



## Nebraska State Fire Marshal Pipeline Safety Section Inspection Report

**SFM Deputy Conducting Inspection:**

**Arnie Bates**

**Call#:**

**8738**

**Report Date:**

**7/28/2011**

**Inspection Type:**

**INCIDENT INVESTIGATION**

**Inspection Date(s):**

**7/19-25,27,28/11**

**Operator Name:**

**Superior Utilities**

**Unit:**

**Superior**

**Town/Site:**

**Superior**

**Facility ID:**

**24-01-477**



# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

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

Principal Investigator: Arnie Bates 8738 Title: \_\_\_\_\_

Date: July 28, 2011 Date: \_\_\_\_\_

<i>Failure Location &amp; Response</i>																										
Location (City, Township, Range, County/Parish): 320 West 2 <sup>nd</sup> Street, Superior NE		(Acquire Map)																								
Address or M.P. on Pipeline: (1) 320 West 2nd	Type of Area (Rural, City): (1) City																									
Date: July 19, 2011	Time of Failure: 12:21																									
Time Detected: 12:21	Time Located: 12:21																									
How Located: On-site maintenance activities																										
NRC Report #: 983190	Time Reported to NRC: 16:30	Reported by: Larry Sibert																								
<b>Type of Pipeline:</b>																										
<table style="width: 100%; border: none;"> <tr> <th style="text-align: left; padding: 5px;">Gas Distribution</th> <th style="text-align: left; padding: 5px;">Gas Transmission</th> <th style="text-align: left; padding: 5px;">Hazardous Liquid</th> <th style="text-align: left; padding: 5px;">LNG</th> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> LP</td> <td style="padding: 5px;"><input type="checkbox"/> Interstate Gas</td> <td style="padding: 5px;"><input type="checkbox"/> Interstate Liquid</td> <td style="padding: 5px;"><input type="checkbox"/> LNG Facility</td> </tr> <tr> <td style="padding: 5px;"><input checked="" type="checkbox"/> Municipal</td> <td style="padding: 5px;"><input type="checkbox"/> Intrastate Gas</td> <td style="padding: 5px;"><input type="checkbox"/> Intrastate Liquid</td> <td></td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> Public Utility</td> <td style="padding: 5px;"><input type="checkbox"/> Jurisdictional Gas Gathering</td> <td style="padding: 5px;"><input type="checkbox"/> Offshore Liquid</td> <td></td> </tr> <tr> <td style="padding: 5px;"><input type="checkbox"/> Master Meter</td> <td style="padding: 5px;"><input type="checkbox"/> Offshore Gas</td> <td style="padding: 5px;"><input type="checkbox"/> Jurisdictional Liquid Gathering</td> <td></td> </tr> <tr> <td></td> <td style="padding: 5px;"><input type="checkbox"/> Offshore Gas - High H<sub>2</sub>S</td> <td style="padding: 5px;"><input type="checkbox"/> CO<sub>2</sub></td> <td></td> </tr> </table>	Gas Distribution	Gas Transmission	Hazardous Liquid	LNG	<input type="checkbox"/> LP	<input type="checkbox"/> Interstate Gas	<input type="checkbox"/> Interstate Liquid	<input type="checkbox"/> LNG Facility	<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Intrastate Gas	<input type="checkbox"/> Intrastate Liquid		<input type="checkbox"/> Public Utility	<input type="checkbox"/> Jurisdictional Gas Gathering	<input type="checkbox"/> Offshore Liquid		<input type="checkbox"/> Master Meter	<input type="checkbox"/> Offshore Gas	<input type="checkbox"/> Jurisdictional Liquid Gathering			<input type="checkbox"/> Offshore Gas - High H <sub>2</sub> S	<input type="checkbox"/> CO <sub>2</sub>			
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Pipeline Configuration (Regulator Station, Pump Station, Pipeline, etc.): Distribution system 6" low pressure system main. Ounce system is currently fed by 6 district regulator stations, with overprotection device. Ounce system currently provides supply to approximately 1/2 of population.																										

<i>Operator/Owner Information</i>	
Owner: City of Superior Address: 135 West 4th Street P O Box 160 Superior NE 68978 Company Official: Larry Brittenham Phone No.: 402 879 4750 Fax No.: 402 879 4907	Operator: Address:  Company Official: Phone No. Fax No.
<u>Drug and Alcohol Testing Program Contacts</u> <input type="checkbox"/> N/A	
Drug Program Contact & Phone: Larry Brittenham 402 879 4750 Alcohol Program Contact & Phone: Larry Brittenham 402 879 4750	

1 Photo documentation

Form 11 Pipeline Failure Investigation Report (Rev. 03/23/09 through Final Rule of 16 January 2009)

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Damages</i>			
Product/Gas Loss or Spill <sup>(2)</sup>	1024 mcf	Estimated Property Damage \$	➤ \$50,000
Amount Recovered	0	Associated Damages <sup>(3)</sup> \$	3,000
Estimated Amount \$	\$ 913.00		

Description of Property Damage:

Caterpillar 303 C mini excavator \$ 65,000 estimate  
 Power Pole \$ 1,000 installation \$1,000  
 Fiber Optics overhead  
 Overhead Telephone line  
 Tools & equipment \$ 1,000

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

<i>Fatalities and Injuries</i>					
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Fatalities:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Company: _____	Contractor: _____	Public: _____
Injuries - Hospitalization:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Company: _____	Contractor: _____	Public: <u>1</u>
Injuries - Non-Hospitalization:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Company: _____	Contractor: _____	Public: _____
Total Injuries (including Non-Hospitalization):			Company: _____	Contractor: _____	Public: _____

Name	Job Function	Yrs w/ Comp.	Yrs. Exp.	Type of Injury
Thomas Johnson	Fire department			Heart attack

<i>Drug/Alcohol Testing</i>			
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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

Job Function	Test Date & Time	Location	Results		Type of Drug
			Pos	Neg	
Foreman	07/19/2011 18:00	Superior Utility Warehouse	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Assistant Foreman	07/19/2011 18:00	333 south Central	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Service tech	07/19/2011 18:00	“	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Service tech	07/19/2011 1800	“	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

2 Initial volume lost or spilled  
 3 Including cleanup cost

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Drug/Alcohol Testing</i>				<input type="checkbox"/> N/A
Service tech	07/19/2011 18:00	“	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<i>System Description</i>
Describe the Operator's System: OPID 1613; Distribution system natural gas delivery by Southern Star, 14 District regulator stations, system contains 2", 4" 6", 8" piping (12.273 miles cathodically protected Bare steel, 3.035 mile cathodically protected coated steel and 23.068 mile of PE with 1273 services serving 1087 meters. Cathodic protection provided by 6 operating rectifiers (some sections of piping galvanically protected). System is being rebuilt with old and new mains in operation. Distribution system with multiple MAOP pressure segments; 23 oz, 5 psi, 10 psi, 18 psi, 16 psi and 66 psi.

<i>Pipe Failure Description</i>		<input checked="" type="checkbox"/> N/A
Length of Failure (inches, feet, miles):		(1)
Position (Top, Bottom, include position on pipe, 6 O'clock):	Description of Failure (Corrosion Gouge, Seam Split):	(1)
Laboratory Analysis: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Performed by:		
Preservation of Failed Section or Component: <input type="checkbox"/> Yes <input type="checkbox"/> No		
If Yes - Method:		
In Custody of:		
Develop a sketch of the area including distances from roads, houses, stress inducing factors, pipe configurations, etc. Bar Hole Test Survey Plot should be outlined with concentrations at test points. Direction of Flow.		

<i>Component Failure Description</i>		<input type="checkbox"/> N/A
Component Failed:	<b>6" Inflatable bag line stopper (Type C ptn PTRTC006)</b>	(1)
Manufacturer: Perma-Type Rubber (company)	Model: Type C Pt# PTRTC006	
Pressure Rating: 1 psi	Size: 2"-6"	
Other (Breakout Tank, Underground Storage): component manufactured March 2011		

<i>Pipe Data</i>		<input type="checkbox"/> N/A
Material: Steel	Wall Thickness/SDR: 0.250wt	
Diameter (O.D.): 6 5/8	Installation Date: unknown prior to 1960	
SMYS: UNK	Manufacturer: UNK	
Longitudinal Seam: hot lap	Type of Coating: Bare	
Pipe Specifications (API 5L, ASTM A53, etc.): Unknown MAOP 23 ounces operating at 18 ounces		

<i>Joining</i>	<input checked="" type="checkbox"/> N/A
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# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Joining</i>		<input checked="" type="checkbox"/> N/A
Type:	Procedure:	
NDT Method:	Inspected: <input type="checkbox"/> Yes <input type="checkbox"/> No	

<i>Pressure @ Time of Failure @ Failure Site</i>					<input type="checkbox"/> N/A
Pressure @ Failure Site: (18 oz) 1.			Elevation @ Failure Site: 1622'		
Pressure Readings @ Various Locations:				Direction from Failure Site	
Location/M.P./Station #	Pressure (psig)	Elevation (ft msl)	Upstream	Downstream	
1425 North KANSAS	1.17	1632	x		
5 <sup>th</sup> & Kansas	1.17	1622	x		

<i>Upstream Pump Station Data</i>		<input checked="" type="checkbox"/> 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:	

<i>Upstream Compressor Station Data</i>		<input checked="" type="checkbox"/> 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:	

<i>Operating Pressure</i>		<input type="checkbox"/> N/A
Max. Allowable Operating Pressure: 23oz MAOP	Determination of MAOP: Existing operating pressure, highest operating pressure in 5 year window.	
Actual Operating Pressure: 18.72 oz (1.17 psi)		
Method of Over Pressure Protection: Pressure relief device(s) DRS 2, 3, 5, 6, 7, 8, 9, 14		
Relief Valve Set Point: 2 psig	Capacity Adequate? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

<i>Integrity Test After Failure</i>		<input checked="" type="checkbox"/> N/A
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 checked="" type="checkbox"/> No		
Method:		
Describe any failures during the test. Was not able to recover the inflatable line stopper bag for testing.		



# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<b>Internal Pipe or Component Examination</b>		<input type="checkbox"/> N/A
Results of Gas and/or Liquid Analysis <sup>(6)</sup>		
Internal Inspection Survey: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Results <sup>(7)</sup> visual inspection of coupons and cut outs.	
Did the Operator have knowledge of Corrosion before the Incident? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
How Discovered? (Instrumented Pig, Coupon Testing, ICDA, etc.): <b>Visual examination of coupon, and visual inspection of cut out segment.</b>		

<b>Outside Force Damage</b>		<input checked="" type="checkbox"/> N/A
Responsible Party:	Telephone No.:	
Address:		
Work Being Performed:		
Equipment Involved: <sup>(1)</sup>	Called One Call System? <input type="checkbox"/> Yes <input type="checkbox"/> No	
One Call Name:	One Call Report # <sup>(8)</sup>	
Notice Date:	Time:	
Response Date:	Time:	
Details of Response:		
Was Location Marked According to Procedures? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pipeline Marking Type: <sup>(1)</sup>	Location: <sup>(1)</sup>	
State Law Damage Prevention Program Followed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No State Law		
Notice Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	Response Required: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Was Operator Member of State One Call? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was Operator on Site? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Did a deficiency in the Public Awareness Program contribute to the accident? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Is OSHA Notification Required? <input type="checkbox"/> Yes <input type="checkbox"/> No		

<b>Natural Forces</b>	<input checked="" type="checkbox"/> N/A
Description (Earthquake, Tornado, Flooding, Erosion):	

<b>Failure Isolation</b>	<input type="checkbox"/> N/A
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- 6 Attach copy of gas and/or liquid analysis report
- 7 Attach copy of internal inspection survey report
- 8 Attach copy of one-call report

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Failure Isolation</i>		<input type="checkbox"/> N/A
Squeeze Off/Stopple Location and Method: <span style="float: right;">(1)</span> <b>Pipeline plugged at release site.</b>		
Valve Closed - Upstream:	I.D.:	M.P.:
Valve Closed - Downstream:	I.D.:	M.P.:
Time:		
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: 6" expandable plug inserted into pipeline, then capped with dresser style cap		
Performed By: Derek Lipker	Valve Spacing: none	

<i>Odorization</i>		<input type="checkbox"/> N/A
Gas Odorized: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Concentration of Odorant (Post Incident at Failure Site):	
Method of Determination: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	% LEL: <input type="checkbox"/> Yes <input type="checkbox"/> No	% Gas In Air: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Periodic perception test	Time Taken: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Was Odorizer Working Prior to the Incident? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Type of Odorizer (Wick, By-Pass): Pulse by Pass Pulse By Pass	
Odorant Manufacturer: Chevron/Phillips	Type of Odorant: Teritary Butyl Mercaptan 78% Methyl Ethyl Sulfide	
Model: Sentinel S-20		
Amount Injected: .129/.066    (19.35 oz per MCF)avg	Monitoring Interval (Weekly): (daily of rate and volume) monthly odorant perception test.	
Odorization History (Leaks Complaints, Low Odorant Levels, Monitoring Locations, Distances from Failure Site): Odorant perception consistent/ injection rate consistent. (customer leak complaints average 2 per month) Most recent perception test completed 6/29/11 (.8% percent gas in air)		

<i>Weather Conditions</i>		<input type="checkbox"/> N/A
Temperature: 95 F @ 12:30	Wind (Direction & Speed): from south 11 mph	
Climate (Snow, Rain): Hot/ humid, clear sky	Humidity: 44%	
Was Incident preceded by a rapid weather change? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Weather Conditions Prior to Incident (Cloud Cover, Ceiling Heights, Snow, Rain, Fog): Cosrest collection point Hebron NE <b>Very hot, clear skies local condition temp at 14:45 was 101 F</b>		

<i>Gas Migration Survey</i>		<input type="checkbox"/> N/A
Bar Hole Test of Area: <input type="checkbox"/> Yes <input type="checkbox"/> No	Equipment Used: <b>Flame Ionization</b>	
Method of Survey (Foundations, Curbs, Manholes, Driveways, Mains, Services) <sup>(9)</sup> <span style="float: right;">(1)</span> FI survey conducted. Previous leakage survey of area conducted on 5/26/11 on reported below grade leaks		

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<b>Environment Sensitivity Impact</b>		<input checked="" type="checkbox"/> N/A
Location (Nearest Rivers, Body of Water, Marshlands, Wildlife Refuge, City Water Supplies that could be or were affected by the medium loss): <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	

<b>Class Location/High Consequence Area</b>		<input checked="" type="checkbox"/> N/A
Class Location: 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>	HCA Area? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Determination: <u>Class study</u>	Determination: _____	
Odorization Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		

<b>Pressure Test History</b>							<input checked="" type="checkbox"/> N/A
<i>(Expand List as Necessary)</i>							
	Req'd <sup>(10)</sup> Assessment Deadline Date	Test Date	Test Medium	Pressure (psig)	Duration (hrs)	% SMYS	
Installation	N/A						
Next							
Next							
Most Recent							
Describe any problems experienced during the pressure tests.							

<b>Internal Line Inspection/Other Assessment History</b>						<input checked="" type="checkbox"/> N/A
<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					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Next					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Next					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Most Recent					<input type="checkbox"/> Yes	<input type="checkbox"/> No
Describe any previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions.						

