, both viewer screens are redundant.

As components of the gas system are renovated, the new information is placed into respective data bases and attached to the GIS system. Information is continually being migrated over. From 2013 until now about 55.5% of the system piping, mains and services have been verified onto the GIS system.

Looking at the main view screen in GIS, this is what the field technician is able to view.

There is an "Orange Dot" displayed on the screen that has legacy information linked to it. Here again, the legacy information may not be totally accurate for those areas not yet verified.

Information could tell the location of where the meter is located.

On the day of 01/9/2016 the Utilities Viewer system was under test, moving back up files to an additional location so that in a situation where 3100 South 61<sup>st</sup> Street becomes inoperable, control of data and information would be transferred to the new location and systems could continue to operate.

So the main viewer system would have been the GIS map. As indicated, this has the same information with links to additional information.

There are approximately 201,200 service lines, located on 245,000 lots. We currently have roughly, 114,300 lots with verified accurate information. (55.5%)

What is the status of information and data on service lines? We have roughly 95% of all services with documents. So there is approximately 5% of service line data unknown. Of the service cards 98% have been verified as accurate. (2% of known information not verified).



## Pipeline Failure Investigation Report

As new or inaccurate information is found and is provided to us or an immediate supervisor, there is a process to **verify data** as correct and gain added GIS information before final correction to GIS system.

There are four individuals assigned to verify location. On estimate, there are roughly 5% of services without service card information.

**For the specific area near 422 South 11<sup>th</sup> Street, this is an area that GIS is not yet completed. Not all service lines have been identified as to location. Not all of the service lines are on the displayed map. Most of the services have "service cards" which give the location of the service curb valve, but may not be displayed on the mapped system.**

M.U.D. installs service curb valves on all commercial applications, commercial is a designation, it is not based upon size of line or volume of gas flow. Not all residential service lines get a service curb valve.

-----  
We visually looked at several service line cards and how they are displayed.  
One from 1999  
One from 1926

Type of material or related information is not available sometimes. To indicate material in VASL we input data that would be consistent to that time of construction. Meaning that if the card was from the 1930's we would look at size, if listed; corresponded this to type of material **1 1/4" = steel, 1 1/2" = galvanized, 5/8"** generally some type of copper. If on the other hand we look at a service from 1960, the type of material may be listed but not always. Legacy information would then be updated or verified by the work. In the 1960's we were starting to use some types of plastic, Alkyl-A and Orangeburg, or Phillips (orange in color) and sizes varied a little 5/8", 3/4", 1", etc.

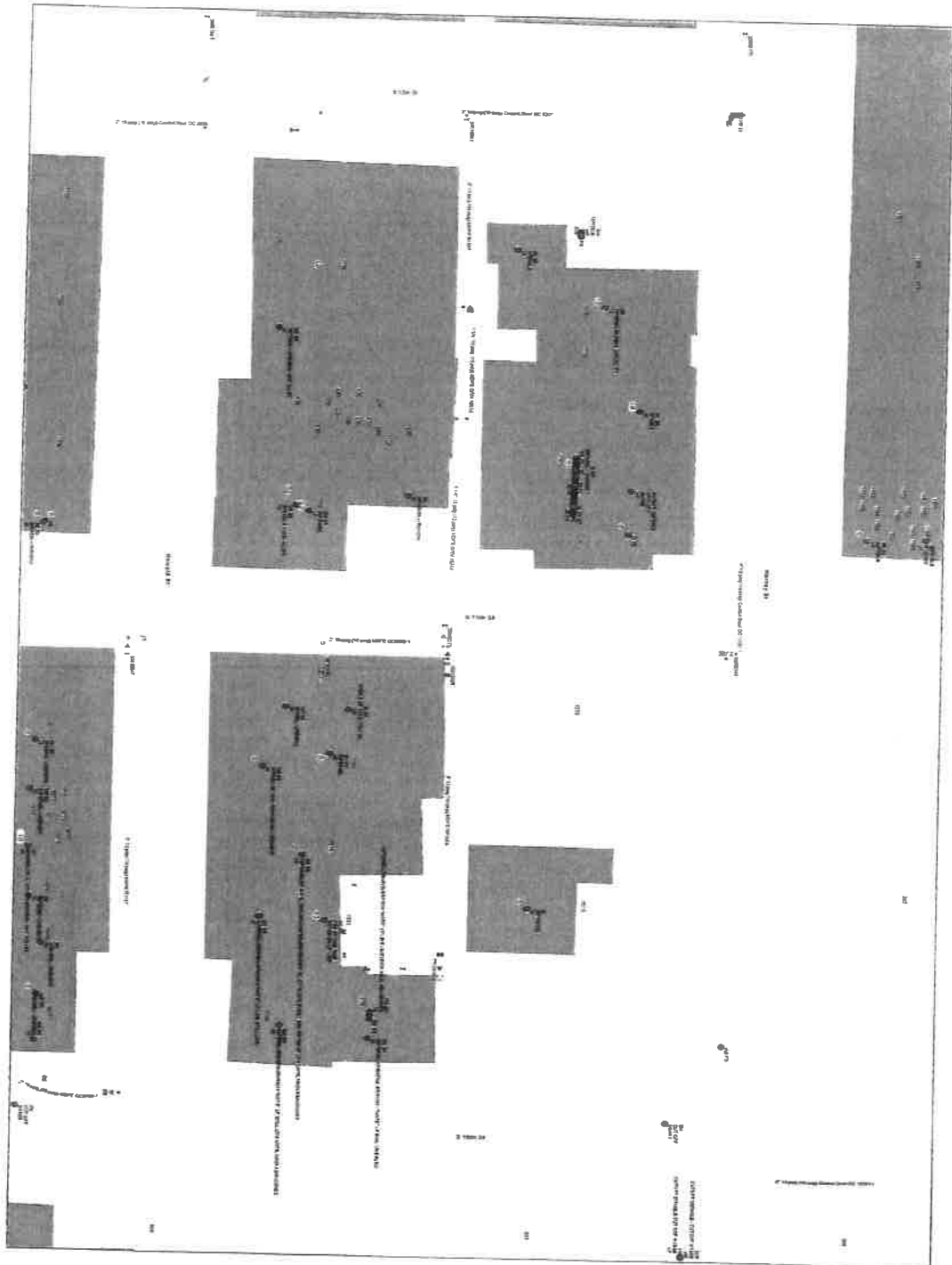
There are known cast iron services. The last known cast iron service replaced (renewed) is at 30<sup>th</sup> and Dewey. This was a 4" gas service.

We started a program where we look at services that have had no activity or are known to be "not in service". We will go in and abandoned the service, once in a while we will replace the service if we believe that service will be utilized (soon). Because of all the plan replacement that we have, the review and action time interval is at three years now. (If we know we are going to replace the main in three years, we may then wait to take action when the replacement of the main happens.)

.....

# Pipeline Failure Investigation Report

## Attachment 9: Computer screen shot of map for Old Market Area



# Pipeline Failure Investigation Report

## Attachment 10: Operator Qualification Task 35-92

### OPERATOR QUALIFICATION EVALUATION CRITERIA 10-20-2011

COVERED TASK: OQ-35 - 92

P. 1 of 2

SUBJECT: LINE LOCATING AND PIPELINE MARKING

PERFORMED BY: PLANT ENGINEERING – UTILITY LOCATORS, UTILITY  
LOCATOR/CAD TECHNICIAN, SR. ENGINEERING  
TECHNICIANS, FIELD ENGINEERS  
DESIGN ENGINEERING – DRAFTING TECHNICIANS

*Identification of the approximate location, by field marking, of underground District facilities.*

*Existing District owned underground facilities shall be field located using the MUD Locating Manual as a guideline.*

As it concerns the Senior Engineering Technicians, this task applies to projects involving Contractors installing facilities for MUD. In complex or unusual situations, the senior engineering technician will contact Field Engineering for assistance performing this task.

A Qualified individual will be able to  
Recognize and react to Abnormal Operating Conditions  
Investigate extent of abnormality or contact appropriate personnel  
Complete documentation in accordance with procedures

#### ABNORMAL OPERATING CONDITIONS

No Signal  
Air coupling  
Apparent overhead interference  
Destructive interference  
Weak signal  
Signal distortion  
Poor grounding conditions

#### TRAINING TOOLS

Module #402  
Classroom instruction  
Field training by experienced locators  
MUD Locating Manual  
Nebraska One-Call Notification Systems Act of 1994

SYSTEMS CONTROL

# Pipeline Failure Investigation Report

**OPERATOR QUALIFICATION  
EVALUATION CRITERIA  
10-20-2011**

**COVERED TASK: OQ-35 - 92**

**P. 2 of 2**

**SUBJECT: LINE LOCATING AND PIPELINE MARKING**

**PERFORMED BY: PLANT ENGINEERING – UTILITY LOCATORS, UTILITY  
LOCATOR/CAD TECHNICIAN, SR. ENGINEERING  
TECHNICIANS, FIELD ENGINEERS  
DESIGN ENGINEERING – DRAFTING TECHNICIANS**

## EVALUATION CRITERIA OPTIONS

The determination of which criteria to use during evaluation is at the discretion of the employees supervisor with the understanding that work performance history review cannot be used solely.

