



Nebraska State Fire Marshal Pipeline Safety Section Inspection Report

SFM Deputy Conducting Inspection:

Arnie Bates

Call#:

8738

Report Date:

8/22/2011

Inspection Type:

STANDARD COMPLIANCE

Inspection Date(s):

08/17/11

Operator Name:

Black Hills Energy

Unit:

Omaha-Metro

Town/Site:

Louisville

Facility ID:

02-07-101

Facility ID 02-07-101

SFM Inspection Date(s) August 17, 2011

NEBRASKA STATE FIRE MARSHAL – PIPELINE SAFETY DIVISION

TOWN Louisville

UNIT Omaha-Metro

COMPANY Black Hills Energy

NG LPG

PRIVATE MM MUNICIPAL

MANAGER Tim Proksel

TELEPHONE#: (402) 935-4870

COUNTY Cass

PIPING MATERIAL / MAINS:

Bare Steel Coated Steel Cast Iron Plastic Copper

PIPING MATERIAL / SERVICES:

Bare Steel Coated Steel Cast Iron Plastic Copper

ODORANT:

Odorized by: Pulse Bypass

Field Check: No

Odorant Intensity Level: _____

Odorant Perception Test Monthly

Odorant level check Weekly

TOWN BORDER STATION (Designation & Location) East side of town 709 2nd Street

Company Owner: Northern Natural Gas

Operator Inspection Date: _____

Size/Make/Model of Distribution Regulator: _____

Size/Make/Model of OPP Device: _____

Relief Stack Size: _____

Approx. Length of Stack: _____

MAOP for Inlet Pressure: _____

MAOP for Outlet Pressure 40

OPP Set Point _____

Inlet Pressure / Field: _____

Outlet Pressure / Field: _____

Pressure Recording Device: _____

YES / NO

YES / NO

Cathodic Protection as Required _____

Required Valves Locked.....

Fire Hazard _____

Station Guard.....

Atmospheric Corrosion Control Good Condition

REGULATOR STATION # & Location: DRS# 2 East of Main on 2nd by stream crossing

TYPE: Monitoring

Relief

Operator Inspection Date: 08/15/11

Size/Make/Model of Distribution Regulator: 2" Fisher 99 49.5 mcfh

Size/Make/Model of OPP Device: 2" Fisher 1808 53.4 mcfh

Relief Stack Size: 2"

Approx. Length of Stack: 24"

MAOP for Inlet Pressure: 40psig

MAOP for Outlet Pressure 9psig

OPP Set Point 11.5psig

Inlet Pressure / Field: _____

Outlet Pressure / Field: _____

Pressure Recording Device: N/A

YES / NO

YES / NO

Cathodic Protection as Required -1.083 in.

Required Valves Locked.....

Fire Hazard _____

Station Guard.....

Atmospheric Corrosion Control Good Condition

Signage.....

DISTRIBUTION KEY VALVE # / Location: DRS #2

Operator Inspection Date: Jan 09

Locked: Yes

Below Grade:

Above Ground:

CATHODIC PROTECTION

Rectifier Brand NA

Output Volts: NA

Output Amps: NA

Anodes Yes

Maps Marked Yes Areas 30

Date of Reading 4/15/11

CHECK POINT

Address

Reading (by 1/2 cell)

- 1. 82 North Walnut
- 2. 203 EWast 2nd / 205 East 2nd
- 3. West 3rd Copple Chevrolet
- 4. 149 Depot St
- 5. 718 Cherry
- 6. DRS #1 outlet (rebuilt)
- 7. 718 Sandhill Road
- 8. DRS #2 outlet

- 1.122
- 0.914 / 1.295
- 1.042
- 1.214
- 1.060
- 0.635
- 0.965
- 1.212

10% Isolated Short Section : YES Date: _____

Atmospheric corrosion Survey: 4/9/09

Electrical survey upon bare pipeline: 4/15/11

LEAK SURVEY DATA

TYPE <u>FI</u>	Business <u>05/01/11</u>	#Leaks <u>0</u>	#Leaks Repaired <u>0</u>
TYPE <u>FI</u>	Residential <u>5/5/08</u>	#Leaks <u>2</u>	#Leaks Repaired <u>2</u>
TYPE <u>FI</u>	Bare Pipe HS <u>5/5/08</u>	#Leaks <u>0</u>	#Leaks Repaired <u>0</u>

LEAK CAUSES:

Corrosion:2 3rd Party:0 Outside Force:0 Const. Defect:0 Material Defect:0 Other:0

LEAK LOCATION(S):

Mains:2 Service Line:0 Beyond Meter:0

192.353, 192.355, 192.357, & 192.365 METER SETS

Inaccessible: 0 Unpainted:0 Outside stress:0 No Service Valve Upstream: 0

Not protected from damage: 0 Plugged or unscreened Regulator Vent: 0

Failed Cathodic Reading: 1

Total Meters 493 Approximate Number of Meters Checked 100

Remarks:

DRS #1 rebuilt in 4/2010 new piping installed however does not meet cathodic protection criterion.

bridge crossing ? Line markers at water crossing DRS#1 line markers

Need update on 2011 leakage survey(s)