10 As required of Pipeline Integrity Management regulations in 49CFR Parts 192 and 195

11 MFL, geometry, crack, etc.

12 ECDA, ICDA, SCCDA, "other technology," etc.

Form 11 Pipeline Failure Investigation Report (Rev. 03/23/09 through Final Rule of 16 January 2009)

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Pre-Failure Conditions and Actions</i> <span style="float: right;"><input type="checkbox"/> N/A</span>
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 any previously indicated anomalies at the failed pipe, and any subsequent pipe inspections (anomaly digs) and remedial actions. <b>First time use of this bag.</b>

<i>Maps &amp; Records</i> <span style="float: right;"><input type="checkbox"/> N/A</span>
Are Maps and Records Current? <sup>(13)</sup> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Comments: System under construction however maps are current.      Map of specific area

<i>Leak Survey History</i> <span style="float: right;"><input type="checkbox"/> N/A</span>
Leak Survey History (Trend Analysis, Leak Plots): <b>Part of the "outside business District" area last surveyed 5/26/11, is actually in area that was surveyed following construction 6/2/09, prior leakage survey 5/8/07.</b>

<i>Pipeline Operation History</i> <span style="float: right;"><input type="checkbox"/> N/A</span>
Description (Repair or Leak Reports, Exposed Pipe Reports): <b>No repairs to 6" main in last 5 years, in this area. Most Recent Exposed pipe report 6/18/2010 just east of location</b>
Did a Safety Related Condition Exist Prior to Failure? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No      Reported? <input type="checkbox"/> Yes <input type="checkbox"/> No
Unaccounted For Gas: <b>from 2010 annual report 2.04%</b>
Over & Short/Line Balance (24 hr., Weekly, Monthly/Trend):

13 Obtain copies of maps and records

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Operator/Contractor Error</i> <span style="float: right;"><input checked="" type="checkbox"/> N/A</span>				
Name:		Job Function:		
Title:		Years of Experience: 21		
Training (Type of Training, Background):				
Was the person "Operator Qualified" as applicable to a precursor abnormal operating condition? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A				
Was qualified individual suspended from performing covered task <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A				
Type of Error (Inadvertent Operation of a Valve):				
Procedures that are required: Tapping and stoppling 6" and larger steel pipeline. Use/ installation and safety precautions for inflatable line stopper.				
Actions that were taken: Personnel followed what was a verbal procedural process.				
Pre-Job Meeting (Construction, Maintenance, Blow Down, Purging, Isolation): yes (isolation, no)				
Prevention of Accidental Ignition (Tag & Lock Out, Hot Weld Permit): line bagged off, area secured				
Procedures conducted for Accidental Ignition: Streets and alley closed to traffic, barricade for foot traffic, Fire extinguisher located up wind, protective clothing donned, personnel on stand-by.				
<b>No monitoring of atmosphere within excavation</b>				
Was a Company Inspector on the Job? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Was an Inspection conducted on this portion of the job? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Additional Actions (Contributing factors may include number of hours at work prior to failure or time of day work being conducted):				
Training Procedures: na				
Operation Procedures: none				
Controller Activities: No controller involvement				
Name	Title	Years Experience	Hours on Duty Prior to Failure	Shift
Alarm Parameters:				
High/Low Pressure Shutdown:				
Flow Rate:				
Procedures for Clearing Alarms:				
Type of Alarm:				

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Operator/Contractor Error</i>		<input checked="" type="checkbox"/> N/A
Company Response Procedures for Abnormal Operations:		
Over/Short Line Balance Procedures:		
Frequency of Over/Short Line Balance:		
Additional Actions:		

<i>Additional Actions Taken by the Operator</i>		<input type="checkbox"/> N/A
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):		
<b>Once the fire was controlled and pipeline stopped with expandable plug, a dresser style cap was applied to end of main. Investigation commenced shortly after the main was secured.</b>		
<b>Initial excavation completed 7/18/2011. 2" no-blow fitting welded in place 7/18/2011. Inflatable bag pressure tested 7/18/2011 to 15 psi.</b>		
<b>Pre installation process review 7/18/2011.</b>		

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

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

Overall Area from best possible view. Pictures from the four points of the compass. Failed Component, Operator Action, Damages in Area, Address Markings, etc.

Photo No.	Description	Photo No.	Description
1	719004 end cap being installed 7/19/11	31	725034 material lodged in grass
2	719005 riser containing fill	32	725035 close up
3	720006 Excavator damage 7/20	33	725036 Shadows at 1130
4	720007 looking NNE from 2nd	34	
5	720008 recover fill hose	35	
6	720009 ready no blow valve	36	
7	720010 Nipple removed	37	
8	720011 looking inside nip	38	
9	720012 Fill valve	39	
10	720013 cone residue	40	
11	720014 Occupant 320 W 2nd	41	
12	720015 Fill valve	42	
13	720016 residue of hose crimp	43	
14	720017 residue in hose crimp	44	
15	720018 Hose barb	45	
16	720019 12"x 2" nipple	46	
17	720020 Removed pipe segment	47	
18	721021 edge of pie & interior	48	
19	721022 edge of pipe nipple	49	
20	721023 squeeze	50	
21	721024 blurred	51	
22	721025 Marks on edge	52	
23	721026 Marks on edge	53	
24	721027 Marks on edge	54	
25	721028 tire pressure gauge	55	
26	721029 damaged tools	56	
27	721030 pipe bevel machine	57	
28	725031 Shadows at 1030	58	
29	725032 pipe off set	59	
30	725033 west of drive look east	60	

Camera Type:

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Additional Information Sources</i>			
Agency	Name	Title	Phone Number
Police:	<b>Jill Allgood</b>	<b>Officer</b>	
Fire Dept.:	<b>Todd Kroeger</b>	<b>Fire Chief</b>	<b>402 879 5955</b>
State Fire Marshall:	<b>Marty Neilan</b>	<b>Investigator</b>	
State Agency:	<b>Clark Conklin</b>	<b>Chief Fuels Division</b>	<b>402 471 9467</b>
NTSB:	<b>Chuck Koval</b>		
PHMSA KC:	<b>Brian Pierzina</b>		<b>816 329 3827</b>
FBI:			
ATF:			
OSHA:			
Insurance Co.:			
FRA:			
MMS:			
Television:			
Newspaper:	<b>Superior</b>		
Other:			

<i>Persons Interviewed</i>		
Name	Title	Phone Number
<b>Derek Lipker</b>	<b>Assistant Foreman/SU</b>	<b>402 879 4750</b>
<b>Larry Sibert</b>	<b>Foreman/SU</b>	<b>402 879 4750</b>
<b>Todd Kroeger</b>	<b>Fire Chief/Superior Vol. FD</b>	<b>402 879 5955</b>
<b>Dean Fenimore</b>	<b>resident</b>	
<b>Steve D'Amoto</b>	<b>Sales/Groebner</b>	<b>877 476 3263</b>
<b>Russel Korn</b>	<b>Manufacture/Perma-type Rubber Co</b>	<b>860 747 9999</b>
<b>Douglas Rogers</b>	<b>Service technician/SU</b>	<b>402 879 4750</b>
<b>Jerred Ahlers</b>	<b>Service Technician</b>	<b>402 879 4750</b>



# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

<i>Investigation Contact Log</i>			
Time	Date	Name	Description
	7/19/11	Derek Lipker	Verbal statement
	7/19/11	Larry Sibert	Verbal statement
	7/22/11	Doug Rogers	Verbal statement
	7/20/11	Steve D'Amoto	Goebner Sales
	7/20/11	Russel Korn	Manufacture of bag

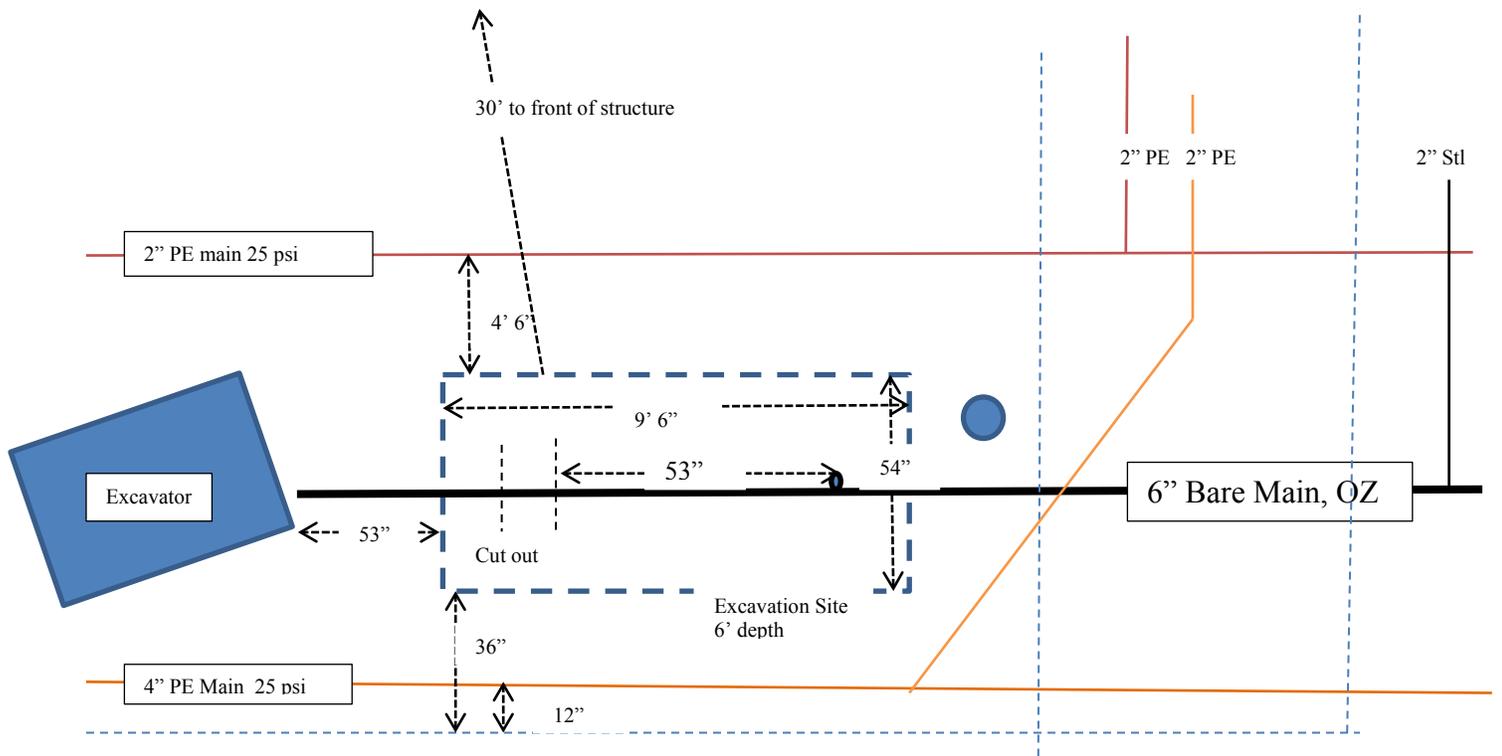
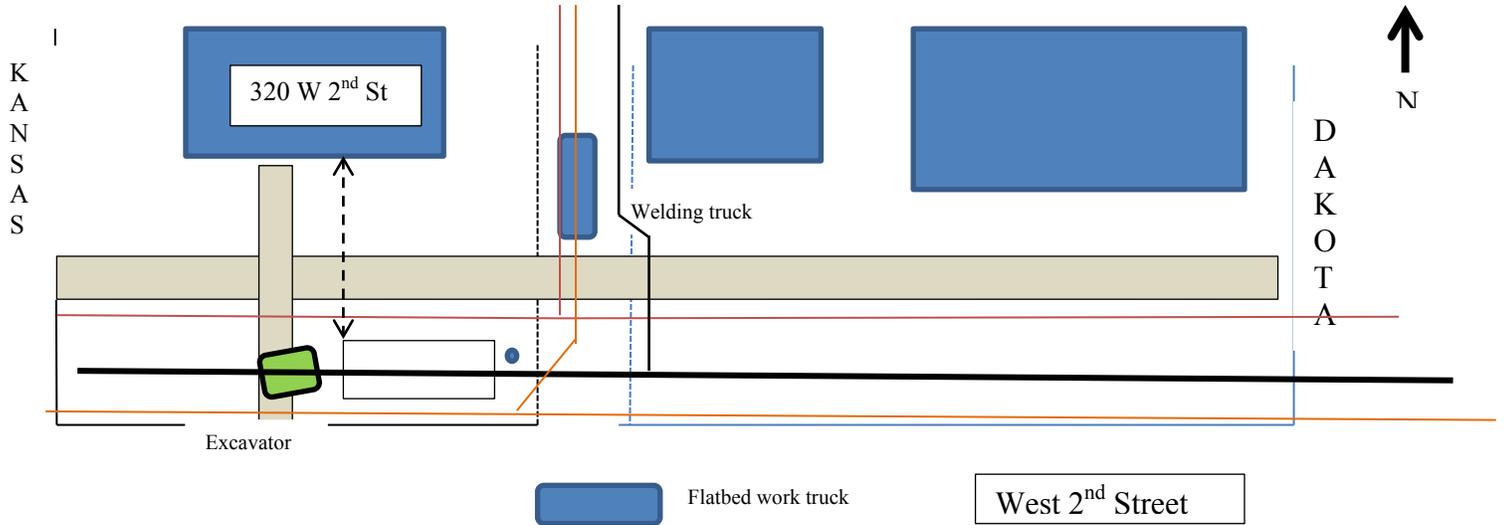
<i>Failure Investigation Documentation Log</i>				
Operator:		Unit #:	CPF #:	Date:
Attachment Number	Documentation Description	Date Received	FOIA	
			Yes	No
1	Senerio	7/22/11		x
2	Verbal statement from Derek Lipker	7/19/11		
3	Written statement from Derek Lipker	7/21/11		
4	Verbal statement from Larry Sibert	7/19/11		
5	Written Statement from Larry Sibert	7/21/11		
6	Verbal Statement from Doug Rogers	7/22/11		
7	Written Statement from Doug Rogers	7/25/11		
8	Telephone interview SD	7/20/11		
9	Telephone interview Manufacture	7/20/11		
10	Verbal interview with Occupant 320 West 2nd	7/20/11		
11a	Inflatable bag info	7/20/11		
11b	Pressure Info			
12	Pressure recording review			
13	199-225 comments			
14	D&R Results			
15	Recovery of bag comment			
16	Maintenance Info			
17	Probable Violations			
18	Root Cause			

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

*Site Description*

Provide a sketch of the area including distances from roads, houses, stress inducing factors, pipe configurations, etc. Bar Hole Test Survey Plot should be outlined with concentrations at test points. Photos should be taken from all angles with each photo documented. Additional areas may be needed in any area of this guideline.



# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

Attachment 1 Scenario:

The gas operator (Superior Gas Department) was making preparation to abandon several blocks of old steel main. It was decided that because there were no isolating valves, the method of choice was to install an inflatable bag (line stopper) and stop the flow of natural gas. Blow down the section of main, cut out a segment of pipe, purge and cap the ends.

Superior Gas department employees had excavated the pipeline to be abandoned, a 6" bare steel distribution main operating at 18 ounces pressure, on July 18, 2011. Excavation was made in front of 320 west 2<sup>nd</sup>.

Excavation is approximately 4'6" wide (N-S) by 9'6" long (E-W) and 6' deep. The 6" main at this location has approximately 40" of cover.

A Superior Gas department employee welded a 2" short stop fitting upon the main July 18, 2011. On the morning of July 19<sup>th</sup>, Superior Gas department employees tapped the main (1.75" dia opening), brushed/deburred the opening and brushed bottom of main.

At approximately 10:15 am, Superior gas department Inserted the inflatable line stopper into the main.

After bag had been inserted the bag was pressurized (Derek) to twelve psi, then bumped to 18 psi.

The Fill nozzle and hose of inflatable bag was fed into a 12"x 2" D, nipple, the fill nozzle was tethered to a cap. All assembled into the short stop fitting.

The pressure within the main downstream of the bag was then depressurized to 0 psi by purging at a service riser near Lumber Yard approx. 2 ½ blocks due west. (Jerred)

Then non pressurized main was then prepared to have a short segment removed (a window). Two grooves were made upon the main with a powered hand grinder, approximately 12" apart, to allow for the four wheeled pipe cutter to be utilized to cut out a segment of main. The main was cut at the two grooves. However external forces acting upon the pipeline caused the pipe segment to become wedged. A reciprocating saw (Milwaukee Sawzall) was applied to the cuts in attempt to reduce length and free pipe segment. Force was applied to remove the nipple. First a chain and then a crimping tool was utilized to squeeze the pipe segment, finally a chain wrench and force used to drop out the pipe segment. (the main piping shifted both vertically and horizontally)

The bag was visually checked by Derek for location and found to be approximately 3' 6" from end of live main.

2 personnel were released to lunch. (Jerred and Bobby)

A temporary plug was installed within the depressurized main. ( one gallon soap container filled with water) An older leather "welders" jacket was then laid over the end of pipe and over temporary plug.

One employee manned the fire extinguisher (Larry) One employee entered the excavation (Derek) and one employee remained top north side of excavation to tender tools. (Doug)

A beveling tool was installed upon the pressurized main. Locating the torch of beveling machine on top side of main (12 o'clock position), approximately one inch from end of pipe.

## NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

### Incident investigation:

Superior gas dept. employee attempted to light torch. Bled air from oxygen/acetylene fuel lines, attempted to light torch, adjusted fuel ratio and lit torch.

Pre heat was started on the pipeline and travel of torch was estimated to be 3"-4", when there was a release of gas which instantly ignited.

(Derek) Gas department employee exited the excavation and (Larry) tried to knock the flames down with dry chemical extinguisher.

The Flame went out, but instantly re-ignited.

A second attempt was made to extinguish the flame, but to no avail.

Evacuation of the surrounding structures was started and phone call made to 911. (12:21)

(Derek) A Gas company employee entered structure at 320 west 2<sup>nd</sup> and indicated to occupant's to leave the area.

[Occupants of 320 west 2<sup>nd</sup> (Dean Fenimore and wife Carrol Fenimore)].

Fire Department arrived on scene along with Police Department. FD & PD evacuated several more residence and an apartment complex.

Approximately 12 occupants evacuated.

Electrical department dispatched to kill electrical power of lines over the excavation and fire.

Approximately 1/3 of system was affected by electrical shut down.

**During the fire process the question was asked, "can you shut the system off"?**

YES, it can be. However it may not be what we want to do.

The system is supplied by 6 district regulating stations and different locations around town, it will take considerable time to shut them all down safely. There are miles of pipe attached to this system, it will take considerable time to bleed down and the fire will go out. Until then we still have to control/maintain the fire.

This system serves nearly ½ half of the population of Superior and the shut-down will take time and the effective start-up of the system would be very time consuming (days). Currently we are sustaining pressure in the system. We (gas department) would prefer NOT to shut this system off.

Can we put the fire out, and plug the pipeline?

Yes but very dangerous. Blowing gas, multiple ignition sources. Life threatening.

It was suggested that there may be another option!

Fill the excavation with water, put the fire out, fill the excavation to stop flow of gas and then cap/plug the end of main.

14:00 Parties agreed that plan was plausible.

14:00-14:10 Plan executed flameout/ gas flow stopped

15:00 Pipeline plugged

15:50 Pipeline capped

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

### Attachment 2

Subject verbal interview: Derek Lipker (Assistant foreman / welder) approx. 1515 hours  
7/19/2011

SFM: what happened Derek.

I inserted the bag into the main at approximately 10:15. I aired the bag up to about 18 psi, checked the pressure with tire gauge.

The pressure was reduced to zero (psi) on the downstream side.

We cut out and dropped a short section of pipe.

I visually checked the location of bag. Approximately 3' from the open end.

I set up the beveling machine, to get edge ready to be welded.

Checked the end of pipe for gas accumulation with striker.

Tried to lite oxy-acetylene torch on beveling machine.

Lit the torch and started pre-heating the edge, traveled about three inches (had not applied cutting o2 yet.

I saw an orange glow/ felt some heat.

Crouched down and exited the hole. Rolled around in the grass a second.

Ran to the back door of (320 West 2<sup>nd</sup>) went in and told the people to leave.

SFM

Attachment 3 written statement from Derek Lipker

7/21/11  
16:06 

Gas Fire July 19, 2011

On July 19, 2011 The Gas Dept. Were Abandoning A 6" Steel Gas Main In Front Of 320 E. 2<sup>nd</sup> St. Superior NE. We Were Using A Inflatable Bag Process. I Had Tested The Bag In The Shop (Gas Dept.) The Morning Of July 18, 2011 I Used A Peace Of Pretested 6" Pipe We Had On The Shelf In The Shop. I Installed The Bag Into The Pipe Pumped It To 15 PSI. Used Air Tire Pressure Gauge To Check It. There Was No Gauge On The Bag. I Soaped The Inlet (The Valve Stem) I Let It Set. For 10 minutes And Rechecked It Was OK. I Also Made Sure The Bag Would Fit Threw The TDW Fitting Before Inflating The Bag.

I Used A 2" TDW Short Stop <sup>(For Pressure)</sup> The Insertion Point I Welded And Tested The Short Stop The Afternoon Of July 18, 2011. We Tapped And Brushed The Inside Of The Fitting The Morning Of July 19, 2011. The Bag Was Installed Just West Of The TDW Short Stop. Down Stream I Put Some Air In The Bag And Checked It With The Tire Pressure Gauge I Used The Day Before It Read 12 PSI. I Put A Little More Air In And Checked It. It Read 18 PSI. On A Little Less With Tire Pressure Gauge I Did Not Want To Take A Chance Of Letting To Much Air

Out Of The Bag. We Capped The Insertion Point With A 2" X 12" Nip & Cap & Coupling We Also Had A Small Wire Holding The Bag Inlet Hose Inside The Pipe So It Would Not Drop In The Pipe. We Had Jerred Ehlers Go Down The Street West Of Us To A Empty Meter Loop He Bleed The System Down. It Seemed To Have A Good Seal. We Then Proceed To Cut A 12" Pup Out With 4 Wheel Cutters And A Sawzall Saw. Once The Pup Was Cut Out I Took A Flashlight And Looked Up The Pipe The Bag Looked Like It Formed The Pipe Well I Smelled NO Gas ~~I~~ Hurd NO Gas It Seemed To Be A Good Seal. The Bag Was Approximately 3 1/2' From The West End Of The Pipe. I Proceeded To Check The End Of The Pipe With A Striker There Was A Small Poof And Went Out. I Checked The Bag Inside The Pipe With A Flashlight Again. It Looked To Be Fine Still Formed Well To The Pipe. I Then Had Doug Rogers Hand Me The 6" Beveling Machine I Set It On The Pipe And The Chain That Holds It On To The Pipe Was Loose So I Had To Adjust It. I Am Estimating It Was 10 min From The Time I First Checked The Pipe End With The Striker. I Set The Beveling Machine 1" Back From Where The Pipe Had Been Cut. With The 4 Wheel Cutter. Once.

The Beveling Machine Was Ready I Started To Ignite The Torch With The Striker I Estimated Trying The Striker 5 Times The Torch Would Not Ignite I Have Really Long Hoses I Had To Purge Air Out Of Lines Acetylene & Oxygen For 2 or 3 Seconds I Let The Hole Air Out For A Minute or so. Then I Used My Striker 2 Times The Torch Lit Up. I Was Then Setting The Torch For Preheating The Pipe. The Torch Moved Approximately 3" From Right To Left Around The Pipe When A Flash Occurred I Bent Down Went East To The Ladder And Got Out Of The Hole While I Was Getting Out Of The Hole Larry Sibert Was Trying To Extinguish The Flame With The Fire Extinguisher. It Did Not Get Put Out. I Felt Heat On <sup>(my)</sup> Back & Back Of Legs I Dropped & Rolled To Make Sure I Was Not On Fire. Then We Got A Hold Of 911 & Utility Office For Help. Then I Evacuated The Residents At 320. E 2<sup>nd</sup> By Then The Police And Fire Were On The Scene.

Derek A Lipker  
Derek A Lipker

July 21, 2011

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

Attachment 4

Verbal Interview with Larry Sibert approximately 15:20 July 19, 2011.

SFM: Larry I need for you tell me what happened?

We had made a tap into the main, clean it up with a brush and inserted a bag to stop the gas.

I had Jerred blow down the main.

We cut out the window (short section of pipe) and dropped the pipe.

Derek checked to see where the bag was, said it was about three feet back.

Saw Derek use striker to check end of pipe

Derek and Doug set-up equipment, to bevel the pipe.

I positioned myself to the east of excavation with fire extinguisher.

Derek said it was safe to bevel, heard him (Derek) try to lite, then lite torch.

I couldn't see the torch, I was back far enough I could see Derek, but not the torch.

There was a slight breeze to my back.

Then I heard a (pop) like ignition of flame. Saw fire hit the west bank and go up.

I moved to near the excavation and discharged the fire extinguisher, but it didn't go out.

I didn't see Derek go by me. I thought he was still in the ditch.

Tried the fire extinguisher again, thought it (flame) may have went out, but re-lit again.

I decided we needed help.

Turned, and saw Derek rolling on the ground behind me.

Called 911, tried to figure out what to do. Didn't have my City cellphone, just had mine.

Didn't have your number so I called the Lincoln Office to let them know what was going on.

Attachment 5 written statement from Larry Sibert

7/21/11  
16:06 AB

## GAS FIRE - July 19, 2011

WE HAD A HOLE DUG IN FRONT OF 320 E 2ND TO ABANDON THE REMAINING 1802 MAIN DOWNTOWN. THE PIPE WE WERE WORKING ON WAS 6" BARE STEEL AT A DEPTH OF APPROXIMATELY 40". A 2" TDW STOPPER HAD BEEN WELDED TO THE TOP OF THE PIPE ON THE EAST END OF THE HOLE. THIS WAS THE INSERTION POINT FOR THE BAG STOPPER. WE HAD SOME DIFFICULTY POSITIONING THE BAG. LINE PRESSURE WAS ~~BE~~ BETWEEN 1 PSI & 1.15 PSI BEFORE INSERTION. GAS ESCAPING FROM THE INSERTION HOLE MADE POSITIONING THE BAG MORE DIFFICULT & WE ENDED UP WITH THE BAG JUST DOWNSTREAM OF THE INSERTION HOLE.

ONCE INSERTED THE BAG WAS INFLATED TO 18 PSI ACCORDING TO A TIRE PRESSURE GAUGE. THIS GAUGE WAS DAMAGED BY THE FIRE. ONCE INFLATED THE WEST SIDE OF THE BAG, CONSISTING OF 15-20 BLOCKS OF PAVING, WAS BLED DOWN. A GRINDER WAS USED TO SCORE <sup>2</sup> LINES AROUND THE PIPE AT 12" APART. THIS DID NOT PENETRATE THE PIPE WALL. WE THEN CUT THE PIPE WITH A 4 WHEEL PIPE CUTTER AT THE LOCATION OF THE GRINDER SCORE. THERE WAS A SLIGHT OUT-OF-ROUND TO THE PIPE PREVENTING US FROM COMPLETING THE 2 CUTS WITH THE CUTTER. NO GAS COULD BE HEARD FROM THE PIPE SO A SAWZACK WAS USED TO COMPLETE THE LAST OF THE CUTS. NO IGNITION OCCURED AT THIS TIME. WE HAD TROUBLE REMOVING THE 12" OF PIPE BECAUSE IT CLOSED UP AND HAD TO BE FORCED OUT. THIS TOOK AN HOUR OR MORE. ONCE

THE PIPE WAS REMOVED DEREK USED A FLASHLIGHT TO LOOK AT THE BAG. HE SAID IT COOKED GOOD. THERE WAS A DISTANCE OF 53" FROM INSERTION TO CUT END WITH THE BAG CELESTIAL MAKING THE DISTANCE FROM BAG TO CUT END 45". DEREK USED A STRIKER AT THE OPEN END OF THE STOPPED WHEN THERE WAS A QUICK 'POOF' - THIS TOOK 1-2 SECONDS FROM STRIKE TO 'POOF' OR LESS. BEFORE THIS A / GACON JUG WITH WATER IN IT HAD BEEN INSERTED INTO THE ABANDONED END OF THE MAINX & A LEATHER ~~COAT~~ <sup>WEAVING</sup> COAT LAYED OVER THAT. AFTER THE INITIAL STRIKING AT MAINS END DEREK SET UP HIS BEUCING TORCH TO BEVEL THE END OF THE PIPE. BEFORE LIGHTING THE TORCH HE AGAIN LOOKED IN THE PIPE & SAW THE BAG. AT NO TIME WAS GAS DETECTED FROM THE PIPE. HE TRIED TO CITE THE TORCH WITH A STRIKER BUT HAD TO PURGE THE LINES TO GET IT TOO CITE. HE WAITED FOR THE AIR TO CLEAR & THEN CIT THE TORCH. IT TOOK SEVERAL STRIKES FOR THE TORCH TO CITE. I DIDN'T SEE A CIT TORCH BECAUSE IT WAS ON THE OTHER SIDE OF DEREK FROM ME. ~~HE~~ I DID HEAR THE TORCH BURNING. HE TOLD ME LATER AT THE SLOOP HIS TORCH TRAVELED 3'-4" PREHEATING THE PIPE BEFORE THE IGNITION. THERE WAS A LOUD 'WROOSH' FOLLOWED BY 'POOF' OF THE GAS IGNITING. THIS ALL TOOK PLACE IN 1-2 SECONDS. I MADE 2 ATTEMPTS TO EXTINGUISH THE FIRE + COULDN'T. I CONFIRMED DEREK WAS OUT OF THE HOLE & WE

BEGAN THE PROCESS OF CALLING 911 - OFFICE - OTHER DEPTS. WHEN THE FIRE DEPT ARRIVED THEY WET THE AREA - POWER POLE & HOUSE TO PREVENT THE FIRE SPREADING. WE BEGAN CLEANING NOW WE WERE GOING TO GET THE SITUATION UNDER CONTROL.

ESTIMATED TIMELINE:

8 AM - BEGAN TAPPING THE MAIN - TDW HAD BEEN WELDED ON THE DAY BEFORE. ONCE TAPPED & BRUSHED WE BEGAN INSERTING THE BAG. I'M NOT SURE WHAT TIME BAG INSERTION WAS COMPLETED BUT BELIEVE IT TO BE 1-1/2 HRS PRIOR TO IGNITION (11:00 - 11:30 AM)

12:30 PM - IGNITION

2:30 PM - FIRE OUT & WATER LEVEL IN HOLE STOPPED THE GAS FLOW

3:30 - 3:45 PM PIPE PLUGGED & CAPPED WITH DRESSER & WELD CAP

4:30 PM - INITIAL CALL TO NRC

By 6:45 - 7:00 PM ALL 5 GAS EMPLOYEES HAD BEEN DRUG & ALCOHOL TESTED AT SCOP & SENT HOME.

ARMIC'S INVESTIGATION CONTINUED NEXT DAY (CONT.)

CARRY SEBERT  
GAS DEPT FOREMAN  
July 21st, 2011

AB written  
prior to  
7/21/11  
Time line

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**  
**Incident investigation:**

Attachment 6

Verbal Interview with Doug Rogers approximately 7:55 July 22, 2011.

SFM Asked if he would be able to recount what had happened on Tuesday July 19, or if time had clouded his recollection of events. Doug indicated felt he could tell me what happened.

SFM: Doug I need for you tell me what you saw and heard

I had helped get tools in the excavation.

Moved back to the northeast, over by the tree.

Saw Larry to east of excavation with fire extinguisher.

I heard Derek try to light the torch (on the beveling machine) I heard the torch "pop" about three times.

I heard a "Whoosh".

Saw Derek come out of the excavation.

Larry moved in with fire extinguisher.

I went over to my flatbed and moved it out of the way,

Grabbed my fire extinguisher, but it was too late for use of it.

Attachment 7 written statement from Doug Rogers

MB 7/25/11

1026AM

DEREK LIPKER AND I WENT INTO THE EXCAVATION HOLE TO PLACE THE "STOP BAG" INTO THE MAIN PIPE. THE 2" T.D. WILLIAMSON HAD BEEN WELDED TO THE PIPE THE DAY BEFORE (MONDAY). WE HAD SOME DIFFICULTY WITH THE BAG, WE COULD NOT GET IT TO SEAT UPSTREAM. AFTER DISCUSSING THE SITUATION, A DECISION WAS MADE TO SEAT THE BAG DOWNSTREAM. THE BAG WAS SEATED DOWN STREAM AND INFLATED TO 18PSIG (CHECKED BY TIRE GAUGE). OUR NEXT STEP WAS TO CUT OUT A SECTION OF PIPE AND PREP IT TO HAVE A END-CAP WELDED ON IT. TWO GRIND GUIDES WERE GROUND ONTO THE PIPE TO HELP WITH THE HAND CUTTER. LARRY SIEBERT AND BOBBY PRICE CUT THE FIRST CUT ON THE PIPE AND BOBBY PRICE AND I CUT THE 2ND CUT. AT NO TIME DID I SMELL OR HEAR ANY GAS. IT WAS LUNCH TIME, AND BOBBY PRICE AND JORRED EHLERS WENT TO LUNCH. LET ME WRITE INTO THIS... AFTER THE 2ND CUT WAS MADE WE HAD DIFFICULT REMOVING THE CUT SECTION. WE TRIED ROTATING IT BUT TO NO AVAIL. A SHOP MADE PRESS WAS USED TO SQUEEZE THE CUT SECTION OF PIPE TO EASE THE REMOVAL, AFTER THE SQUEEZE A CHAIN WRENCH WAS USED TO ROTATE THE CUT PIPE AND IT WAS REMOVED. I DID NOT SMELL OR HEAR ANY GAS AT THIS TIME.