### INITIAL QUALIFICATION

See Attached Checklist

### SUBSEQUENT QUALIFICATION

1. Written Exam

AND

2. Performance On-the-Job

### SPAN OF CONTROL

1:0 Only qualified individuals can perform a task.

<b>Repetitive Nature</b>	1
<b>Level of Safety Risk</b>	3
<b>Complexity of Task</b>	3
<b>Evaluation Checklist</b>	2
<b>Sum of Scores</b>	9
<b>Qualification Interval</b>	3 Years

SYSTEMS CONTROL

# Pipeline Failure Investigation Report

## Attachment 11: Individual Operator Qualification Task 35-92

### Metropolitan Utilities District Operator Qualifications Date: July 31, 2015

Empl. No.	Job Title	First Name	Last Name	Task	Description	Qualified Date	Next Date
4390	UTIL LOCATOR	CHRISTOPHER	SACCO	08A-95	SEALING CAST IRON JOINTS ENCAP	04/17/2013	04/17/2016
4390	UTIL LOCATOR	CHRISTOPHER	SACCO	35-92	LOCATING/MARKING PIPELINES	11/06/2014	11/06/2017
4390	UTIL LOCATOR	CHRISTOPHER	SACCO	54-95	EXCAVATION	02/08/2012	02/08/2017

### Metropolitan Utilities District Operator Qualifications Date: July 31, 2015

Empl. No.	Job Title	First Name	Last Name	Task	Description	Qualified Date	Next Date
3844	UTIL LOCATOR	RICHARD	COSTELLO	35-92	LOCATING/MARKING PIPELINES	11/06/2014	11/06/2017

### Metropolitan Utilities District Operator Qualifications Date: July 31, 2015

Empl. No.	Job Title	First Name	Last Name	Task	Description	Qualified Date	Next Date
3394	UTIL LOCATOR	RONALD	JANKOWSKI JR	35-92	LOCATING/MARKING PIPELINES	11/06/2014	11/06/2017



# Pipeline Failure Investigation Report

Attachment 13: 2009 Abandonment of services, for 422/424 S 11<sup>th</sup> Street  
Page 1 of 3

*Review*

Gas Service Record — H.P.

Q.S. Page # \_\_\_\_\_

Address: **422 / 424 S. 11<sup>TH</sup> ST.**

Name: **M/S PUB**

Lot: \_\_\_\_\_ B k \_\_\_\_\_

Addition: \_\_\_\_\_ Dwg. No. \_\_\_\_\_

Service Installer: **3712 / TROXEL** Date installed: **8-8-09**

Size: **1** ins. Length: \_\_\_\_\_ ft. \_\_\_\_\_ ins.

Material: **ALLOY** Operating pressure: \_\_\_\_\_ psi Test pressure: \_\_\_\_\_ psi

Installed method: \_\_\_\_\_ Tap size: \_\_\_\_\_ ins.

Tap location: \_\_\_\_\_ ft. \_\_\_\_\_ ins. of \_\_\_\_\_ line of bldg.

Main Size: \_\_\_\_\_ ins. Depth: \_\_\_\_\_ ft. \_\_\_\_\_ ins.

Material: \_\_\_\_\_

Location: \_\_\_\_\_ ft. \_\_\_\_\_ ins. of \_\_\_\_\_ (curb line / bldg line)

Condition: Poor  4 Fair  3 Good  2 Very Good  1

Valve type: **Auto** Location of Valve: **(OVER)** Regulator: \_\_\_\_\_

### Gas Service Installation

Method Codes			
Code	Description	Code	Description
A	= Augered	I	= Inserted
B	= Directional Bore	P	= Plowed
C	= Augered/Trenched	T	= Trenched
D	= Augered/Plowed	Blank	= Don't know

Regulator Codes	
Code	Description
A	= Above ground
B	= Buried
I	= Inside
O	= Outside at meter

Remarks/repairs: \_\_\_\_\_

Date \_\_\_\_\_ Name \_\_\_\_\_

**Cut in side of new  
line last year**

# Pipeline Failure Investigation Report

2009 Abandonment of services, for 422/424 S 11<sup>th</sup> Street Page 2 of 3

Form 6A R3 GAS SERVICE RECORD M.U.D. Omaha, Neb.

Address 424 So 11.

Lot \_\_\_\_\_ Blk. \_\_\_\_\_ Addition \_\_\_\_\_

Name Santino Butcher Dwg. No. \_\_\_\_\_

Size of Service 3/4 Length 71 Ft. 6 Ins. Size Tap 5/8"

Location 20 Ft. 9 Ins. S of No Line of Building

Loc. of Valve 1' WWCL

Regulator \_\_\_\_\_ Press \_\_\_\_\_ Lbs. \_\_\_\_\_

Size of Main 2" Type Plastic Depth 5 Ft. 0 Ins. Trench  Push \_\_\_\_\_

Location 10 Ft. 4 Ins. W of E Curb Line  
Property Line

Service Laid by Wells, Johnson Date 10-28 1969

Remarks	Date	Name
<u>1' main to curb</u>		
<u>1/2" curb to building</u>	<u>10/28/69</u>	<u>WJ</u>
Repairs		



# Pipeline Failure Investigation Report

2009 Abandonment of services, for 422/424 S 11<sup>th</sup> Street Page 3 of 3

Form 5 R1 **86-243** GAS SERVICE RECORD **4-1831-74** M.U.D. Omaha, Nebr.

Address **422-24 S 11<sup>th</sup>** Lot \_\_\_\_\_ Blk \_\_\_\_\_ Addition \_\_\_\_\_ OK

Name **Airtested gas service** Dwg. No. \_\_\_\_\_

Size of Service **1/2"** Length \_\_\_\_\_ Ft. Ins. Size Tap **1"**

Location **20'** Ft. **0"** Ins. **5** Of **N** Line of Building **422 S 11**

Type of Valve **AT-CURB** Turns \_\_\_\_\_ Regulator \_\_\_\_\_

Drip on Service \_\_\_\_\_ Location \_\_\_\_\_

Size of Main **1/2"** Type \_\_\_\_\_ Depth **4** Ft. **6** Ins. Drips Towards **South**

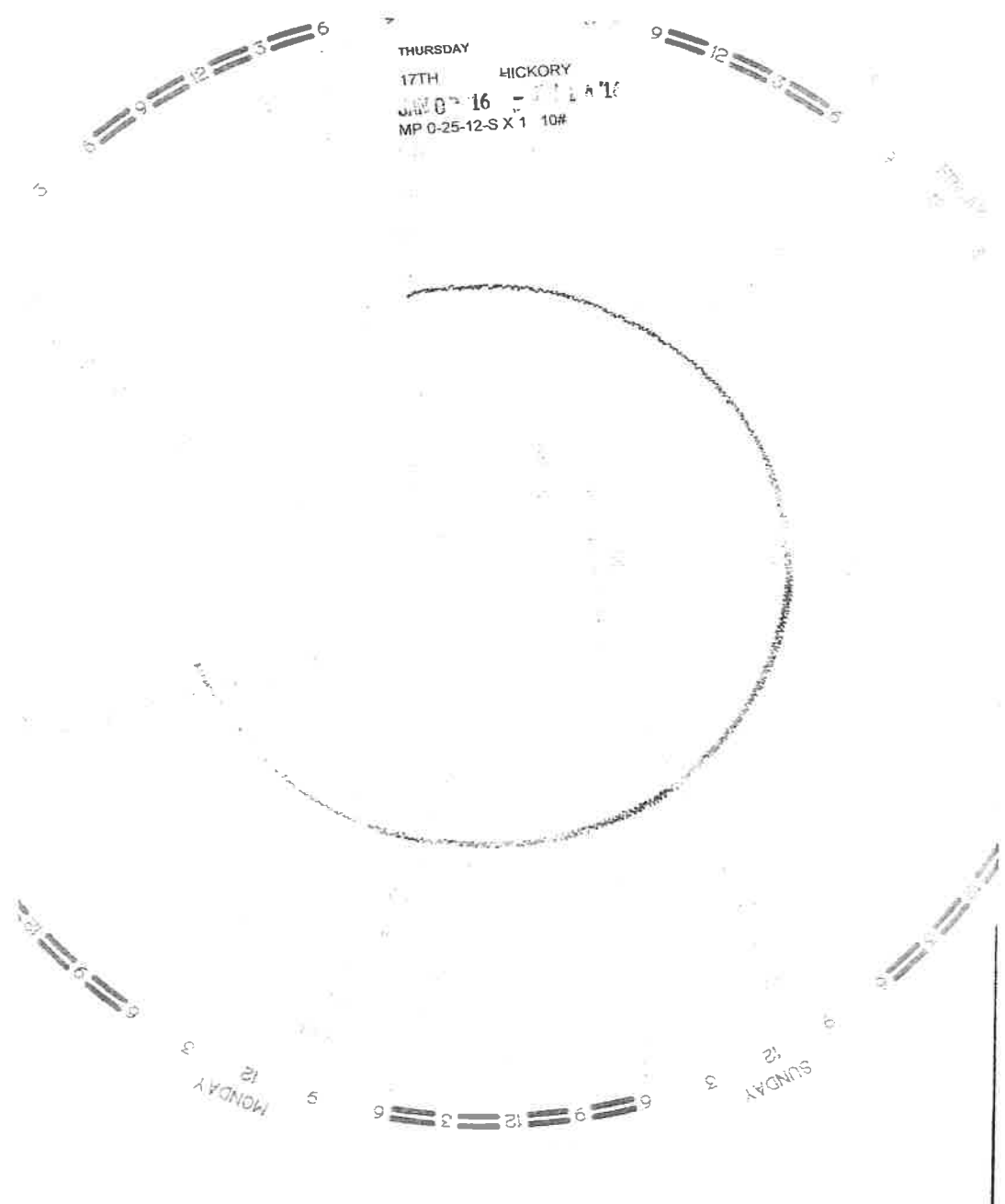
Location **10** Ft. **0** Ins. **W** of **EAST** Curb Line \_\_\_\_\_