NOW THEN.... BOBBY AND JERRED WENT TO LUNCH. I OBSERVED DEREK DO A "STRIKER" CHECK AT THE END OF THE PIPE, I SAW A SMALL FLAME IGNITE. THE OXY/ACE. PIPE CUTTER WAS PUT ONTO THE PIPE. AT THIS TIME I WAS NORTHEAST OF THE HOLE GETTING A DRINK OR WATER, I HEARD 4 "POPS" FROM THE TOUCH AND LOOKED OVER TOWARDS DEREK. DEREK ADJUSTED THE TOUCH HEAD AND STARTED ROTATING THE HANDLE ON THE TOUCH EQPT. IN SECONDS THE PIPE IGNITED. I OBSERVED DEREK TAKE ON JUMP OUTO THE LADDER AND ROLL ONTO THE GROUND. LARRY S. WAS NOW USING A FIRE EXT TRYING TO PUT OUT THE FIRE. I RAN TO THE FLAT BED TRUCK AND MOVED IT, I THEN RAN TO THE WELDING TRUCK AND SHUT OFF THE VALVES TO THE OXY/ACE TOUCH. WE BACKED AWAY FROM THE FIRE AND STARTED CALLING THE PROPER AUTHORITIES.

I SWEAR WHAT I HAVE WROTE IS THE TRUTH AND WROTE TO THE BEST OF MY ABILLITIES.

Douglas W. Ross

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**  
**Incident investigation:**

Attachment 8 Verbal Interview with Groebner Sales  
4949 Hadley St  
Overland Park, KS 66203  
(product supplier)  
July 20, 2011 09:08 am CST  
Telephone conversation/interview with Steve D'Amoto

SFM: Steve I need some help with a product that I believe you sent to Superior back in March, a inflatable bag. Type "C".

D'Amoto: Yeah, I remember them ordering one.

SFM: Steve is there any instructions or procedures for the use of these bags?

D'Amoto: No, there really aren't any instructions or procedures because they are used in so many different ways and applications. But they are pretty simple to use. Just insert them through a 1.5" hole or tap into the pipeline and inflate. That should stop the flow.

SFM: Can you send or fax a copy of the specification sheet and any info to the Superior warehouse at 402.879.4752

D'Amoto: Sure we can do that.

Attachment 9 Manufacturer

12:38-12:55 verbal interview with manufacture of Type C inflatable bag. Perma-Type Rubber (company) Plainville CT, 860.747.9999 with Russel Korn. 7/20/2011 starting at 12:41pm CST Initially spoke with a receptionist, identified myself and elaborated that I needed to talk to someone about the specifications of a product(6" inflatable bag Part number PTRTC006, the receptionist transferred me to a party identified as Russ Korn. Identified myself as Arnold Bates, Deputy State Fire Marshal, Pipeline Safety in Nebraska. Verified that the item a Natural Rubber Type "C" product PTRTC006 is a product manufactured by this company.

SFM?: Does your company have or issue any procedures for the use of the product?

KORN: No, we have no procedures. We just manufacture the product, we don't use them.

SFM: No recommended instructions?

KORN: No.

SFM: Can I ask you about specification and operating parameters?

KORN: Yes, I'll try to help.

SFM: We are talking about the inflatable bag, the 6".

KORN: OK.

SFM: Are there any variables in the operating specifications.

KORN: The specifications are available for the products.

SFM: I have the specification sheet, it says that the maximum inflation of the plug is 15 psi, are there any variables in the parameters.

KORN: The specifications call for 15 psi, if you were to over inflate the bag it would fail.

SFM: Is that the maximum, and anything over that the bag would fail?

KORN: The bag should be able to handle a range of 3-4 psi above or below that. What I mean is that the bag will seal at 12 psi, and become rock hard at 15 psi.

SFM: What is the maximum the bag may hold without failure? I mean if I were to pressurize the bag to 18 psi would it fail?

KORN: In reality the bag should be able to sustain that but not much more.

SFM: OK, let's talk about the maximum line pressure.

## NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

### Incident investigation:

KORN: OK, the bag is rated for 1 psi in the line.

SFM: Are there any variables to this.

KORN: In reality the plug should be able to sustain line pressure up to 32" wc. Over that the bag may not seal.

SFM: So to recap the conversation, no procedures for use of bag. Variables are not listed, pressure specification is what is listed on the sheet.

Bag Maximum inflation pressure 15 psi, (variable 3-4 psi) should be acceptable. Over that pressure the bag may fail.

Maximum line pressure is 1 psi (27" wc/16 oz) variable maximum working pressure 32"wc ( 1.25 psi / 20 oz) over that pressure the bag may not seal.

KORN: That is correct.

SFM: Does your company store these so they can be shipped out in a hurry?

KORN: Generally we manufacture as product is ordered, we don't stock these items.

SFM: Just to verify the outer covering would be white?

KORN: Yes

SFM: The bag would be grey in color?

KORN: Yes, or maybe orange, we are in the transition of changing colors.

SFM: this bag was purchased in March.

KORN: Yes, the color would be grey.

Pleasantries exchanged.

End of interview.

### Attachment 10 Occupant

Interview with occupant of 320 west 2<sup>nd</sup>. 07/20/2011 11:55 Dean Finemore

I don't think I will have to mow the grass out here for a while.

SFM: Sorry for the inconvenience yesterday!

Oh, it wasn't too bad

I was sitting in the front room in my chair when I heard a loud whoosh.

I said what was that?

My wife said "there's a fire out front.

I looked out the window and the front area was on fire.

About that time "Derek" came through the back door and said, you need to get out of here!

So we went out and got in the car and drove around for a while.

SFM: Were you able to stay cool, find a place with air conditioning?

Oh, we were ok, drove around for a while, then my wife had doctors' appointment so we went there for most of the afternoon. When we got done we came back by and there was a lot of commotion still going on so we went down to the lake for a while. Then we came back, thought I might get supper on the City, but everything was about over then and they let us back in the house. So there wasn't much inconvenience.

SFM: you were able to stay cool?

Yeah, we drove around a little and my wife had that eye appointment at the doctors' so we stayed cool enough.

### Attachment 11a Inflatable Bag info

Form 11 Pipeline Failure Investigation Report (Rev. 03/23/09 through Final Rule of 16 January 2009)

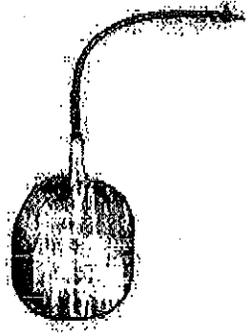
Use of Inflatable

MAOP = 32" wc

Verible psi 3-4 on bag

Rassel Korn

Perma-Type Rubber  
83 Northwest Drive  
Plainville, CT 06062 USA  
Tel: (860) 747-9909 - Fax: (860) 747-1986  
E-mail: permatypeco@snet.net



### Natural Rubber Type "C" (Polyester Covered)

For Gas Pipelines

- Type "C" Stoppers when inflated are slightly cylindrically shapad
- Type "C" tubing length is approximately 3 ft. long

Grey in color  
OR  
Orange  
White Cover

#### Results 1 - 25 of 28

Item #	Item Name	Inflated Plug O.D. (Inches)	Inflated Plug O.D. (mm)	Maximum Pressure in Plug (P.S.I.)	Maximum Pressure in Line (P.S.I.)	Inflated Length (Inches)	Inflated Length (mm)	Tubing I.D. (Inches)	Tap Hole Size Required (Inches)	Approximate Weight With Fitting
PTRTC002	Natural Rubber Type "C" (Polyester Covered)	2	51	15	1	4	102	.25	1"	9 oz.
PTRTC003	Natural Rubber Type "C" (Polyester Covered)	3	76	15	1	5	127	.25	1"	10 oz.
PTRTC004	Natural Rubber Type "C" (Polyester Covered)	4	101	16	1	6	152	.25	1.25"	12 oz.
PTRTC005	Natural Rubber Type "C" (Polyester Covered)	5	127	15	1	7	178	.25	1.25"	14.5 oz.
PTRTC006	Natural Rubber Type "C" (Polyester Covered)	6	152	15	1	8	203	.375	1.5"	1.25 lbs.
PTRTC008	Natural Rubber Type "C" (Polyester Covered)	8	203	12	1	9	229	.375	2"	1.4 lbs.
PTRTC010	Natural Rubber Type "C" (Polyester Covered)	10	254	10	3/4 lb.	11	279	.375	2"	1.5 lbs.
PTRTC012	Natural Rubber Type "C" (Polyester Covered)	12	304	8	3/4 lb.	14	356	.375	2.5"	2.25 lbs.
PTRTC014	Natural Rubber Type "C" (Polyester Covered)	14	355	6	1/2 lb.	16	406	.625	2.5"	4 lbs.
PTRTC015	Natural Rubber Type "C" (Polyester Covered)	15	381	6	1/2 lb.	17	432	.625	3"	4.5 lbs.
PTRTC016	Natural Rubber Type "C" (Polyester Covered)	16	406	6	1/2 lb.	18	457	.625	3"	4.75 lbs.

AD

AB  
7/20/11  
9:45



# GROEBNER

Powered By Experience

Minneapolis  
Headquarters  
9530 Fallon Ave. NE  
Monticello, MN  
55362  
783-295-5355  
800-638-8322  
783-295-5360 fax

Chicago  
450 Fenton Lane  
Suite 902  
West Chicago, IL  
60185  
630-876-5330  
800-434-3972  
630-876-5334 fax

Kansas City  
4949 Hadley St.  
Overland Park, KS  
66203  
913-384-1610  
877-476-3263  
913-384-1032 fax

www.groebner.com

## Fax

To: ARNIE BATES / LARRY SIBSON - GAS DEPT.

Fax: ~~Phone:~~ 402-879-4752

Date: 7/20/11 Time: Pages: 2

From: STEVE DAMATO

Re: TYPE C PIPE PLUG

### Comments:

Guy's -

I TALKED TO PERMA-TYPE RUBBER TO SEE IF

THEY HAD INSTRUCTIONS, BUT BECAUSE THE ARE USED IN SO MANY DIFFERENT APPLICATIONS AND THEY ARE LOW PRESSURES THEY DO NOT.

BUT SIMPLY INSERT THROUGH A 1.5" HOLE OR TAP, PUSH THE PLUG UPSTREAM & INFLATE WITH HANDS PUMP. THE NATURAL RUBBER IS NATURAL GAS COMPATIBLE

CALL IF YOU HAVE MORE QUESTIONS.



# MATERIAL REQUISITION

(NOT A PURCHASE ORDER)

©2007 REDIFORM® 1L115

510858

TO:	GROEBNER	DATE:	3-23-10
DELIVER TO:	GAS		
CHARGE TO JOB NO.:	PO 4310		

QUANTITY		SHOPKEEPER: PLEASE SUPPLY	PRICE	AMOUNT
1	1	BAG STOPPER FOR 6" PIPE # PTATC006		111
	2			
	3			
	4	ORDER COMPLETE 4-5-11		
	5			
	6			
	7			
	8			
	9			

PRICED BY: EXTENDED BY: CHECKED BY: ENTERED BY: SIGNED: L. SIBERT

AB 7/25/11 10:23



GROEBNER & ASSOCIATES, INC.  
 9530 Fallon Ave NE  
 Monticello, MN 55362  
 763-295-5360 Fax  
 800-638-8322

**INVOICE**

INVOICE NUMBER	227703
PAGE	1
DATE	03/31/11

**S** 791  
**O** Superior Utilities  
**L** P.O. Box 160  
**D** Superior, NE 68978  
**T**  
**O**

**S** SUPNE  
**H** Superior Utilities  
**I** 135 W. 4Th St.  
**P** Attn: Larry Sibert  
**T** Superior, NE 68978  
**O**

CUSTOMER P.O. #	SHIP DATE	SLSP	TERMS	TAX CODE	DOC. NO.	W/H	FREIGHT		SHIP VIA	
4310	03/31/11	80	NET 25 DAYS	NE SUP	172989	06	PRE/ADD		BEST WAY/UPS	
ITEM	DESCRIPTION			ORDERED	SHIPPED	B/O	U/M	PRICE	U/M	EXTENSION
PTRTC006	6" BAG STOPPER- NATURAL RUBBER TYPE C, POLYESTER COVER, 1.5" TAP HOLE. INFLATE TO 15 PSI MAX RATING			1.00	1.00	.00	EA	111.000	EA	111.00
<i>SENT TO OFFICE - NOT SHIP.</i>										
				MERCHANDISE	MISCELLANEOUS	DISCOUNT	TAX	FREIGHT	TOTAL DUE	
				111.00	.00		8.76	23.75	143.51	

RETURNS ARE SUBJECT TO 25% RESTOCKING CHARGE.

### Audit Trail Report (Daily Summary)

Report Name: MasterLink32 Audit Trail Report (Daily Summary)

Report Selections: 1 site, Since 7/19/2011

Site Id: 40-0

Site Name: low pressure

Site Location:

*5th Kansas  
D*

Report Date: 7/21/2011

*AB 9.15*

Start Time: 12:00:00AM

Date: 7/19/2011	Records per hr	Average	Minimum	Maximum	Minimum	(Not In Use)					
		Interval Avg Pressure	Interval LO Pressure	Interval High Pressure	Battery Voltage Reading						
		PSIG	PSIG	PSIG	Volts						
12:00:00AM	1	1.18	1.16	1.18	5.74						
1:00:00AM	1	1.18	1.16	1.19	5.74						
2:00:00AM	1	1.18	1.16	1.19	5.74						
3:00:00AM	1	1.18	1.17	1.19	5.74						
4:00:00AM	1	1.18	1.17	1.19	5.74						
5:00:00AM	1	1.17	1.16	1.19	5.74						
6:00:00AM	1	1.16	1.15	1.17	5.74						
7:00:00AM	1	1.15	1.14	1.17	5.74						
8:00:00AM	1	1.15	1.02	1.23	5.74						
9:00:00AM	1	1.18	1.02	1.21	5.74						
10:00:00AM	1	1.18	0.97	1.28	5.74						
11:00:00AM	1	1.17	1.15	1.19	5.74						
12:00:00PM	1	0.75	0.54	1.21	5.74						
1:00:00PM	1	1.07	0.78	1.29	5.74						
2:00:00PM	1	1.17	0.99	1.32	5.74						
3:00:00PM	1	1.16	1.14	1.16	5.74						
4:00:00PM	1	1.15	1.14	1.16	5.74						
5:00:00PM	1	1.15	1.14	1.16	5.74						
6:00:00PM	1	1.15	1.14	1.16	5.74						
7:00:00PM	1	1.16	1.14	1.18	5.74						
8:00:00PM	1	1.16	1.16	1.18	5.74						
9:00:00PM	1	1.16	1.14	1.17	5.74						
10:00:00PM	1	1.18	1.16	1.21	5.74						
11:00:00PM	1	1.18	1.16	1.21	5.74						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>(Not In Use)</b>					
24		1.15	0.54	1.32	5.74						

*12:33pm  
Mercury time (12:41) actual  
1.44 PSI MAOP  
23" O2*

### Audit Trail Report (Daily Summary)

Report Name: MasterLink32 Audit Trail Report (Daily Summary)

Report Date: 7/21/2011

Report Selections: 1 site, Since 7/19/2011

Site Id: 40-0

Site Name: low pressure

Site Location:

Start Time: 12:00:00AM

Date: 7/20/2011	Records per hr	Average	Minimum	Maximum	Minimum	(Not In Use)					
		Interval Avg Pressure	Interval LO Pressure	Interval High Pressure	Battery Voltage Reading						
		PSIG	PSIG	PSIG	Volts						
12:00:00AM	1	1.20	1.18	1.21	5.74						
1:00:00AM	1	1.19	1.19	1.20	5.74						
2:00:00AM	1	1.19	1.17	1.21	5.74						
3:00:00AM	1	1.20	1.19	1.21	5.74						
4:00:00AM	1	1.19	1.17	1.21	5.74						
5:00:00AM	1	1.17	1.17	1.19	5.74						
6:00:00AM	1	1.16	1.15	1.18	5.74						
7:00:00AM	1	1.15	1.15	1.17	5.74						
8:00:00AM	1	1.16	1.15	1.17	5.74						
9:00:00AM	1	1.16	1.15	1.17	5.74						
10:00:00AM	1	1.17	1.13	1.19	5.74						
11:00:00AM	1	1.17	1.01	1.23	5.74						
12:00:00PM	1	1.17	1.15	1.19	5.74						
1:00:00PM	1	1.17	1.16	1.19	5.74						
2:00:00PM	1	1.16	1.14	1.19	5.74						
3:00:00PM	1	1.16	1.14	1.18	5.74						
4:00:00PM	1	1.16	1.14	1.17	5.74						
5:00:00PM	1	1.16	1.14	1.16	5.75						
6:00:00PM	1	1.16	1.14	1.17	5.75						
7:00:00PM	1	1.16	1.16	1.18	5.75						
8:00:00PM	1	1.17	1.16	1.18	5.75						
9:00:00PM	1	1.16	1.14	1.18	5.75						
10:00:00PM	1	1.17	1.14	1.20	5.74						
11:00:00PM	1	1.19	1.16	1.23	5.74						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>(Not In Use)</b>					
24		1.17	1.01	1.23	5.74						

### Audit Trail Report (Daily Summary)

Report Name: MasterLink32 Audit Trail Report (Daily Summary)

Report Date: 7/21/2011

Report Selections: 1 site, Since 7/19/2011

Site Id: 40-0

Site Name: low pressure

Site Location:

Start Time: 12:00:00AM

Date: 7/21/2011	Records per hr	Average	Minimum	Maximum	Minimum	(Not In Use)					
		Interval Avg Pressure	Interval LO Pressure	Interval High Pressure	Battery Voltage Reading						
		PSIG	PSIG	PSIG	Volts						
12:00:00AM	1	1.20	1.17	1.23	5.74						
1:00:00AM	1	1.20	1.18	1.22	5.74						
2:00:00AM	1	1.19	1.16	1.21	5.74						
3:00:00AM	1	1.21	1.18	1.23	5.74						
4:00:00AM	1	1.19	1.18	1.21	5.74						
5:00:00AM	1	1.18	1.17	1.19	5.74						
6:00:00AM	1	1.16	1.15	1.17	5.74						
7:00:00AM	1	1.16	1.15	1.19	5.74						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>(Not In Use)</b>					
8		1.19	1.15	1.23	5.74						

### Audit Trail Report (Monthly Summary)

Report Name: MasterLink32 Audit Trail Report (Monthly Summary)

Report Selections: 1 site, From 7/1/2011 To 7/20/2011

Site Id: 40-0

Site Name: low pressure

Site Location:

5<sup>th</sup> Kansas/Dakota  
 Report Date: 7/21/2011  
 Start Time: 12:00:00AM

Date	Records per day	Average	Minimum	Maximum	Minimum	Minimum	Consum	Minimum	Average	Maximum	Minimum	
		Interval Avg Pressure	Interval LO Pressure	Interval High Pressure	Battery Voltage Reading							
		PSIG	PSIG	PSIG	Volts							
7/1/2011	10	1.17	1.14	1.19	5.73							
7/2/2011	24	1.17	1.13	1.19	5.73							
7/3/2011	24	1.17	1.13	1.20	5.72							
7/4/2011	24	1.16	1.13	1.20	5.73							
7/5/2011	24	1.16	1.14	1.19	5.73							
7/6/2011	24	1.17	1.14	1.20	5.72							
7/7/2011	24	1.17	1.13	1.20	5.72							
7/8/2011	24	1.17	1.13	1.20	5.72							
7/9/2011	24	1.16	1.13	1.20	5.72							
7/10/2011	24	1.16	1.14	1.19	5.73							
7/11/2011	24	1.16	1.13	1.19	5.73							
7/12/2011	24	1.17	1.13	1.19	5.73							
7/13/2011	24	1.16	1.13	1.20	5.73							
7/14/2011	24	1.16	1.13	1.19	5.73							
7/15/2011	24	1.17	1.14	1.19	5.73							
7/16/2011	24	1.16	1.14	1.19	5.73							
7/17/2011	24	1.16	1.13	1.19	5.73							
7/18/2011	24	1.16	1.14	1.19	5.73							
7/19/2011	24	1.15	0.54	1.32	5.74							
7/20/2011	24	1.17	1.01	1.23	5.74							
<b>Total Records</b>	<b>466</b>	<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Minimum</b>	<b>Consum</b>	<b>Minimum</b>	<b>Average</b>	<b>Maximum</b>	<b>Minimum</b>	
		1.16	0.54	1.32	5.72		0					

Measure time is slow of actual

### Audit Trail Report (Daily Summary)

Report Name: MasterLink32 Audit Trail Report (Daily Summary)

Report Selections: 1 site, Since 7/19/2011

Site Id: 15-0

Site Name: 1425 <sup>N Kansas</sup> ~~California~~

Site Location:

14B 7/20/11 10:10  
Report Date: 7/20/2011

Start Time: 12:00:00AM

*Time is within 8min of actual. 8min behind*

Date: 7/19/2011	Records per hr	Average	Minimum	Maximum	Minimum	(Not In Use)					
		Interval Avg Pressure PSIG	Interval LO Pressure PSIG	Interval High Pressure PSIG	Battery Voltage Reading Volts						
12:00:00AM	1	1.18	1.17	1.19	5						
1:00:00AM	1	1.19	1.17	1.19	5						
2:00:00AM	1	1.19	1.17	1.19	4.99						
3:00:00AM	1	1.19	1.17	1.19	4.99						
4:00:00AM	1	1.18	1.17	1.19	4.99						
5:00:00AM	1	1.17	1.17	1.19	4.99						
6:00:00AM	1	1.17	1.15	1.17	4.99						
7:00:00AM	1	1.16	1.15	1.17	4.99						
8:00:00AM	1	1.16	1.06	1.23	4.99						
9:00:00AM	1	1.19	1.08	1.22	5						
10:00:00AM	1	1.19	1.07	1.23	5						
11:00:00AM	1	1.17	1.15	1.20	5.01						
12:00:00PM	1	1.05	1	1.21	5.01						
1:00:00PM	1	1.10	1.08	1.17	5.01						
2:00:00PM	1	1.18	1.08	1.23	5.01						
3:00:00PM	1	1.17	1.15	1.17	5.01						
4:00:00PM	1	1.16	1.14	1.17	5.01						
5:00:00PM	1	1.15	1.15	1.17	5.01						
6:00:00PM	1	1.15	1.13	1.18	5.01						
7:00:00PM	1	1.17	1.15	1.18	5.01						
8:00:00PM	1	1.17	1.16	1.18	5						
9:00:00PM	1	1.16	1.16	1.18	5						
10:00:00PM	1	1.18	1.16	1.21	5						
11:00:00PM	1	1.19	1.17	1.21	5						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>(Not In Use)</b>					
24		1.17	1	1.23	4.99						

*Average of 11:00 to 12:00*

*Bag insertion 10:30 APPX  
Blow 12:20 off ice  
stopped 14:30  
seal 15:45*

*Lowest Pressure in  
last 24 hrs. was 0.78 psi  
1230 1200*

### Audit Trail Report (Daily Summary)

Report Name: MasterLink32 Audit Trail Report (Daily Summary)

Report Date: 7/20/2011

Report Selections: 1 site, Since 7/19/2011

Site Id: 15-0

Site Name: 1415 california

Site Location:

Start Time: 12:00:00AM

Date: 7/20/2011	Records per hr	Average	Minimum	Maximum	Minimum	(Not In Use)					
		Interval Avg Pressure	Interval LO Pressure	Interval High Pressure	Battery Voltage Reading						
		PSIG	PSIG	PSIG	Volts						
12:00:00AM	1	1.20	1.19	1.21	5						
1:00:00AM	1	1.19	1.19	1.21	5						
2:00:00AM	1	1.20	1.17	1.21	5						
3:00:00AM	1	1.20	1.19	1.21	5						
4:00:00AM	1	1.19	1.17	1.21	4.99						
5:00:00AM	1	1.18	1.17	1.19	4.99						
6:00:00AM	1	1.17	1.15	1.19	4.99						
7:00:00AM	1	1.16	1.15	1.17	4.99						
8:00:00AM	1	1.17	1.15	1.17	4.99						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>(Not In Use)</b>					
9		1.18	1.15	1.21	4.99						

*Mercury - Century  
Mini Max*

### Audit Trail Report (Monthly Summary)

Report Name: MasterLink32 Audit Trail Report (Monthly Summary)

Report Selections: 1 site, From 7/1/2011 To 7/20/2011

Site Id: 15-0

Site Name: 1425 California

*Kansas*

Site Location:

*Day*

*AS 7/20/11 10:10*

Report Date: 7/20/2011

Start Time: 12:00:00AM

Date	Records per day	Average	Minimum	Maximum	Minimum	Minimum	Consum	Minimum	Average	Maximum	Minimum
		Interval Avg Pressure PSIG	Interval LO Pressure PSIG	Interval High Pressure PSIG	Battery Voltage Reading Volts						
7/1/2011	10	1.17	1.14	1.19	4.99						
7/2/2011	24	1.17	1.14	1.20	4.99						
7/3/2011	24	1.17	1.14	1.20	4.99						
7/4/2011	24	1.17	1.14	1.20	4.99						
7/5/2011	24	1.17	1.13	1.20	4.99						
7/6/2011	24	1.17	1.14	1.20	4.99						
7/7/2011	24	1.17	1.13	1.20	4.99						
7/8/2011	24	1.17	1.14	1.20	4.98						
7/9/2011	24	1.17	1.14	1.20	4.99						
7/10/2011	24	1.17	1.14	1.19	4.99						
7/11/2011	24	1.17	1.13	1.20	4.99						
7/12/2011	24	1.17	1.14	1.19	4.99						
7/13/2011	24	1.17	1.14	1.20	4.99						
7/14/2011	24	1.17	1.13	1.19	4.99						
7/15/2011	24	1.17	1.15	1.19	4.99						
7/16/2011	24	1.17	1.13	1.19	4.99						
7/17/2011	24	1.17	1.14	1.19	4.99						
7/18/2011	24	1.17	1.14	1.19	4.99						
7/19/2011	24	1.17	1	1.23	4.99						
7/20/2011	9	1.18	1.15	1.21	4.99						
<b>Total Records</b>		<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Minimum</b>	<b>Consum</b>	<b>Minimum</b>	<b>Average</b>	<b>Maximum</b>	<b>Minimum</b>
<b>451</b>		<b>1.17</b>	<b>1</b>	<b>1.23</b>	<b>4.98</b>		<b>0</b>				

*Recording Device is B BKo North*

# History for Hebron, NE

Tuesday, July 19, 2011 — View Current Conditions

Tuesday, July 19, 2011

« Previous Day

July 19 2011 View

Next Day »

Daily Weekly Monthly Custom

	Actual	Average	Record
<b>Temperature</b>			
Mean Temperature	86 °F	-	
Max Temperature	96 °F	92 °F	108 °F (1954)
Min Temperature	77 °F	68 °F	58 °F (1971)
Cooling Degree Days	22		
Growing Degree Days	36 (Base 50)		
<b>Moisture</b>			
Dew Point	70 °F		
Average Humidity	67		
Maximum Humidity	79		
Minimum Humidity	34		
<b>Precipitation</b>			
Precipitation	0.00 in	-	- (0)
<b>Sea Level Pressure</b>			
Sea Level Pressure	29.94 in		
<b>Wind</b>			
Wind Speed	7 mph (South)		
Max Wind Speed	16 mph		
Max Gust Speed	20 mph		
Visibility	10 miles		
<b>Events</b>			

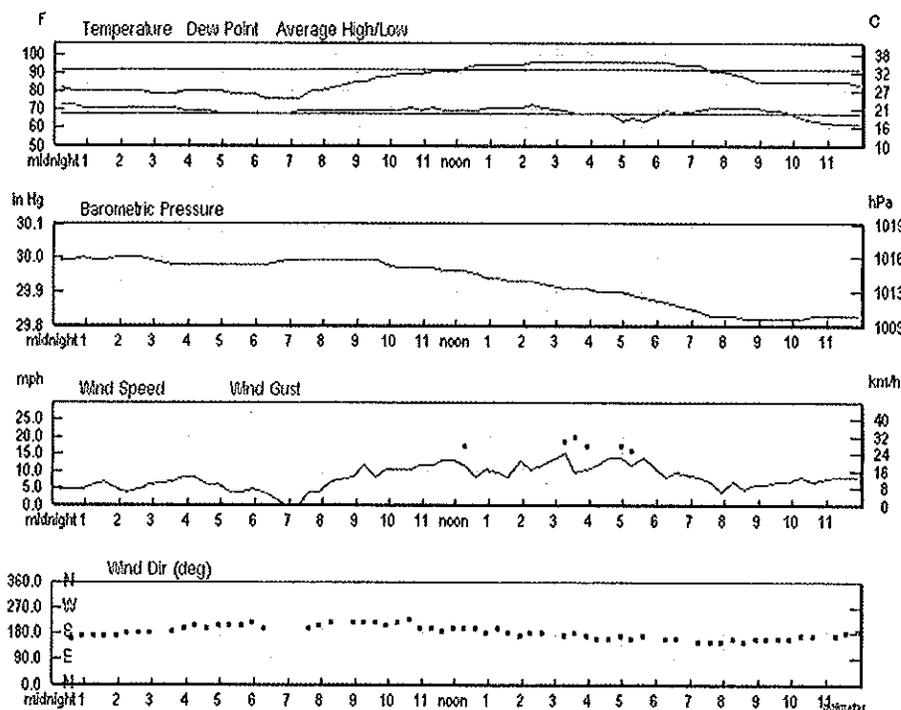
Averages and records for this station are not official NWS values.

Click here for data from the nearest station with official NWS data (KCNK).