Service ~~made~~ by **D. Hall - Stewart** Date **3-22-1966**  
*airtested*

Remarks	Date	Name
<i>Out chg to GA 611</i>		
<i>Replaced main fittings</i>		
<i>and airtested service OK</i>		
<b>Repairs</b>		

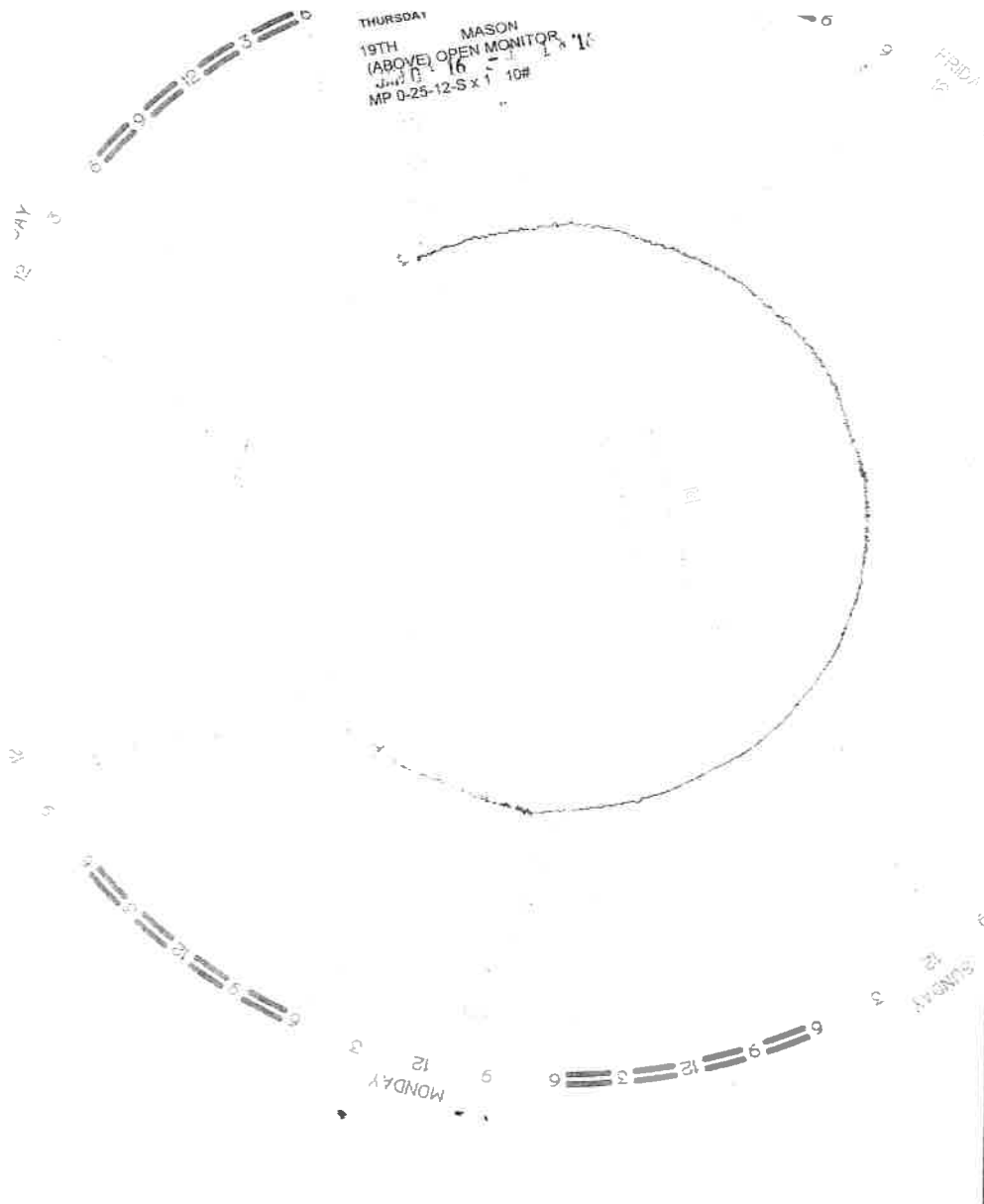
# Pipeline Failure Investigation Report

## Attachment 14: Pressure Chart from 17<sup>th</sup> & Hickory



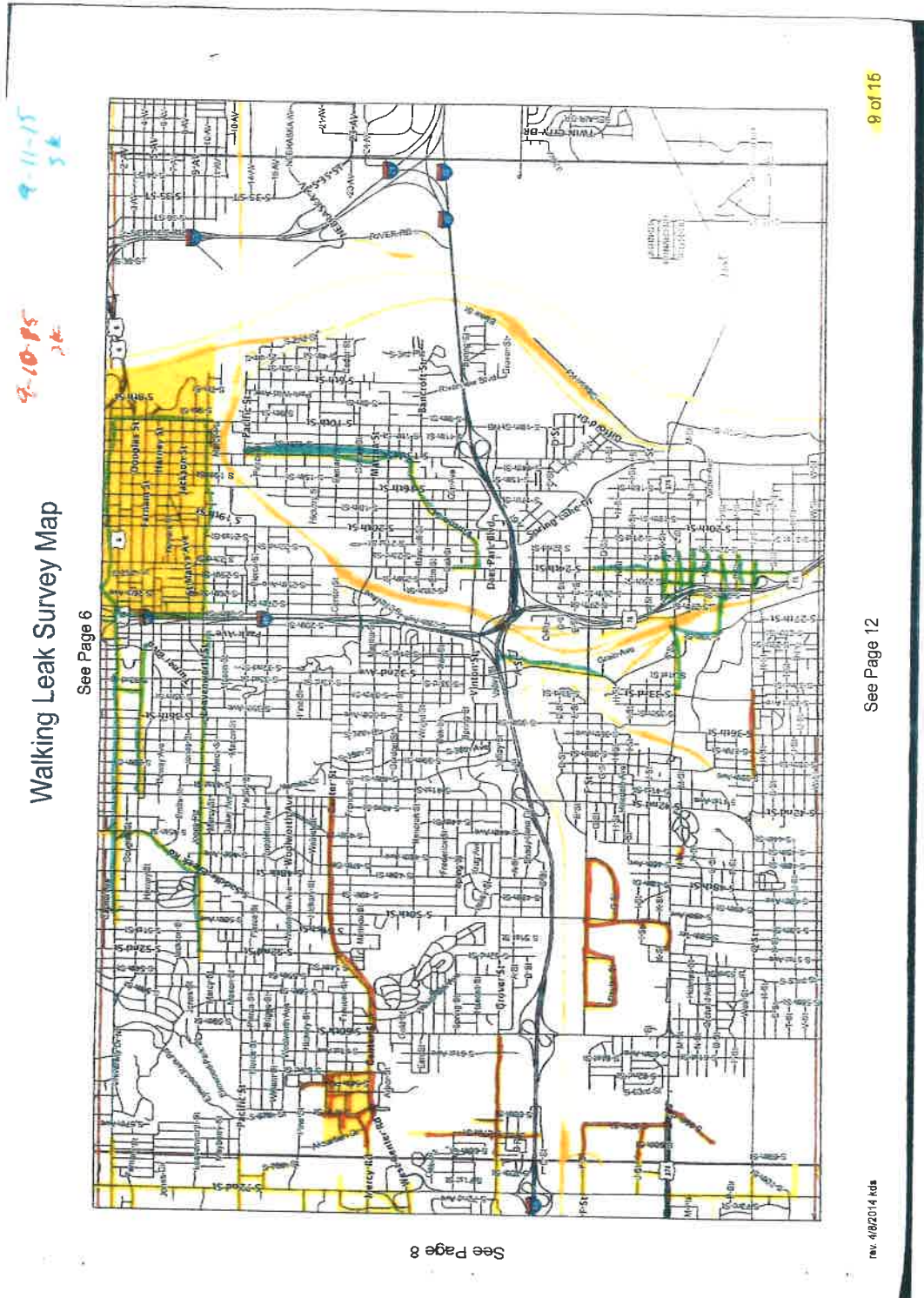
# Pipeline Failure Investigation Report

## Attachment 15: Pressure Chart from 19<sup>th</sup> & Mason



# Pipeline Failure Investigation Report

## Attachment 16: Leak Survey map for area 2015



# Pipeline Failure Investigation Report

## Attachment 17: Defined area of Leak Survey 2015

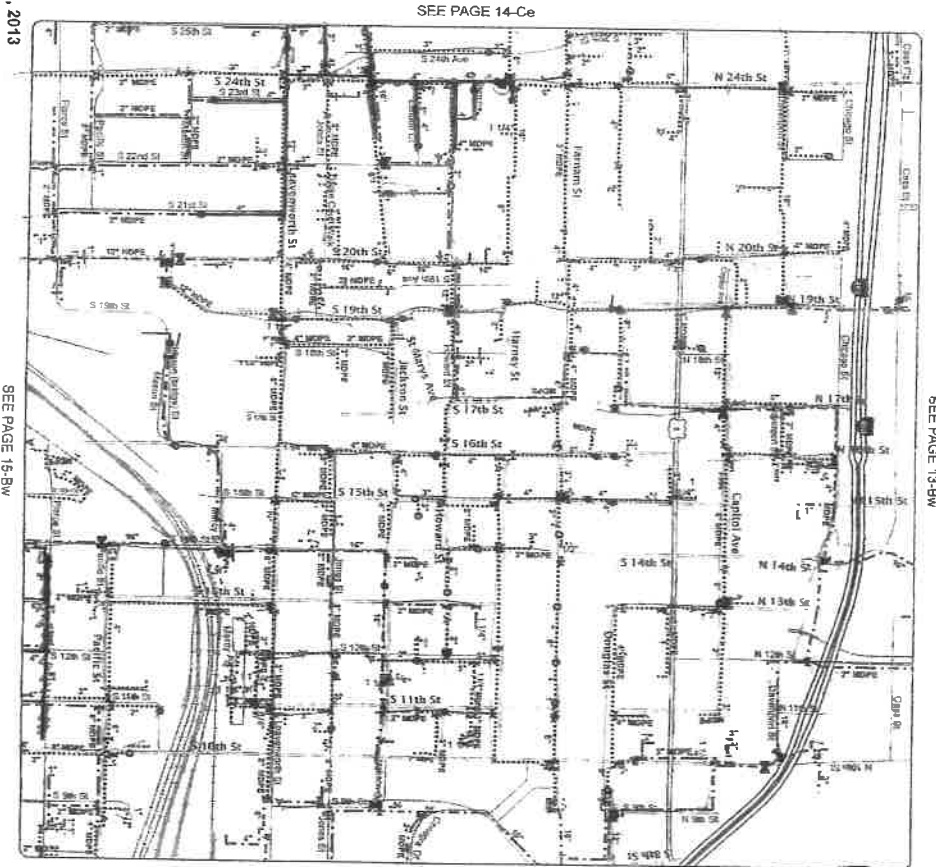
NOTES

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1/4 Sec. Pg. Ref

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123	122

PRINTED/EXPORTED ON Tuesday, October 01, 2013



SEE PAGE 14-Ce

SEE PAGE 13-Bw

SEE PAGE 15-Bw

SEE PAGE 14-Be

14-Bw

9-11-15  
LW

# Pipeline Failure Investigation Report

## Attachment 18: Leak Survey sign-off

### Metropolitan Utilities District

rptGasLeakSurvey

Gas Leak Survey by Service Address

HOWARD ST FROM 100 TO 2800

22<sup>nd</sup> - 24<sup>th</sup> St  
under const.  
11-20-15  
SK

9-17-15  
9-18-15  
All ok  
SK

ED 10

NW corner

1100

Howard light

## ***Pipeline Failure Investigation Report***

### **Attachment 19: Guidance for Odorant Perception test records**

Odorization

M.U.D. conducts odorant perception tests (odorometer tests) on a monthly basis. We have divided the system into two sections; North & South (roughly halve the city).

Odorometer tests are conducted in alternating sections monthly.

So reports for a specific section would be bi-monthly (January-March-May-July-September-November

Or; February-April-June-August-October-December of the year.

**From:** Dolezal, Denise [[mailto:Denise\\_Dolezal@mudnebr.com](mailto:Denise_Dolezal@mudnebr.com)]

**Sent:** Wednesday, January 20, 2016 10:55 AM

**To:** Bates, Arnie; Lucas, Stephen

**Subject:** RE: Paper work for 422 S 11th

Hello Arnie,