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Seasonal Weather Averages



Certify This Report

Hourly Observations

Time (CDT)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:15 AM	82.4 °F	73.4 °F	74%	29.99 in	10.0 miles	SSE	4.6 mph	-	N/A		Clear
12:35 AM	80.6 °F	73.4 °F	79%	29.99 in	10.0 miles	SSE	4.6 mph	-	N/A		Clear
12:55 AM	80.6 °F	71.6 °F	74%	30.00 in	10.0 miles	South	4.6 mph	-	N/A		Clear
1:15 AM	80.6 °F	71.6 °F	74%	29.99 in	10.0 miles	South	6.8 mph	-	N/A		Clear
1:35 AM	80.6 °F	71.6 °F	74%	29.99 in	10.0 miles	South	6.9 mph	-	N/A		Clear
1:55 AM	80.6 °F	71.6 °F	74%	30.00 in	10.0 miles	South	4.6 mph	-	N/A		Clear
2:15 AM	80.6 °F	71.6 °F	74%	30.00 in	10.0 miles	South	3.5 mph	-	N/A		Clear
2:35 AM	80.6 °F	71.6 °F	74%	30.00 in	10.0 miles	South	4.6 mph	-	N/A		Clear
2:55 AM	78.8 °F	71.6 °F	78%	29.99 in	10.0 miles	South	6.8 mph	-	N/A		Clear
3:35 AM	78.8 °F	71.6 °F	78%	29.98 in	10.0 miles	South	6.9 mph	-	N/A		Clear
3:55 AM	80.6 °F	69.8 °F	70%	29.98 in	10.0 miles	SSW	8.1 mph	-	N/A		Clear
4:15 AM	80.6 °F	69.8 °F	70%	29.98 in	10.0 miles	SSW	8.1 mph	-	N/A		Clear
4:35 AM	80.6 °F	69.8 °F	70%	29.98 in	10.0 miles	SSW	6.8 mph	-	N/A		Clear
4:55 AM	80.6 °F	68.0 °F	65%	29.98 in	10.0 miles	SSW	6.8 mph	-	N/A		Clear
5:15 AM	78.8 °F	68.0 °F	69%	29.98 in	10.0 miles	SSW	3.5 mph	-	N/A		Clear
5:35 AM	78.8 °F	68.0 °F	69%	29.98 in	10.0 miles	SSW	3.5 mph	-	N/A		Clear
5:55 AM	78.8 °F	68.0 °F	69%	29.98 in	10.0 miles	SW	4.6 mph	-	N/A		Clear
6:15 AM	77.0 °F	68.0 °F	74%	29.98 in	10.0 miles	SSW	3.5 mph	-	N/A		Clear
6:55 AM	77.0 °F	68.0 °F	74%	29.99 in	10.0 miles	Calm	Calm	-	N/A		Clear
7:15 AM	77.0 °F	69.8 °F	78%	29.99 in	10.0 miles	Calm	Calm	-	N/A		Clear
7:35 AM	80.6 °F	69.8 °F	70%	29.99 in	10.0 miles	SSW	3.5 mph	-	N/A		Clear
7:55 AM	80.6 °F	69.8 °F	70%	29.99 in	10.0 miles	SSW	3.5 mph	-	N/A		Clear
8:15 AM	82.4 °F	69.8 °F	66%	29.99 in	10.0 miles	SW	6.9 mph	-	N/A		Clear
8:55 AM	86.0 °F	69.8 °F	58%	29.99 in	10.0 miles	SW	8.1 mph	-	N/A		Clear
9:15 AM	86.0 °F	69.8 °F	58%	29.99 in	10.0 miles	SW	11.5 mph	16.1 mph	N/A		Clear
9:35 AM	87.8 °F	69.8 °F	55%	29.99 in	10.0 miles	SW	8.1 mph	-	N/A		Clear
9:55 AM	87.8 °F	69.8 °F	55%	29.98 in	10.0 miles	SSW	10.4 mph	-	N/A		Clear
10:15 AM	89.6 °F	69.8 °F	52%	29.97 in	10.0 miles	SW	10.4 mph	-	N/A		Clear
10:35 AM	89.6 °F	71.6 °F	55%	29.97 in	10.0 miles	SW	10.4 mph	-	N/A		Clear
10:55 AM	89.6 °F	69.8 °F	52%	29.97 in	10.0 miles	SSW	11.5 mph	17.3 mph	N/A		Clear
11:15 AM	91.4 °F	71.6 °F	52%	29.97 in	10.0 miles	SSW	11.5 mph	-	N/A		Clear
11:35 AM	91.4 °F	69.8 °F	49%	29.96 in	10.0 miles	South	12.7 mph	-	N/A		Clear
11:55 AM	91.4 °F	69.8 °F	49%	29.96 in	10.0 miles	SSW	12.7 mph	18.4 mph	N/A		Clear
12:15 PM	93.2 °F	69.8 °F	46%	29.96 in	10.0 miles	SSW	11.5 mph	17.3 mph	N/A		Clear
12:35 PM	95.0 °F	69.8 °F	44%	29.95 in	10.0 miles	SSW	8.1 mph	-	N/A		Clear
12:55 PM	95.0 °F	71.6 °F	47%	29.94 in	10.0 miles	South	10.4 mph	-	N/A		Clear
1:15 PM	95.0 °F	71.6 °F	47%	29.94 in	10.0 miles	SSW	9.2 mph	-	N/A		Clear
1:35 PM	95.0 °F	71.6 °F	47%	29.93 in	10.0 miles	South	8.1 mph	18.4 mph	N/A		Clear

Show full METARS | METAR FAQ | Comma Delimited File

Time (CDT)	Temp.	Dew Point	Humidity	Sea Level Pressure	Visiblity	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
1:55 PM	95.0 °F	71.6 °F	47%	29.93 in	10.0 miles	South	12.7 mph	-	N/A		Clear
2:15 PM	96.8 °F	73.4 °F	47%	29.93 in	10.0 miles	South	10.4 mph	-	N/A		Clear
2:35 PM	96.8 °F	71.6 °F	44%	29.92 in	10.0 miles	South	11.5 mph	16.1 mph	N/A		Clear
3:15 PM	96.8 °F	69.8 °F	41%	29.91 in	10.0 miles	South	16.0 mph	18.4 mph	N/A		Clear
3:35 PM	96.8 °F	68.0 °F	39%	29.91 in	10.0 miles	South	9.2 mph	19.6 mph	N/A		Clear
3:55 PM	96.8 °F	68.0 °F	39%	29.91 in	10.0 miles	South	10.4 mph	17.3 mph	N/A		Clear
4:15 PM	96.8 °F	68.0 °F	39%	29.90 in	10.0 miles	SSE	11.5 mph	-	N/A		Clear
4:35 PM	96.8 °F	68.0 °F	39%	29.90 in	10.0 miles	SSE	13.8 mph	18.4 mph	N/A		Clear
4:55 PM	96.8 °F	64.4 °F	34%	29.90 in	10.0 miles	South	13.8 mph	17.3 mph	N/A		Clear
5:15 PM	96.8 °F	66.2 °F	37%	29.89 in	10.0 miles	SSE	11.5 mph	16.1 mph	N/A		Clear
5:35 PM	96.8 °F	64.4 °F	34%	29.88 in	10.0 miles	South	13.8 mph	-	N/A		Clear
6:15 PM	96.8 °F	69.8 °F	41%	29.87 in	10.0 miles	SSE	8.1 mph	-	N/A		Clear
6:35 PM	95.0 °F	68.0 °F	41%	29.86 in	10.0 miles	SSE	9.2 mph	-	N/A		Clear
7:15 PM	95.0 °F	69.8 °F	44%	29.84 in	10.0 miles	SSE	8.1 mph	-	N/A		Clear
7:35 PM	91.4 °F	71.6 °F	52%	29.83 in	10.0 miles	SSE	6.9 mph	-	N/A		Clear
7:55 PM	91.4 °F	71.6 °F	52%	29.83 in	10.0 miles	SSE	3.5 mph	-	N/A		Clear
8:15 PM	89.6 °F	71.6 °F	55%	29.83 in	10.0 miles	SSE	6.9 mph	-	N/A		Clear
8:35 PM	87.8 °F	71.6 °F	58%	29.82 in	10.0 miles	SSE	4.6 mph	-	N/A		Clear
8:55 PM	86.0 °F	71.6 °F	62%	29.82 in	10.0 miles	SSE	5.8 mph	-	N/A		Clear
9:15 PM	86.0 °F	69.8 °F	58%	29.82 in	10.0 miles	SSE	5.8 mph	-	N/A		Clear
9:35 PM	86.0 °F	69.8 °F	58%	29.82 in	10.0 miles	SSE	6.9 mph	-	N/A		Clear
9:55 PM	86.0 °F	68.0 °F	55%	29.82 in	10.0 miles	SSE	6.9 mph	-	N/A		Clear
10:15 PM	86.0 °F	66.2 °F	51%	29.82 in	10.0 miles	South	8.1 mph	-	N/A		Clear
10:35 PM	86.0 °F	64.4 °F	48%	29.83 in	10.0 miles	South	6.9 mph	-	N/A		Clear
11:15 PM	86.0 °F	62.6 °F	45%	29.83 in	10.0 miles	South	8.1 mph	-	N/A		Clear
11:35 PM	86.0 °F	62.6 °F	45%	29.83 in	10.0 miles	South	8.1 mph	-	N/A		Clear
11:55 PM	84.2 °F	62.6 °F	48%	29.83 in	10.0 miles	South	8.1 mph	-	N/A		Clear

Show full METARS | METAR FAQ | Comma Delimited File

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**  
**Incident investigation:**

Attachment 12 Pressure review

Pressure recording review and location

From data collected from 2 sites, 1425 N Kansas (14 blocks north of release) and 5<sup>th</sup> & Kansas (3 blocks north of release). These are Mercury recording devices capable of gathering data and saving specific data.

Basic daily (24 hour): Average pressure, lowest pressure, highest pressure. And Extreme pressures in last 24 hours

Hourly: accumulated from top of hour to next ie. 10:00-10:59 ): Average pressure, lowest pressure, highest pressure.

Total average for # of recording records: Average pressure, lowest pressure, highest pressure.

In review of the records the Mercury recording time clocks appear to have a discrepancy of 8 minutes however the time intervals can be matched to actual time log of events.

Time Log / Event

Pressure

recording device (psi)

5<sup>th</sup> & Kansas / 1425 N Kansas  
 Hi      Lo      Avg

9:00	Average pressures	1.18	1.02/1.08	1.22
10:15. 7/19/2011	<b>Inflatable bag (line stopper) inserted into 6" main</b>	<b>1.18/1.19</b>	<b>0.97/1.07</b>	<b>1.28/1.23</b>
11:00-12:00	<b>Maintenance on pipeline</b>	<b>1.17/1.17</b>	<b>1.15/1.15</b>	<b>1.19/1.20</b>
12:20	<b>Failure/ ignition</b>	<b>0.75/1.05</b>	<b>0.54/1</b>	<b>1.21/1.21</b>
1300-1400	<b>Fire</b>	<b>1.12/1.14</b>	<b>0.99/1.08</b>	<b>1.30/1.20</b>
14:00-15:00	<b>Gas flow contained</b>	<b>1.16/1.17</b>	<b>1.14/1.15</b>	<b>1.32/1.23</b>
16:00	After containment	1.15	1.14	1.16/1.17

**CONCLUSION:**

I believe these pressure to be accurate and shows that the pressure within the main consistent with actions and events throughout the day.

Pressure remained above a hazardous level during the event and there was no over pressurization within the system.

Calculated gas loss is estimated as 1024 mcf. Based on a time frame of 2 hours. 12:30- 14:30

Ounce System DRS location overview:

Current ounce pressure system is provided by 7 district regulators:

DRS #2 @ 11<sup>th</sup> Street alley of Kansas & Dakota (10 blocks north)

DRS# 3 @ Alley south of 5<sup>th</sup> Street between Kansas & Dakota (3 blocks north)

DRS# 6 @ Intersection 3<sup>rd</sup> Street & Loudon, southeast corner (1 block north 3 ½ blocks east)

DRS# 7 @ Intersection 2<sup>nd</sup> Street & Loudon, northeast corner (4 ½ blocks east)

DRS# 8 @ Intersection 6<sup>th</sup> Street & Loudon, northeast corner (4 blocks north, 4 ½ blocks east)

DRS# 9 @ Alley ½ north of 12<sup>th</sup> Street between Central & Commercial (10 ½ blocks north & 2 ½ blocks west)

DRS# 14 @at alley of 15<sup>th</sup> Street between Kansas & Dakota, (15 blocks north)

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**  
**Incident investigation:**

Attachment 13

§199.225 Alcohol tests required.

Each operator shall conduct the following types of alcohol tests for the presence of alcohol:

(a) Post-accident.

(1) As soon as practicable following an accident, each operator shall test each surviving covered employee for alcohol if that employee's performance of a covered function either contributed to the accident or cannot be completely discounted as a contributing factor to the accident. The decision not to administer a test under this section shall be based on the operator's determination, using the best available information at the time of the determination, that the covered employee's performance could not have contributed to the accident.

(2)(i) If a test required by this section is not administered within two hours following the accident, the operator shall prepare and maintain on file a record stating the reasons the test was not promptly administered. If a test required by paragraph (a) is not administered within eight hours following the accident, the operator shall cease attempts to administer an alcohol test and shall state in the record the reasons for not administering the test.

It is the opinion of this deputy that the phrase "As soon as practicable following an accident" is key to the post-accident alcohol testing requirements. Drug testing was conducted within the required time frame.

Upon my arrival it was apparent that "all hands" were needed to stabilize and "make safe" the operation of the pipeline. Upon completion of the final tasks of stopping gas flow and sealing the pipeline, proper post-accident testing was conducted within the two hour time frame, and post-accident testing did not exceed the 8 hour time interval from the initial release of product. Thus post-accident testing was not considered as a probable violation. However follow-up will be conducted to ascertain that documentation of the post-accident testing is available.

Attachment 14 D&A results (Adobe)

Form 11 Pipeline Failure Investigation Report (Rev. 03/23/09 through Final Rule of 16 January 2009)

AB 7/25/11  
10:15 am  
407

S & G Associates, Inc.  
P.O. Box 273  
Wichita, KS 67201-0273

Office: 320 S Lulu, Wichita, KS  
Voice: 316-945-5535 FAX: 316-945-0402

www.sgdrugfree.com  
info@sgdrugfree.com

Janice Smidt  
Superior Utilities/City of Superior  
PO Box 160  
Superior NE 68978

EMPLOYER NOTIFICATION OF DOT DRUG TEST RESULT

Employer: Superior Utilities/City of Superior

This letter is to inform you that the individual whose name appears below, had a DOT drug test, that was conducted in accordance with 49 CFR 40.

Test result: VERIFIED NEGATIVE

Name: Douglas W Rogers

DOB: 10-9-1962

Donor ID: 509-76-4020

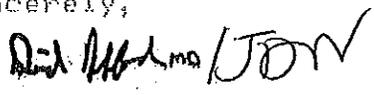
Reason for test: Post-Accident

Test date: 7-19-2011

MRO received Copy 2: 7-22-2011

Specimen ID No.: 6400631154 was analyzed by  
Clinical Reference Lab, Lenexa, KS.

Sincerely,



David Hufford, M.D.  
Medical Review Officer  
AAMRO Certified

7-22-2011

Verified Test  
Result Date

Timothy Scanlan, M.D  
650 N. Carriage Parkway, Suite 135  
Wichita, KS 67208  
Voice: 316-685-4700  
FAX: 316-685-8247

Utility Consultants, Inc.

EMPLOYER NOTIFICATION OF DOT DRUG TEST RESULT

Employer: Superior Utilities

This letter is to inform you that the individual, whose name appears below, had a DOT drug test, that was conducted in accordance with 49 CFR part 40.

Test Result: MRO VERIFIED NEGATIVE

Name: Robert Price

DOB: 01-12-1986

Employee Id: 418-25-6970

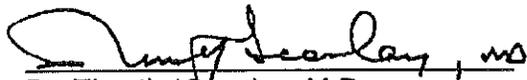
Reason for test: Post Accident

Test Date: 07-19-2011

Date MRO received Copy 2 of CCF: 07-22-2011

Specimen Id.: 0045214302 was analyzed by Clinical Reference Laboratory, Lenexa, KS.

Sincerely,



Dr. Timothy Scanlan, M.D.  
Medical Review Officer  
AAMRO Certified

July 22, 2011

---

Verified Test  
Result Date

Timothy Scanlan, M.D  
650 N. Carriage Parkway, Suite 135  
Wichita, KS 67208  
Voice: 316-685-4700  
FAX: 316-685-8247

Utility Consultants, Inc.

EMPLOYER NOTIFICATION OF DOT DRUG TEST RESULT

Employer: Superior Utilities

This letter is to inform you that the individual, whose name appears below, had a DOT drug test, that was conducted in accordance with 49 CFR part 40.

Test Result: MRO VERIFIED NEGATIVE

Name: Larry Sibirt

DOB: 05-20-1957

Employee Id: 507-80-2729

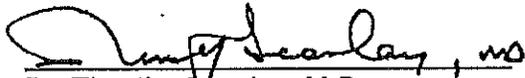
Reason for test: Post Accident

Test Date: 07-19-2011

Date MRO received Copy 2 of CCF: 07-22-2011

Specimen Id.: 0045214303 was analyzed by Clinical Reference Laboratory, Lenexa, KS.

Sincerely,



Dr. Timothy Scanlan, M.D.  
Medical Review Officer  
AAMRO Certified

July 22, 2011

---

Verified Test  
Result Date

Timothy Scanlan, M.D  
650 N. Carriage Parkway, Suite 135  
Wichita, KS 67208  
Voice: 316-685-4700  
FAX: 316-685-8247

Utility Consultants, Inc.

EMPLOYER NOTIFICATION OF DOT DRUG TEST RESULT

Employer: Superior Utilities

This letter is to inform you that the individual, whose name appears below, had a DOT drug test, that was conducted in accordance with 49 CFR part 40.