The odorant sniff reports that I attached to my original email apparently did not stick. The odorant sniff results are shown in the two documents above entitled "422 S 11<sup>th</sup> Fire Odorant Sniff on 1-09-2016.pdf" and "422 S 11<sup>th</sup> Fire Odorant Sniff on 1-11-2016.pdf". On the column labeled "Reading .00%" you will see the percent of gas in air at which the odorant was detected. So, if you look at the report for 1-09-2016, the first reading at 510 S 10<sup>th</sup> Street showed odorant detected at .53% gas in air. The odor intensity code was 4 or Strong.

The Code column is an odor intensity code that we assign to the test that ranks from 1 to 5. The code values are as follows:

Code 1 = Odor Absent

Code 2 = Barely Detectable

Code 3 = Readily Detectable

Code 4 = Strong

Code 5 = Obnoxious

## Pipeline Failure Investigation Report

### Attachment 20: Odorant Perception tests

Addresses	City	Tech	Unit	Reading .00%	Code	Stop Type	Stop #	Route No.	Foreman Page	E/W
<b>Sniff Test 2015</b>										
<b>Page 13 B</b>										
151 Freedom Park Road	Omaha	CF	3	59	4	RS	202	26	13 B	e
1500 N 24th Street	Omaha	CF	1	60	4	RS	125	41	13 B	w
1313 Cumming Street	Omaha	DS	4	48	4	RS	328	45	13 B	w
151 Freedom Park Road	Omaha	BL	2	55	4	RS	202	26	13 B	e
505 Riverfront Drive	Omaha	CF	3	61	4	RS	663	33	13 B	e
<b>Page 13 C</b>										
1501 N 33rd Street	Omaha	CF	4	52	4	RS	91	33	13 C	e
<b>Page 14 B</b>										
345 Riverfront Drive	Omaha	CJ	3	37	4	RS	39	1	14 B	e
2152 Howard Street	Omaha	CF	3	51	4	RS	190	8	14 B	w
615 Leavenworth Street	Omaha	CF	3	69	4	RS	310	15	14 B	e
1209 Leavenworth Street	Omaha	CF	1	56	4	RS	92	20	14 B	w
345 Riverfront Drive	Omaha	PA	3	49	4	RS	39	1	14 B	e
1041 S 20th Street	Omaha	CF	1	46	4	RS	482	8	14 B	w
1209 Leavenworth Street	Omaha	JH	2	59	4	RS	92	20	14 B	w
608 Conagra Drive Building 9	Omaha	CJ	2	44	4	RS	675	41	14 B	e
<b>Page 14 C</b>										
3001 Dodge Street	Omaha	DH	3	46	4	RS	329	5	14 C	e
220 S 31st Avenue	Omaha	CF	2	59	4	RS	386	31	14 C	e
3520 Pacific Street	Omaha	CF	1	47	4	RS	148	38	14 C	e
<b>Page 15 C</b>										
1701 S 11th Street	Omaha	CF	2	55	4	RS	473	26	15 B	w
2407 S 23rd Street	Omaha	CF	2	57	4	RS	30	31	15 B	w
1213 S 6th Street	Omaha	DB	3	55	4	RS	437	51	15 B	e
1702 S 6th Street	Omaha	BS	2	57	4	RS	26	52	15 B	e
701 Castelar Street	Omaha	CF	4	50	4	RS	564	13	15 B	e
2401 S 16th Street	Omaha	CF	4	63	4	RS	563	13	15 B	w
1701 S 11th Street	Omaha	DH	2	39	4	RS	473	26	15 B	w
2030 Martha Street	Omaha	CF	4	58	4	RS	667	35	15 B	w



## Pipeline Failure Investigation Report

Page 15 C										
3309 Arbor Street	Omaha	CF	1	59	4	RS	197	41	15 C	e
1714 S 32nd Avenue	Omaha	CF	4	51	4	RS	665	31	15 C	e
1745 S 26th Street	Omaha	CF	4	51	4	RS	666	35	15 C	e
1310 S 30th Avenue	Omaha	CF	2	67	4	RS	681	37	15 C	e
<b>1521 Forms 2015</b>										
912 S 31st Street	Omaha	10020			4	mtr chg			14 B	w
1516 Leavenworth	Omaha	4319			4				14 B	w
603 N 14th Street	Omaha	10104			4				14 B	e
1022 Pacific Street	Omaha	10104			4				14 B	w
511 S 16th Street	Omaha	3912			4				14 B	w
1115 Harney Street	Omaha	10104			4				14 B	w
2019 Drake Court Walk	Omaha	10020			4	mtr chg			14 B	w
3406 Dodge Street	Omaha	10070			4				14 C	e
203 S 26th Avenue	Omaha	10007			4				14 C	e
3415 Davenport Street	Omaha	3872			4	leak			14 C	e
2566 Farnam Street	Omaha	10020			4	mtr chg			14 C	e
3422 Leavenworth Street	Omaha	10104			4				14 C	e
3107 Marcy Street	Omaha	10104			4				14 C	e
3105 Marcy Street	Omaha	10104			4				14 C	e
3028 Marcy Street	Omaha	10020			4	mtr chg			14 C	e
554 S 26 Street	Omaha	4421			3				14 C	e
3505 Hamilton Street	Omaha	9255			4	mtr chg			13 C	e
2917 Nicholas Street	Omaha	10104			4				13 C	e
1702 Clark Street	Omaha	10104			4				13 B	w
1102 N 20th Street	Omaha	3912			4	leak			13 B	w
512 Martha Street	Omaha	10020			4				15 B	e
1709 S 15th Street	Omaha	3048			4	mtr chg			15 B	w
1932 S 16th Street	Omaha	3048			4	mtr chg			15 B	w
1450 S 15th Street	Omaha	3048			4	mtr chg			15 B	w
2411 S 20th Street	Omaha	3872			4	leak			15 B	w
2224 S 15th Street	Omaha	9255			4	mtr chg			15 B	w
1310 S 9th Street	Omaha	10104			4	mtr chg			15 B	w
1720 1/2 South 20th Street	Omaha	10020			4	mtr chg			15 B	w

## Pipeline Failure Investigation Report

2513 S 3rd Street Plaza	Omaha	10104			4	mtr chg			15 B	e
1421 S 6th Street	Omaha	10104			4				15 B	e
2102 South 8th Street	Omaha	10020			4	mtr chg			15 B	e
915 1/2 Forest Avenue	Omaha	3912			4	mtr chg			15 B	w
1221 South 24th Street	Omaha	10020			4	mtr chg			15 B	w
1401 South 5th Street	Omaha	10020			4	mtr chg			15 B	e
315 Woolworth Avenue	Omaha	9255			4	mtr chg			15 B	e
401 William Street	Omaha	10020			4	mtr chg			15 B	e
2510 Pierce Street	Omaha	3912			4	leak			15 C	e
1338 S 35th Avenue	Omaha	10104			4				15 C	e
2315 Hanscom Boulevard	Omaha	9255			4	mtr chg			15 C	e
<b>Sniff Test 2016</b>										
317 William Street	Omaha	DM	3	54	4	RS	284	6	15 B	e
345 Riverfront Drive	Omaha	CF	3	54	4	RS	39	1	14 B	e



# Pipeline Failure Investigation Report

## Attachment 22: Damage Prevention Plan Review

Damage Prevention Program review: 02/07/2016

*49 CFR §192.614 Damage prevention program.*

*(a) Except for pipelines listed in paragraphs (d) and (e) of this section, each operator of a buried pipeline shall carry out in accordance with this section a written program to prevent damage to that pipeline by excavation activities. For the purpose of this section, "excavation activities" include excavation, blasting, boring, tunneling, backfilling, the removal of above ground structures by either explosive or mechanical means, and other earth moving operations. An operator may perform any of the duties required by paragraph (b) of this section through participation in a public service program, such as a "one-call" system, but such participation does not relieve the operator of responsibility for compliance with this section.*

*(b) An operator may comply with any of the requirements of paragraph (c) of this section through participation in a public service program, such as a one-call system, but such participation does not relieve the operator of responsibility for compliance with this section. However, an operator must perform the duties of paragraph (c)(3) of this section through participation in a one-call system, if that one-call system is a qualified one-call system. In areas that are covered by more than one qualified one-call system, an operator need only join one of the qualified one-call systems if there is a central telephone number for excavators to call for excavation activities, or if the one-call systems in those areas communicate with one another. An operator's pipeline system must be covered by a qualified one-call system where there is one in place. For the purpose of this section, a one-call system is considered a "qualified one-call system" if it meets the requirements of section (b)(1) or (b)(2) of this section.*

*(1) The state has adopted a one-call damage prevention program under Sec. 198.37 of this chapter; or*

*(2) The one-call system:*

*(i) Is operated in accordance with Sec. 198.39 of this chapter;*

*(ii) Provides a pipeline operator an opportunity similar to a voluntary participant to have a part in management responsibilities; and*

*(iii) Assesses a participating pipeline operator a fee that is proportionate to the costs of the one-call system's coverage of the operator's pipeline.*

*(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:*

*(1) Include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located.*

*(2) Provides for notification of the public in the vicinity of the pipeline and actual notification of the persons identified in paragraph (c)(1) of this section of the following as often as needed to make them aware of the damage prevention program:*

*(i) The program's existence and purpose; and*

*(ii) How to learn the location of underground pipelines before excavation activities are begun.*

*(3) Provide a means of receiving and recording notification of planned excavation activities.*

## **Pipeline Failure Investigation Report**

(4) If the operator has buried pipelines in the area of excavation activity, provide for actual notification of persons who give notice of their intent to excavate of the type of temporary marking to be provided and how to identify the markings.

(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins

(6) Provide as follows for inspection of pipelines that an operator has reason to believe could be damaged by excavation activities:

(i) The inspection must be done as frequently as necessary during and after the activities to verify the integrity of the pipeline; and

(ii) In the case of blasting, any inspection must include leakage surveys.

(d) A damage prevention program under this section is not required for the following pipelines:

(1) Pipelines located offshore.

(2) Pipelines, other than those located offshore, in Class 1 or 2 locations until September 20, 1995.

(3) Pipelines to which access is physically controlled by the operator.

(e) Pipelines operated by persons other than municipalities (including operators of master meters) whose primary activity does not include the transportation of gas need not comply with the following:

(1) The requirement of paragraph (a) of this section that the damage prevention program be written; and

(2) The requirements of paragraphs (c)(1) and (c)(2) of this section.

(Original Code Document, 47 FR 13818, 04-01-1982) Last amended by Amdt. 192-84A, 63 FR 38757, 07-20-1998

Review expectations:

1. An operator must have a written program to prevent damage to their pipeline by excavation activities. This may be a separate written program or made part of the operator's written O&M plan as required by §192.605(a). The written procedures should state the purpose and objectives of the damage prevention program, and provide methods and procedures to achieve them. Applicable state and local requirements should also be noted. [§192.614(a)].

Gas Operator does have a Damage Prevention Plan described within their Operation and Maintenance Procedures (L614.0). Gas Operator also has a Public Awareness Program.

2. If there is more than one qualified One-Call center for an area the operator need only subscribe to one if 1) there is a central phone number for excavation activities or 2) if the various one-call centers communicate excavation notifications to one another. [§192.614(b)]

Gas Operator is member of the Nebraska One Call System.