Test Result: MRO VERIFIED NEGATIVE

Name: Derek Lipker

DOB: 10-26-1969

Employee Id: 507-13-4527

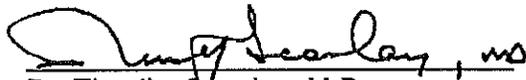
Reason for test: Post Accident

Test Date: 07-19-2011

Date MRO received Copy 2 of CCF: 07-22-2011

Specimen Id.: 0045214305 was analyzed by Clinical Reference Laboratory, Lenexa, KS.

Sincerely,



Dr. Timothy Scanlan, M.D.  
Medical Review Officer  
AAMRO Certified

July 22, 2011

---

Verified Test  
Result Date

Timothy Scanlan, M.D  
650 N. Carriage Parkway, Suite 135  
Wichita, KS 67208  
Voice: 316-685-4700  
FAX: 316-685-8247

Utility Consultants, Inc.

EMPLOYER NOTIFICATION OF DOT DRUG TEST RESULT

Employer: Superior Utilities

This letter is to inform you that the individual, whose name appears below, had a DOT drug test, that was conducted in accordance with 49 CFR part 40.

Test Result: MRO VERIFIED NEGATIVE

Name: Jerred Ehlers

DOB: 06-14-1985

Employee Id: 506-21-2266

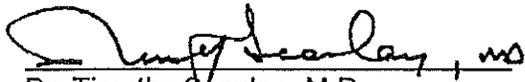
Reason for test: Post Accident

Test Date: 07-19-2011

Date MRO received Copy 2 of CCF: 07-22-2011

Specimen Id.: 0045214304 was analyzed by Clinical Reference Laboratory, Lenexa, KS.

Sincerely,



Dr. Timothy Scanlan, M.D.  
Medical Review Officer  
AAMRO Certified

July 22, 2011

Verified Test  
Result Date

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**  
**Incident investigation:**

Attachment 15 Recovery of bag

Was the bag recovered during the investigation?

The inflatable bag was not recovered during the investigation. Effort was made to hand dig and sift through soils in the bottom of excavation during the investigation. Effort was made to search the area for debris that may have been discharged from the excavation.

This deputy is convinced the “bag” did not remain in the pipeline and was mostly consumed in the fire.

Attachment 16 Maintenance Info



MB 9/21/11  
9:55

# MAIN INSPECTION

LOCATION 332 E 2ND

DATE 6-18-10

PIPE	MAIN			SERVICE			MAIN					
	BARE	C&W	PE	BARE	C&W	PE	BARE	C&W	PE			
MATERIAL												
SIZE	6"								1 1/4"			
DEPTH	27"						27" AT TAP					
PRESSURE	1802						1802					
P/S READINGS	AT PIPE		AT SURFACE		AT MAIN		AT RISER					
	-.580v		-.611v									
COVER	PAVED	X	OTHER	X	PAVED		OTHER		PAVED	X	OTHER	X
	LOCATION	BUS		RES	X	BUS		RES	BUS		RES	X
CONDITION	GOOD						ABANDONED					

ANODE SIZE \_\_\_\_\_ SOIL RESISTIVITY \_\_\_\_\_

LOCATION \_\_\_\_\_

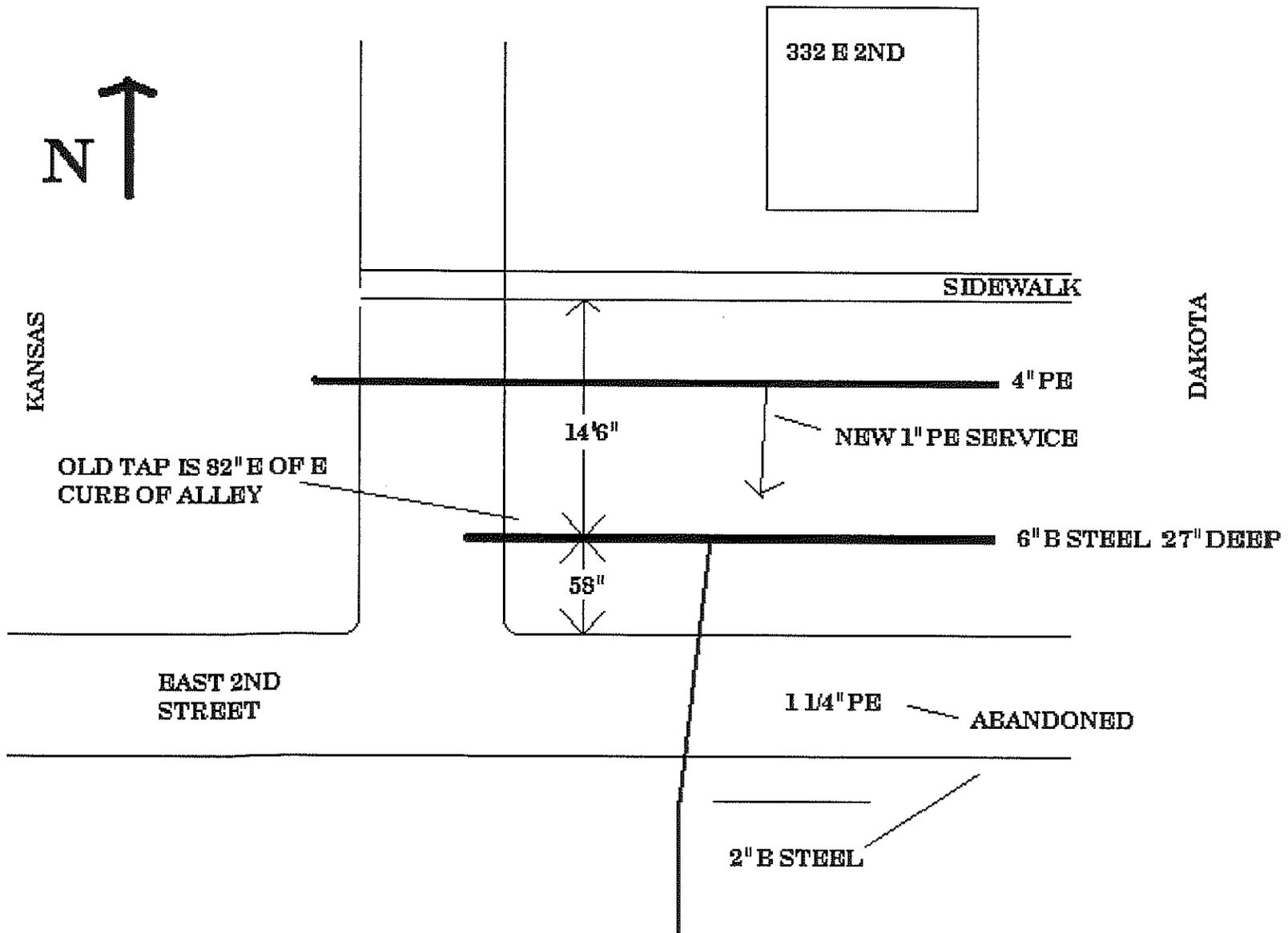
INSIDE OLD MAIN  SERVICE  OK? YES  NO

IF NO, WHY NOT? \_\_\_\_\_

REMARKS: ABANDONED SERVICE TO 141 N. DAKOTA AND MAIN  
IT FED FROM IN THIS HOLE. CUT 1 1/4" PE COUSE FROM 6"  
B. STEEL. ST X-ING ON 2ND WAS 1 1/4 PE & FROM S SIDE  
OF 2ND S TO RISER WAS B. STEEL 2" THREADED 2"  
SO HEAD PLUG INTO SADDLE ON 6".

SIGNATURE K. STORP

DIAGRAM ON BACK



PATROLLING OF DISTRIBUTION SYSTEM

AB 7/21/11  
9:50

Period Covered: Began 7:50 AM, 5-26-11 Ended 9:15 AM 5-26-11

Areas Covered: ALLEY BETWEEN KANSAS & DAKOTA, 2<sup>ND</sup> STREET TO 5<sup>TH</sup> STREET.

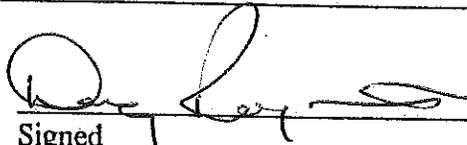
Leakage Indications Discovered (describe locations and indications, such as condition of vegetation) OLD RISER LEAKING THRU VALVE CORE - 332 E 2<sup>ND</sup> 10" NIPPLE LEAKING UNDER REGULATOR (THREATS) - 431 E. DAKOTA

Construction Activity Along Areas: NONE

Describe any unusual conditions at highway and railroad crossings: NONE

Other factors noted which could affect present or future safety or operation of gas system: NONE

COMMENTS: LEAKS DETECTED WITH FLAME PAC. LEAKS HAVE BEEN REPAIRED.

  
Signed \_\_\_\_\_  
Date: 5-26-11

AB 7-21-2011  
9:58

PIS ON 6"

7.21-11

EAST END OF HOLE

AT PIPE

- .556V

AT SURFACE

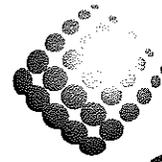
- .572V

---

PRE excavation map

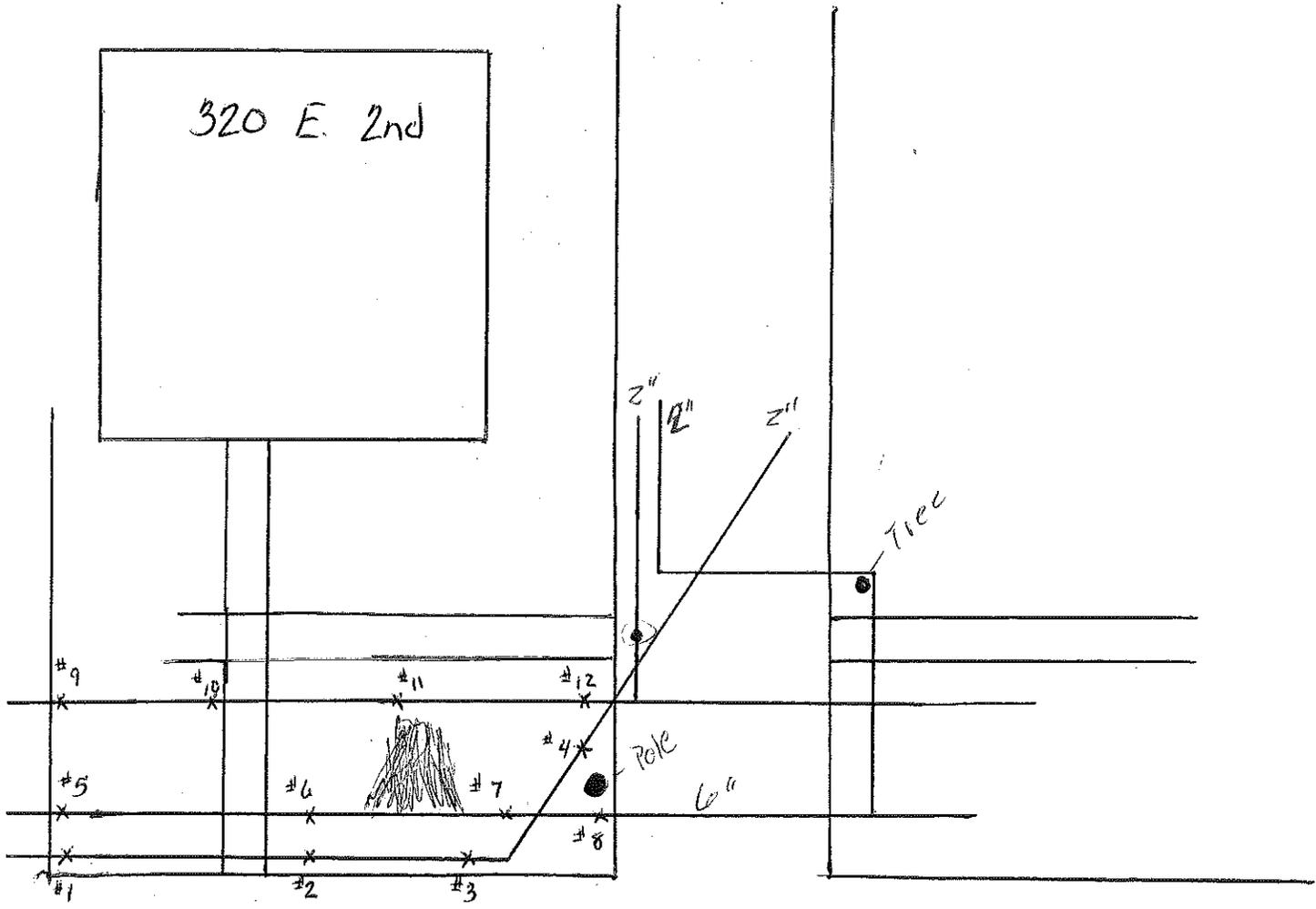
Served

7/21/11 AB



elster  
American Meter

South Main is 18" B.O.C. - High Pressure  
 North Main is 63" B.O.C. - Low Pressure  
 PE Main is 4' South of Sidewalk.



#1 is 21" Deep	#5 is 26" Deep	#9 is 47" Deep
#2 is 21" Deep	#6 is 28" Deep	#10 is 51" Deep
#3 is 21" Deep	#7 is 27" Deep	#11 is 46" Deep
#4 is 32" Deep	#8 is 33" Deep	#12 is 29" Deep
	40"	

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

Attachment 17 Probable violations

Probable Violations

This is the first time this type of line stopping equipment was utilized.

There is no current procedure available to direct personnel in the performance of the task.

There is no current documentation that personnel are/were qualified to conduct this stopping technique or utilizing this equipment on 6" and larger diameter piping.

The task is listed within the Operators Qualification Program.

It is the operator's responsibility to ensure that every individual, whether employed by the operator or by a contractor who performs a covered task on an operator's pipeline facility on or after the compliance date (October 28, 2002), must either be qualified to perform those tasks or be directed and observed by a qualified person.

It is a general thought that Personnel performing line stopping should be:

- (a) Familiar with the pressure limitations of the equipment to be used; and
- (b) Thoroughly trained in the mechanical procedures and safety precautions associated with the use of such equipment.

In this case the Operator failed to qualify individuals to conduct line stopping activities upon 6" Diameter main.

### Probable violation:

#### **No written procedures for installation and use of this type of stopping equipment.**

192.605(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

- (1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

**Affective part of Subpart M = abandonment.**

#### **Operator did not implement the requirements of the written operator qualification program.**

192.805 Qualification Program

Each operator shall have and follow a written qualification program. The program shall include provisions to: (b) Ensure through evaluation that individuals performing covered tasks are qualified;

Recommendations to the operator to prevent reoccurrence. **Yes**

Prior to the implementation of new tools or processes there shall be procedures and adequate training prior to the use of such equipment.

Personnel shall be qualified for task associated with such new tools/equipment/process prior to performance of task upon the pipeline.

Issues with the process:

No standard procedure available from manufacture or sales.

No specific procedures acquired for other sources before using the "tool".

Only a verbal instruction on how to use the product.

No precautionary safety recommendations made.

## **NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION**

### **Incident investigation:**

At a minimum this deputy believes that the standard safety precautions need to address:

Don't over pressurize bag.

Use only a hand pump to fill bag.

Do not exceed listed maximum pressure of bag.

Monitor bag pressure throughout use of bag.

Do not exceed listed maximum line pressure.

Lower line pressure to below maximum line pressure requirements, before operations commence.

Protect bag from hot work, embers, sparks.

Should state; a minimum distance for bag to be away from work area.

A statement that the bag should be installed upstream of opening so bag can be blocked from movement.

Considerations of gas "blow" during bagging operations.

As a gas operator we should know to check the atmosphere(s) before introducing ignition devices.

# NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

## Incident investigation:

Attachment 18

Root Cause as determined by investigator: INCORRECT OPERATIONS

Type of release involved: other; described as failed inflatable bag (line stopper).

From selection of possible causes:

Corrosion Failure: NO

Natural force damage: NO

Excavation Damage: NO

Other outside force damage: NO

Pipe, weld or joint failure: NO

Equipment failure: **NO! Not equipment as described.** Could be classed as “non-threaded connection: seal or packing: This section includes malfunctions of control and relief equipment (typically the result of failed and leaking valves), failures of threaded components and broken pipe couplings, including O- Ring failures, Gasket failures, thread failures, and failures in packing. However it is the opinion of the investigator that this selection refers more to “fixed” apparatus than repair equipment.