## **Pipeline Failure Investigation Report**

3. A damage prevention program must include a listing of persons who normally engage in excavation activities (excavators) in proximity to the operator's pipeline. [§192.614(c)(1)]  
This operator satisfies this requirement through their Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015. However during review of the Gas Operators Damage Prevention Plan (L614.0), we found a statement that is inconsistent with the Public Awareness Plan. The damage prevention plan should be amended to more closely represent how the "communication" and communication interval directed to excavators, is accomplished. [Be substantially the same as indicated within the Public Awareness Plan].
4. A damage prevention program must have a process for notification of the public in the vicinity of the pipeline. [§192.614(c)(2)]  
This operator satisfies this requirement through their Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015.
5. A one-call system or an information service provider may not be able to perform all the tasks required by the damage prevention program. However, an operator may still use these resources to assist in the compliance of this requirement. [§192.614(c)(3)]  
This operator satisfies this requirement through their Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015.
6. The process used to receive and record notifications of planned excavation activities must assure that all notifications are received and recorded. [§192.614(c)(3)]  
This operator satisfies this requirement.
7. The process to assure notifications are addressed within the state mandated time requirements.  
This operator satisfies this requirement described within their Operation and Maintenance Procedures (L614.0).
8. It is acceptable to use third parties to conduct meetings with excavators on behalf of the operator. However, the operator is ultimately responsible for ensuring notification of excavators as often as needed to make them aware of the operator's damage prevention program requirements. [§192.614(c)(2)]  
This operator satisfies this requirement through their Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015. Corporate Communication Department and **Employee Speakers Bureau** (excavator breakfast/lunch).  
With written "communication" (newsletter to excavators/contractors, [Nebraska and Western Iowa]; One-Call process). Through the Nebraska811 quarterly newsletter. Records indicate that this "communication" has been sent.  
Contractor/excavators receive written communication through quarterly newsletters through the Nebraska811 organization. Nebraska811 builds and maintains the mailing list.  
In addition there is a website for M.U.D. that contains a link to "Natural Gas". Within that linked site there is indication to use 811 (however there is no specific information directed at excavators). While this is not a violation, it is a missed opportunity to inform and educate excavators.

## Pipeline Failure Investigation Report

9. Documentation of contractor meetings, if used, must be kept concerning a good faith attempt to include who was invited, who attended, and topics discussed. [§192.614(c)(2)]  
This operator satisfies this requirement through participation in Nebraska811 (Nebraska One Call).
10. The operator is ultimately responsible to assure that all of the damage prevention requirements are being performed. [§192.614(c)]  
This operator satisfies this requirement through their Damage Prevention Plan (revised 10/17/14) and Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015. Damage Prevention Plan: It is the responsibility of the Director of Plant Engineering to ensure the District is locating and marking its facilities according to corresponding Nebraska One Call regulation. Public Awareness Program is the responsibility of the Director of Corporate Communications. Responsible party for excavator list, mailing and meetings with excavators is (David Stroebele).
11. Notification of all excavators who normally operate within the vicinity of the operator's pipeline may be difficult therefore it is important that the operator's process assures that a reasonable effort has been made to identify all excavators. [§192.614(c)(1)]  
This operator satisfies this requirement through membership in the Nebraska811 (State One Call System) and their Pipeline Operator Public Awareness Program, originally filed 08/08/2006, and last updated 02/02/2015. The Director Corporate Communications is responsible for the program. Responsible party for excavator list, mailing and meetings with excavators is (David Stroebele) while the One-Call center maintains list of "excavators", 2108 in 2015.
12. An operator's damage prevention program must have provisions for monitoring excavation activities that are in close proximity to their pipeline and for which the operator believes have a potential for damaging the operator's pipeline. [§192.614(c)(6)(i)]  
This Gas Operator has statements with the Operations and Maintenance Procedure that indicate:  
*"The District shall have someone inspect a segment of buried pipeline during and after excavation when there is reason to believe that damage to the pipeline may result. The District believes that the chances for damage to the gas distribution pipeline is more likely to occur during large projects where there is considerable construction work being done. This may include street renovation projects, sewer installation projects, state highway and interstate work, water main installation by contractors, city renovation and demolition projects".*  
Form 34 is utilized to document this inspection.
13. An operator's damage prevention program must have provisions for monitoring blasting activities that are in close proximity to their pipeline and for which the operator believes have a potential for damaging the operator's pipeline. This process must include leakage surveys. [ §192.614(c)(6)(ii)]  
This operator satisfies this requirement through their Operations and Maintenance Procedure L614.0 subsection G.3.

## **Pipeline Failure Investigation Report**

14. An operator's damage prevention program should have provisions for analyzing pipeline crossings or other abnormal loading situations.  
This operator satisfies this requirement through their Operations and Maintenance Procedure L614.0 subsection G.
15. Records must verify that the operator is following its damage prevention program. [§§192.709 and 192.614(c)]  
This is satisfied by locate tickets for their work, locate request tickets from excavators, response to excavation request tickets, and documentation of damage by excavation and inspection Form 34.
16. An operator's one-call records should indicate what potential excavation activities were in proximity to their buried pipeline and what actions the operator took to notify the excavator, and if applicable, actions they took to mark their pipeline. [ §§192.614(c)(3), (4), and (5)]  
This is satisfied by locate tickets for their work, locate request tickets from excavators, response to excavation request tickets, and documentation of damage by excavation and inspection Form 34.  
**Search results for excavation damage that root cause was "failed to locate/no locate" – counted eight (8) total.**
17. An operator adheres to the damage prevention policy by placing one calls for excavations on the **ROW** and company owned facilities.  
This is satisfied by locate tickets for their work.

In addition to 49 CFR Part 192.614 Damage Prevention Program requirements. There was an Advisory Bulletin issued that addresses directional drilling near gas pipelines.  
We as the regulatory Agency for pipeline safety advise Gas Operators to consider and implement practices as directed by the Advisory Bulletin.

### **Advisory Bulletin ADB-99-04, Directional Drilling and Other Trenchless Technology Operations Conducted In Proximity to Underground Pipeline Facilities.**

Resources and Special Programs Administration, now Pipeline and Hazardous Material Safety Administration (PHMSA), issued this advisory bulletin to owners and operators of natural gas and hazardous liquid pipeline systems to advise them to review, and amend if necessary, their written damage prevention program to minimize the risks associated with directional drilling and other trenchless technology operations near buried pipelines. This action follows several pipeline incidents involving trenchless technology operations which resulted in loss of life, injuries, and significant property damage. It also corresponds to National Transportation Safety Board (NTSB) Safety Recommendation P-99-1, which suggests that RSPA ensure that the operators' damage prevention programs include actions to protect their facilities when directional drilling operations are conducted in proximity to those facilities.

We see no reference to directional drilling or other trenchless technology when operations are conducted in proximity to underground gas pipeline facilities or when company excavators are conducting these activities near other underground utilities.  
There are numerous resources for direction and guidance that would be useful in creating guidance for personnel for activities associated with directional drilling when in the proximity of gas pipelines.



# ***Pipeline Failure Investigation Report***

## **Action/Recommendations**

At a minimum the State Fire Marshal will issue an "Amendment Letter" that will require this Gas Operator consider recommendations, address this issue by formulating acceptable procedures for Gas Operator personnel conducting such operations and for protecting gas facilities when this type of activity is conducted in the proximity of gas pipeline, to minimize the risk associated these activities.

The Damage Prevention plan should be amended to more closely represent the "communication and education" directed to excavators as indicated in the Gas Operators Public Awareness Plan.

IN THE DISTRICT COURT FOR DOUGLAS COUNTY, NEBRASKA

MARK MERCER, VERA MERCER, and )  
MERCER MANAGEMENT COMPANY, )

CASE NO. CI 16-3120

Plaintiffs, )

**SUBPOENA DUCES TECUM**

vs. )

NORTH CENTRAL SERVICES, INC., )  
UNITE PRIVATE NETWORKS, LLC, and )  
CELLCO PARTNERSHIP D/B/A VERIZON )  
WIRELESS, )

Defendants.

---

**TO: Nebraska State Fire Marshal  
Attn: Records Custodian  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508**

Pursuant to the authority granted in Nebraska Discovery Rule 6-334A, you are hereby commanded to produce the records identified on the attached **Exhibit "A"** to William F. Hargens, James G. Powers and April N. Hook of McGrath, North, Mullin & Kratz, PC LLO, 3700 First National Tower, 1601 Dodge Street, Omaha, Nebraska 68102 on the 22nd day of July, 2016, at the hour of 9:00 a.m. in the above captioned matter.

**In lieu of personal appearance, you may mail or deliver true and correct photocopies of the requested records so they arrive on or before July 21, 2016.**

A copy of Rule 6-334A is attached to this Subpoena in compliance with Nebraska Discovery Rule 6-334A. A Notice of Intent to serve this Subpoena was previously sent to all of the following or they expressly waived such notice:

Anne Marie O'Brien  
Jason W. Grams  
Michael Storey  
Lamson, Dugan &  
Murray, LLP  
10306 Regency Parkway Dr.  
Omaha, NE 68114  
*Attorneys for Plaintiffs*

Robert S. Keith II  
Michael Moran  
Engles, Ketcham, Olsen &  
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1350 Woodmen Tower  
1700 Farnam Street  
Omaha, NE 68102  
*Attorney for Defendant  
North Central Services, Inc.*

Mark J. Daly  
Fitzgerald Schorr  
Barmettler & Brennan  
200 Regency One  
10050 Regency Circle  
Omaha, NE 68114  
*Attorney for Defendant  
Cellco Partnership*

HEREOF FAIL NOT UNDER PENALTY OF LAW.

3-1-16  
DATE ISSUED BY CERTIFIED MAIL

3-1-16  
WILLIAM F. HARGENS, #16578  
JAMES G. POWERS, #17780  
APRIL N. HOOK, # 24547  
McGrath, North, Mullin & Kratz, PC LLO  
First National Tower, Suite 3700  
1601 Dodge Street  
Omaha, Nebraska 68102  
Telephone: (402) 341-3070  
Facsimile: (402) 341-0216  
E-mail: whargens@mcgrathnorth.com  
jpowers@mcgrahtnorth.com  
ahook@mcgrathnorth.com  
Attorneys for Defendant Unite Private  
Networks, LLC

## EXHIBIT "A"

You are requested to produce the following documents in the possession, custody or control of the Nebraska State Fire Marshal its attorneys, agents, employees, officers, directors, and/or representatives, relating to the January fire and explosion at M's Pub, 422 S. 11<sup>th</sup> Street, Omaha, Nebraska (the "Event"):

1. All telephone call recordings, call logs, internal memoranda, notes, and other records relating to the Fire Marshal's notice of or response to the Event.
2. All photographs, videos, or other graphic depictions of the Event or the scene of the Event on or after January 9, 2016.
3. All fire investigation reports relating to the Event.
4. All witness statements and recordings or notes of witness interviews relating to the Event.
5. All records that reflect, discuss, or summarize any oral conversation or written communication between any Fire Marshal representative and any Unite Private Networks, LLC or North Central Service, Inc. representative relating to the Event.
6. All records that reflect, discuss, or summarize any oral conversation or written communication between any Fire Marshal representative and any Metropolitan Utilities District ("MUD") representative relating to the Event.
7. All records that reflect, discuss, or summarize any oral conversation or written communication between any Fire Marshal representative and the City of Omaha Fire Department relating to the Event.
8. All non-privileged correspondence, including internal correspondence and correspondence with third parties, relating to the Event.
9. All reports, internal memoranda, notes, and other records relating to the Fire Marshal's investigation into the Event or evidencing the Fire Marshal's conclusions with respect to the Event's cause.
10. All documentation or information provided to, received from, or exchanged with the City of Omaha Fire Department relating to the Event.
11. All documentation or information provided to, received from, or exchanged with MUD (including MUD's attorneys) relating to the Event.
12. All records containing information upon which the Fire Marshal's conclusions with respect to the cause of the Event are based.
13. All notes, agendas, meeting minutes, or other records that reflect, discuss, or summarize any meeting relating to the Event.

14. All photographs or other documents evidencing any utility markings on the concrete at or near the scene of the Event.
15. All records reflecting or relating to the Fire Marshal's examination of the scene of the Event.
16. All records reflecting or relating to any rules, regulations or standards that the Fire Marshal believes were violated in connection with the Event.
17. All records the Fire Marshal has produced in response to any public records request or subpoena relating to the Event.

West's Revised Statutes of Nebraska Annotated  
Rules of the Supreme Court/Court of Appeals of the State of Nebraska  
Chapter 6. Trial Courts  
Article 3. Nebraska Court Rules of Discovery in Civil Cases

Neb Ct R Disc § 6-334(A)

§ 6-334(A). Discovery From a Nonparty Without a Deposition

Currentness

(a) Procedure.

(1) Scope. Any party may, by subpoena without a deposition

(A) require the production for inspection, copying, testing, or sampling of designated books, papers, documents, tangible things, or electronically stored information (including writings, drawings, graphs, charts, photographs, sound recordings, and other data compilations from which information can be obtained) translated if necessary by the owner or custodian into reasonably usable form, that are in the possession, custody, or control of a person who is not a party and within the scope of Rule 26(b); or

(B) obtain entry upon designated land or other property within the scope of Rule 26(b) that is in the possession or control of a person who is not a party for the purpose of inspection and measuring, surveying, photographing, testing, or sampling the property or any designated object or operation thereon.

(2) Notice. A party intending to serve a subpoena pursuant to this rule shall give notice in writing to every other party to the action at least 10 days before the subpoena will be issued. The notice shall state the name and address of the person who will be subpoenaed, the time and place for production or entry, and that the subpoena will be issued on or after a stated date. A designation of the materials sought to be produced shall be attached to or included in the notice.

Such notice may be given by a party other than a plaintiff at any time. Such notice may not be given by a plaintiff until the time at which Rule 30(a) would permit a plaintiff to take a deposition.

(3) Issuance. A subpoena may be issued pursuant to this rule, either by a request to the clerk of the court or by an attorney authorized to do so by statute, at any time after all parties have been given the notice required by subsection (2). The subpoena shall identify all parties who were given notice that it would be issued and the date upon which each of them was given notice. A subpoena pursuant to this rule shall include or be accompanied by a copy of this rule.

(4) Time, manner, and return of service. A subpoena pursuant to this rule shall be served either personally by any person not interested in the action or by registered or certified mail not less than 10 days before the time specified for compliance. The person making personal service shall make a return showing the manner of service to the party for whom the subpoena was issued.

(b) Protection of Other Parties

(1) **Objection Before Issued.** Before the subpoena is requested or issued any party may serve a written objection on the party who gave notice that it would be issued. The objection shall specifically identify any intended production or entry that is protected by an applicable privilege, that is not within the scope of discovery, or that would be unreasonably intrusive or oppressive to the party. No subpoena shall demand production of any material or entry upon any premises identified in the objection. If the objection specifically objects that the person served with the subpoena should not have the option to deliver or mail copies of documents or things directly to a party, the subpoena shall not be issued unless all parties to the lawsuit mutually agree on the method for delivery of the copies.

(2) **Order.** The party who gave notice that a subpoena would be issued may apply to the court in which the action is pending for an order with respect to any discovery for which another party has served a written objection. Upon hearing after notice to all parties the court may order that the subpoena be issued or not issued or that discovery proceed in a different manner, may enter any protective order authorized by Rule 26(c), and may award expenses as authorized by Rule 37(a)(4).

(3) **Protective Order.** After a subpoena has been issued any party may move for a protective order under Rule 26(c).

(c) Protection of the Person Served with a Subpoena.

(1) **Avoiding Burden and Expense.** A party or an attorney who obtains discovery pursuant to this rule shall take reasonable steps to avoid imposing undue burden or expense on a person subject to that subpoena. The court by which the subpoena was issued shall enforce this duty and impose upon the party or attorney in breach of this duty an appropriate sanction, which may include, but is not limited to, lost earnings of the person subject to the subpoena and reasonable attorney fees.

(2) **Responding to the Subpoena.**

(A) A person served with a subpoena pursuant to this rule shall permit inspection, copying, testing, or sampling either where the documents or tangible things are regularly kept or at some other reasonable place designated by that person. If the subpoena states that the person served has an option to deliver or mail legible copies of documents or things instead of inspection, that person may condition the preparation of the copies on the advance payment of the reasonable cost of copying.

(B) A person served with a subpoena pursuant to this rule may, within 10 days after service of the subpoena, serve upon the party for whom the subpoena was issued a written objection to production of any or all of the designated materials or entry upon the premises. If objection is made, the party for whom the subpoena was issued shall not be entitled to production of the materials or entry upon premises except pursuant to an order of the court. If an objection has been made, the party for whom the subpoena was issued may, upon notice to all other parties and the person served with the subpoena, move at any time in the district court in the county in which the subpoena is served for an order to compel compliance with the subpoena. Such an order to compel production or to permit entry shall protect any person who is not a party or an officer of a party from significant expense resulting from complying with the command.

§ 6-334(A). Discovery From a Nonparty Without a Deposition, NE R DISC § 6-334(A)

(3) Protections. On timely motion, the court by which a subpoena was issued shall quash or modify the subpoena if it:

(A) fails to allow reasonable time for compliance,

(B) requires disclosure of privileged or other protected matter and no exception or waiver applies, or

(C) subjects a person to undue burden

(d) Duties in Responding to Subpoena.

(1) Production. A person responding to a subpoena to produce documents shall produce them as they are kept in the usual course of business or shall organize and label them to correspond with the categories in the demand.

(2) Objection. When information subject to a subpoena is withheld on an objection that it is privileged, not within the scope of discovery, or otherwise protected from discovery, the claim shall be made expressly and shall be supported by a description of the nature of the documents, communications, or things not produced that is sufficient to enable the party who requested the subpoena to contest the objection.

(e) Coordination

(1) Copies. If the party for whom the subpoena was issued creates or obtains copies of documents or things, that party shall make available a duplicate of such copies at the request of any other party upon advance payment of the reasonable cost of making the copies.

(2) Inspection. If a notice of intent to serve a subpoena designates that the subpoena will require entry upon land or other property for the purposes permitted by subsection (1)(B), any other party shall, upon request to the party who gave the notice, be named in the subpoena as also attending at the same time and place.

**Credits**

Recodified effective July 18, 2008.

Neb Ct R Disc § 6-334(A), NE R DISC § 6-334(A)

State court rules are current with amendments received through May 15, 2016.