Incorrect operations: (**Probable; from view of investigator**)

**Complete the following if any Incorrect Operation sub-cause is selected.**

\*2. Was this Incident related to: *(select all that apply)*

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

\*3. What category type was the activity that caused the Incident:

- Construction
- Commissioning
- Decommissioning
- Right-of-Way activities
- Routine maintenance
- Other maintenance
- Normal operating conditions
- Non-routine operating conditions (abnormal operations or emergencies)

\*4. Was the task(s) that led to the Incident identified as a covered task in your Operator Qualification Program?  Yes  No

\*4.a If Yes, were the individuals performing the task(s) qualified for the task(s)?

- Yes, they were qualified for the task(s)
- No, but they were performing the task(s) under the direction and observation of a qualified individual
- No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual

**Other Incident Cause** – \*only one **sub-cause** can be selected (**Operator selected this area**)

- Miscellaneous** \*1. Describe: \_\_\_\_\_ **Failure of inflatable bag** \_\_\_\_\_
- Unknown** \*2. Specify:  Investigation complete, cause of Incident unknown  
 Still under investigation, cause of Incident to be determined\* (*\*Supplemental Report required*)

## NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION

### Incident investigation:

Incorrect operations: (Probable from view of investigator)

These types of incidents most often occur during operating, maintenance or repair activities. Some examples of this type of failure are improper valve selection or operation, inadvertent over pressurization, or improper selection or installation of equipment. The unintentional ignition of the transported gas during a welding or maintenance activity would also be included in this sub-cause. These types of incidents often involve training or judgment errors.

Was the equipment selected to stop the flow of gas within the ounce main incorrect or improper?

Considering this type of product, it may be the next best choice, in lieu of (“shutting the segment of system down”). This is an ounce system and many products or equipment may not function properly.

In this instance considering the area that would need to be shut down, stopping the line is an accepted practice.

Did the judgment of the operator to continue with this process without some type of written procedure contribute to the incident? “Yes”

There are multiple issues with the installation and monitoring of the device that can be questioned, some actions may have prevented the incident.













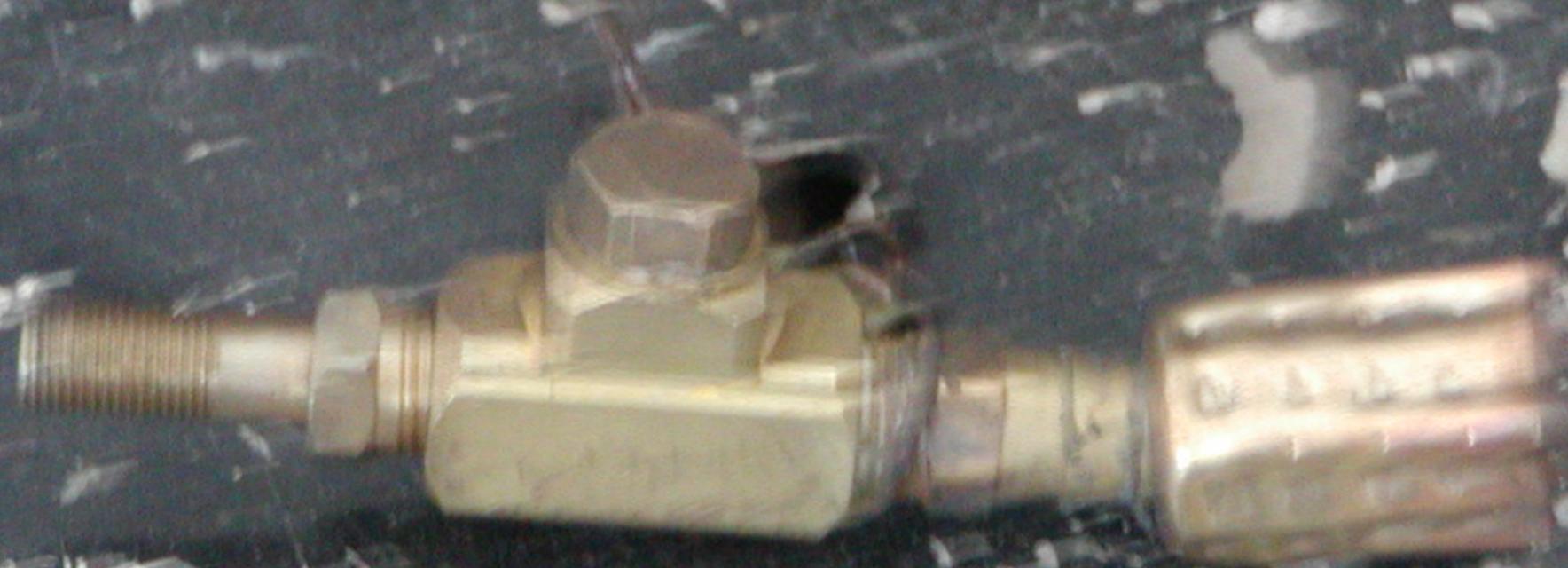








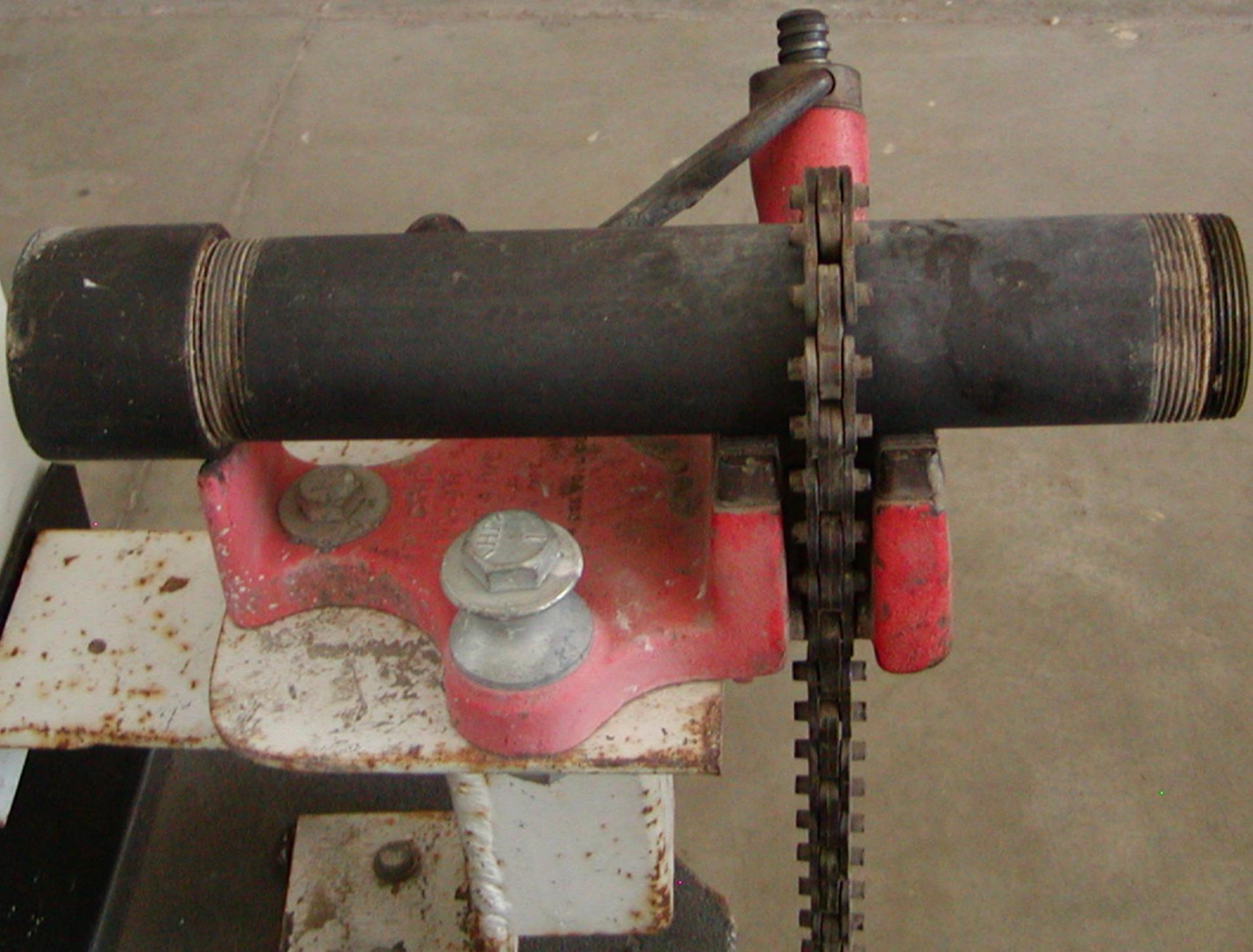




































# STATE OF NEBRASKA

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Dave Heineman  
Governor



STATE FIRE MARSHAL  
John Falgione  
Fire Marshal

## NOTICE OF PROBABLE VIOLATION

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 2, 2011

Larry Brittenham, PE  
Superior Utilities  
P. O. Box 160  
135 West 4<sup>th</sup> Street  
Superior, NE 68978

RE: Incident of July 19, 2011

The State Fire Marshal – Fuels Division, Pipeline Safety Division conducted an investigation into the events and actions regarding a July 19, 2011 incident that occurred near 320 2<sup>nd</sup> Street Superior, NE. It has been determined that the actions taken by Superior Utility employees, as well as a lack of documentation regarding the training and procedures for said actions, are violations of the requirements listed in Title 155 Nebraska Administrative Code Chapter, which by reference also adopts the Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 192.

The information below provides a summary of the information ascertained during the investigation and the specific violations that were discovered. The summary information is provided below. Following that are the specific CFR code sections for the violations, listed in blue.

**Superior Utility employees (Superior) were in the process of cutting off a 6" diameter pipeline main, in preparation for abandonment of a section of this main when the incident occurred. The workers began a process that was designed to stop the flow of gas in the main line. A part of this process required the use of specialized equipment. This was the first time this type of line stopping equipment had been utilized and the workers had received no training on its usage. Although the task is listed within the City of Superior Operators Qualification Program there was no current procedure available to direct personnel in the performance of the task.**

**To be in compliance with an accepted Operators Qualification Program personnel performing line stopping must be:**

- (a) Familiar with the pressure limitations of the equipment to be used; and**
- (b) Thoroughly trained in the mechanical procedures and safety precautions associated with the use of such equipment.**

**In this incident Superior failed to meet either of those requirements. The personnel were not familiar with the equipment utilized nor were they trained in the mechanical procedures and safety requirements of the equipment.**

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

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

*Affective part of Subpart M = abandonment.*

**No written procedures for installation and use of this type of stopping equipment were found in the City of Superior Operation and Maintenance Manual**

**192.805 Qualification Program**

Each operator shall have and follow a written qualification program. The program shall include provisions to: (b) Ensure through evaluation that individuals performing covered tasks are qualified;

**Superior did not implement the requirements of the written operator qualification program.**

The City of Superior may respond within 30 days of receipt of this letter. The response may accept the determinations made by the investigation and provide a plan of action to correct future violations that would occur based on the information. Alternatively, the response may disagree with the findings; if this is the case please provide details to support that position in the response. In the response please include the reference #20110802-N, which is the incident number which has been assigned to this case.

Whenever the State Fire Marshal has reason to believe any person is violating any provision of Neb. Rev. Stat. §81-545 subsection (1) or any regulation under the Nebraska Natural Gas Pipeline Safety Act of 1969, the State Fire Marshal shall give notice to such person and permit such person reasonable opportunity to achieve compliance. If compliance has not been achieved in a reasonable time, the State Fire Marshal may request the Attorney General to bring an action under Neb. Rev. Stat. §81-547 in the district court for the county in which the defendant's principle place of business is located, and 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.

If you have any questions regarding the substance or propriety of this notice, please contact our office at, Nebraska State Fire Marshal, Pipeline Safety Section, 246 South 14<sup>th</sup> Street, Lincoln, NE, 68508-1840 telephone 402-471-9664.



Clark Conklin  
Chief Deputy Fire Marshal  
Fuels Division



John E. Falgione  
State Fire Marshal  
State of Nebraska

cc: Larry Sibert, Gas Superintendent, City of Superior

# SUPERIOR UTILITIES

Our Name Says It All

ELECTRIC, WATER, WASTE WATER & GAS

*The Victorian Capital of Nebraska*



23 Aug 2011

Received on:

AUG 25 2011

NE State Fire Marshal

Nebraska State Fire Marshall  
Pipeline Safety Section  
146 S 14<sup>th</sup> St  
Lincoln NE 68508-1840  
RE: 20110802-N

Dear Sirs,

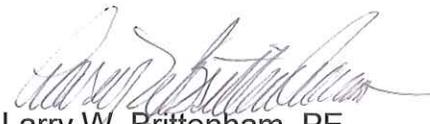
In regards to your letter August 2, 2011, one item requires clarification. The letter states, "first time this line stopping equipment had been utilized and the workers had received no training on its usage." While this was the first time in the field, our people had taken the equipment and tested it using the same size pipe in the shop, verifying the bag held pressure. Concerning operating procedures, they received verbal instructions only.

However, we accept the findings of "no written procedures for the installation and use" and "did not implement the requirements of the written operator qualification program" because no procedures were written prior to the use of the equipment.

Regardless of our acceptance or not, our plan of action is simple and renders any objections irrelevant. In the future, we will contract line stoppages of six inch or greater unless affordable equipment becomes available for us to train with and become qualified on. Until then, we will never again use this form of line stoppage. Both of the senior people in the department are very aware this incident could have very easily become much worse. In the future, written procedures will be reviewed and required training completed before integrating any new equipment or methods into operations.

If you have questions, please contact me at (402) 879-4711.

Sincerely



Larry W. Brittenham, PE  
Utility Manager

City of Superior

P.O. BOX 160, 135 W. 4th Street, Superior, Nebraska 68978 • 402-879-4711 • Fax 402-879-4907

# STATE OF NEBRASKA



## Letter of Approval

Dave Heineman  
Governor

STATE FIRE MARSHAL  
Jim Heine  
Acting Fire Marshal

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

February 4, 2013

Larry Brittenham, PE  
Superior Utilities  
P. O. Box 160  
135 West 4th  
Superior, NE 68978

RE: Incident of July 19, 2011 and Notice of Probable Violation 20110802-N

The State Fire Marshal – Pipeline Safety Division is closing action centered around an incident occurring near 320 2<sup>nd</sup> Street on July 19, 2011 and a resulting Notice of Probable Violation dated August 2, 2011. The specific violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 192 is as follows:

**No written procedures for installation and use of this type of stopping equipment were found in the City of Superior Operation and Maintenance Manual.**

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

(b) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and Subpart M of this part.

*Affective part of Subpart M = abandonment.*

**Superior did not implement the requirements of the written operator qualification program.**

### **192.805 Qualification Program**

Each operator shall have and follow a written qualification program. The program shall include provisions to: (b) Ensure through evaluation that individuals performing covered tasks are qualified;

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

DISTRICT C

200 South Silber  
North Platte, NE 69101-4219  
(308) 535-8181

FUELS DIVISION

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

TRAINING DIVISION

2410 North Wheeler Avenue  
Suite 112  
Grand Island, NE 68801-2376  
(308) 385-6892

In closing action upon the violation(s) consideration has been given to the fact that Superior Utilities has made effort to strengthen procedures within the Operation and Maintenance manual. Superior Utilities has made revisions to Operator Qualification Program to better ensure training and qualification of personnel performing critical tasks upon the pipeline.

Consideration has also been given to the fact that Superior Utilities continues to install new mains and services so that most all of the gas system will have been replaced in near future. We believe that actions of Superior Utilities personnel have demonstrated an effort of compliance with regulation and a continued believe in the importance of safety for the general public.

If you have any questions regarding the substance or propriety of this notice, please contact our office at, Nebraska State Fire Marshal, Pipeline Safety, 246 South 14<sup>th</sup> Street, Lincoln, NE, 68508-1840, telephone 402-471-9664.



Arnie Bates  
Deputy State Fire Marshal  
Pipeline Safety Section  
308-390-0460



Clark Conklin  
Chief Deputy Fire Marshal  
Fuels Division  
402-471-9664

cc: Larry Sibert, Gas Superintendent, City of Superior