# STATE OF NEBRASKA



Pete Ricketts  
Governor



Jim Heine  
Fire Marshal

## Notice of Probable Violation

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

June 23, 2016

Scott L. Keep  
President  
Metropolitan Utilities District  
1723 Harney Street  
Omaha, NE 68102

RE: Incident at 422 South 11<sup>th</sup> Street, Omaha Nebraska

The State Fire Marshal Office, Fuels Division, Pipeline Safety has conducted an investigation of the incident at 422 South 11<sup>th</sup> Street, Omaha Nebraska within the operating natural gas system of Metropolitan Utilities District. As a result of this investigation, we believe there is probable violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 191, 192, 199, & 40.

Therefore, the purpose of this letter is to request a response from Metropolitan Utilities District for the probable violation. I am requesting that Metropolitan Utilities District respond to within 30 days of receipt of this letter. Please reference 20160401-N in the response. The response may accept the findings and state a plan of action to address the probable violation or, the response may disagree with the findings. If Metropolitan Utilities District chooses to disagree with the findings, please justify your position in the response.

The following details the specific findings of the investigation as they relate to the probable violation. Items listed in blue are Part 192 reference; items listed in black are findings.

§192.605 Procedural manual for operations, maintenance, and emergencies  
Each operator shall include the following in its operating and maintenance plan:  
(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

§192.614 Damage prevention program

(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:

(5) Provide for temporary marking of buried pipelines in the area of excavation activity before as far as practical the activity begins.

Metropolitan Utilities District personnel did not respond in an appropriate manner to a locate request as per Metropolitan Utilities District Operation and Maintenance Procedures. For locate request # 153640287 dated 12/30/15, Metropolitan Utilities District personnel did not travel to the location for identifying, locating and marking of gas pipeline for 422 S 11<sup>th</sup> Street Omaha, NE.

Metropolitan Utilities District personnel failed to sufficiently mark gas pipeline for 422 S 11<sup>th</sup> Street Omaha, NE., as per Metropolitan Utilities District Operation and Maintenance procedures. Visually the markings for the gas service at 422 S 11<sup>th</sup> Street were non-existent. The markings that were located on the concrete sidewalk in front of 422 S 11<sup>th</sup> Street, (two opaque dots) were not consistent with markings of other gas service lines in the immediate area leading the excavator to believe no gas service line existed at the location where the damage occurred.

At present we consider the findings to be a probable non-compliance with Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference pipeline safety regulations Title 49, Code of Federal Regulations, Part 192.

**81-546. Violations; notice; failure to comply; penalty.**

Whenever the State Fire Marshal has reason to believe any person is violating any provision of subsection (1) of section 81-545 of the Nebraska Natural Gas Pipeline Safety Act of 1969 or any regulation under the Nebraska Natural Gas Pipeline Safety Act of 1969, the State Fire Marshal may request the Attorney General of Nebraska to bring an action under section 81-547 of the Nebraska Natural Gas Pipeline Safety Act of 1969 in the district court of the county in which the defendant's principal place of business is located. The district court may impose a civil penalty not to exceed ten thousand dollars for each violation for each day that such violation persists, except that the maximum civil penalty shall not exceed five hundred thousand dollars for any related series of violations. The district court shall have jurisdiction to restrain violations of the Nebraska Natural Gas Pipeline Safety Act of 1969 including the restraint of transportation of gas or the operation of a pipeline facility.

If you have any questions regarding the substance or propriety of this notice, please contact our office at Nebraska State Fire Marshal, Fuels Division, Pipeline Safety Section, 246 South 14<sup>th</sup> Street, Lincoln, NE 68508-1804 or telephone 402-471-9465.



Arnie Bates, Deputy  
Fuels Division, Pipeline Section  
Nebraska State Fire Marshal



Clark Conklin, Chief Deputy  
Fuels Division  
Nebraska State Fire Marshal

MAIN OFFICE  
DISTRICT A  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-2027

DISTRICT B  
438 West Market  
Auburn, NE 68620-1241  
(402) 395-2164

FUELS DIVISION  
FLST - Pipeline  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-9465

TRAINING DIVISION  
1347 W. Capital Ave  
Grand Island, NE 68801  
(308) 585-6892

# STATE OF NEBRASKA



## Notice of Probable Violation

Pete Ricketts  
Governor

Jim Heine  
Fire Marshal

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 12, 2016

Scott L. Keep  
President  
Metropolitan Utilities District  
1723 Harney Street  
Omaha, NE 68102

RE: Incident at 422 South 11<sup>th</sup> Street, Omaha, Nebraska

The State Fire Marshal Office, Fuels Division, Pipeline Safety Section has conducted an investigation of the incident at 422 South 11<sup>th</sup> Street, Omaha, Nebraska within the operating natural gas system of Metropolitan Utilities District. As a result of this investigation, it is believed there is a probable violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 191, 192, 199, & 40.

Therefore, a Notice of Probable Violation (NOPV) letter was issued to Metropolitan Utilities District, requesting a response within thirty days of the receipt of said letter. Metropolitan Utilities District requested a meeting with the Agency to discuss the findings and language of the NOPV letter. As a result of the meeting the State Fire Marshal Agency agreed to a stay of the thirty day response time and to consider revisions to the NOPV letter.

The information listed below is the revisions to the original NOPV letter. Upon receipt of this updated NOPV letter the Agency requests a response to the revised NOPV letter; this response will need to be within 11 days of receipt of the letter. The original NOPV letter was received on June 30 and the meeting was held on July 19. This was 19 days into the original 30 day response window, thus leaving the 11 days for a response. **Please reference #20160401-N in the response.** The response may accept the findings and state a plan of action to address the probable violation or, the response may disagree with the findings. If Metropolitan Utilities District chooses to disagree with the findings, please justify your position in the response.

The following details the specific findings of the investigation as they relate to the probable violation. Items listed in blue are Part 192 reference; items listed in black are our findings.

☐ MAIN OFFICE  
☐ DISTRICT A  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-2027

☐ DISTRICT B  
438 West Market  
Albion, NE 68620-1241  
(402) 395-2164

■ FUELS DIVISION  
☐ FLST ■ Pipeline  
246 South 14<sup>th</sup> Street  
Lincoln, NE 68508-1804  
(402) 471-9465

☐ TRAINING DIVISION  
3347 W Capital Ave  
Grand Island, NE 68801  
(308) 385-6892

§192.605 Procedural manual for operations, maintenance, and emergencies

Each operator shall include the following in its operating and maintenance plan:

General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted

§192.614 Damage prevention program.

(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:

(5) Provide for temporary marking of buried pipelines in the area of excavation activity before, as far as practical, the activity begins

Metropolitan Utilities District personnel did not respond in an appropriate manner to a locate request as per Metropolitan Utilities District Operation and Maintenance Procedures. For locate request # 153640287 dated 12/30/15, Metropolitan Utilities District personnel did not travel to the location for identifying, locating and marking of gas pipeline for 422 S 11<sup>th</sup> Street Omaha, NE.

Metropolitan Utilities District personnel failed to sufficiently mark gas pipeline for 422 S 11<sup>th</sup> Street Omaha, Nebraska, as per Metropolitan Utilities District Operation and Maintenance procedures. The Agency was unable to locate physical evidence of a "marked line" for the gas pipeline for 422 S 11 Street, Omaha, Nebraska that was consistent with the markings indicating other MUD gas lines in the excavation area.

At present we consider the findings to be a probable non-compliance with Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference pipeline safety regulations Title 49, Code of Federal Regulations, Part 192.

**81-546. Violations; notice; failure to comply; penalty.**

Whenever the State Fire Marshal has reason to believe any person is violating any provision of subsection (1) of section 81-545 of the Nebraska Natural Gas Pipeline Safety Act of 1969 or any regulation under the Nebraska Natural Gas Pipeline Safety Act of 1969, the State Fire Marshal may request the Attorney General of Nebraska to bring an action under section 81-547 of the Nebraska Natural Gas Pipeline Safety Act of 1969 in the district court of the county in which the defendant's principal place of business is located. The district court may impose a civil penalty not to exceed ten thousand dollars for each violation for each day that such violation persists, except that the maximum civil penalty shall not exceed five hundred thousand dollars for any related series of violations. The district court shall have jurisdiction to restrain violations of the Nebraska Natural Gas Pipeline Safety Act of 1969 including the restraint of transportation of gas or the operation of a pipeline facility.

If you have any questions regarding the substance or propriety of this notice, please contact our office at Nebraska State Fire Marshal, Fuels Division, Pipeline Safety Section, 246 South 14<sup>th</sup> Street, Lincoln, NE 68508-1804 or telephone 402-471-9465.



Arnie Bates, Deputy  
Fuels Division, Pipeline Section  
Nebraska State Fire Marshal



Clark Conklin, Chief Deputy  
Fuels Division  
Nebraska State Fire Marshal