Deputy Signature: Arnie Bates

Arnie Bates

Louisville inspection

REGULATOR STATION # & Location: DRS# 1 2nd & Oak

TYPE: Monitoring Relief Operator Inspection Date: 07/08/11

Size/Make/Model of Distribution Regulator: (2) 2" Mooney / FlowGrid 3L

Size/Make/Model of OPP Device: _

Relief Stack Size: 0" Approx. Length of Stack: 0

MAOP for Inlet Pressure: 40psig MAOP for Outlet Pressure 9psig OPP Set Point 0

Inlet Pressure / Field: 38 Outlet Pressure / Field: 9 Pressure Recording Device: N/A

	YES / NO		YES / NO	
Cathodic Protection as Required <u>-0.471in.</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Required Valves Locked.....	<input checked="" type="checkbox"/> <input type="checkbox"/>
Fire Hazard	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Station Guard.....	<input checked="" type="checkbox"/> <input type="checkbox"/>
Atmospheric Corrosion Control <u>Good Condition</u>			Signage.....Needs Attention	

STATE OF NEBRASKA



Notice of Probable Violation

Dave Heineman
Governor

STATE FIRE MARSHAL
John Falgione
Fire Marshal

Mr. Kevin Jarosz
Black Hills Energy
501 West 6th Street
Papillion, NE 68046

August 23, 2011

RE: 2011 Facilities inspections

The State Fire Marshal Office, Fuels Division, Pipeline Safety Section has begun an inspection of field facilities and operational records for distribution pipelines within the Omaha-Metro Unit. As a result of this inspection there is concern that present practices have led to a violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 191, 192, 199, & 40.

The purpose of this letter is to request a response from Black Hills Energy within 30 days of receipt of this letter, **please reference #20110823-N in your correspondence**. The response may accept the findings and state a plan of action to address the probable violation or, the response may disagree with the findings. If Black Hills Energy chooses to disagree with the findings, please justify your position in the response.

Of concern is the cathodic protection for new steel piping added to the District Regulating Station #1 located at Oak Street and 2nd Street in Louisville, NE. This segment of the distribution system was relocated and rebuilt in April of 2010 by installing control valves and extending existing mains to new location. However, at time of inspection in 2011 the cathodic criterion had not been met. Upon further review of construction documentation it became apparent that there are cathodic shorts preventing the new steel piping from meeting the -0.850 mV criterion. During the inspection it was indicated that the corrosion department was not aware that the DRS facility had been relocated. Visual inspection of the design elements indicated that the corrosion department was to "determine insulating requirements" prior to construction.

The following details the specific findings of the inspection. Listed in blue are Part 192 reference and Black Hills Energy Operation and maintenance manual sections.

§192.455 External corrosion control: Buried or submerged pipelines installed after July 31, 1971.

- (a) Except as provided in paragraphs (b), (c), and (f) of this section, each buried or submerged pipeline installed after July 31, 1971, must be protected against external corrosion, including the following:
- (2) It must have a cathodic protection system designed to protect the pipeline in accordance with this subpart, installed and placed in operation within 1 year after completion of construction.

□ MAIN OFFICE
□ DISTRICT A
246 South 14th 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 14th Street
Lincoln, NE 68508-1804
(402) 471-9465

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

§192.463 External corrosion control: Cathodic protection.

(a) Each cathodic protection system required by this subpart must provide a level of cathodic protection that complies with one or more of the applicable criteria contained in Appendix D of this part. If none of these criteria is applicable, the cathodic protection system must provide a level of cathodic protection at least equal to that provided by compliance with one or more of these criteria.

§192.467 External corrosion control: Electrical isolation.

(b) One or more insulating devices must be installed where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.

Section 41 of the Black Hills Energy Operation and Maintenance Manual; provides guidance on corrosion control and compliance with Part 192.

Black Hills Energy failed to monitor pipe to soil potentials for this segment of pipeline facilities for more than one year after installation.

§192.465 External corrosion control: Monitoring.

(a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463.

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

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 14th Street, Lincoln, NE 68508-1804 or telephone 402-471-9664.



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



Clark Conklin,
Chief Deputy Fire Marshal
Fuels Safety Division
402-471-9467

cc: Nathan Stewart, 1600 Windhoek Drive, P. O. Box 83008 Lincoln, NE 68501-3008
Tim Proksel, 501 West 6th Street, Papillion, NE 68046



Received on:

SEP 27 2011

NE State Fire Marshal

Arnie Bates
Deputy Fire Marshal
Nebraska State Fire Marshal
Pipeline Safety Division
246 South 14th Street
Lincoln, NE 68508-1804

September 23, 2011

RE: 20110823--N

Dear Mr. Lucas,

Enclosed you will find a response to a letter sent to our office on August 23, 2011 in regard to cathodic protection issues in Louisville

If you have questions regarding this response, please contact me at (402) 437-1734 or email at nathan.stewart@blackhillscorp.com.

Sincerely,

Nathan Stewart
State Compliance Specialist

Concern:

Cathodic protection for new steel piping added to DRS #1 located at 2nd and Oak streets in Louisville, Ne. This segment of the distribution system was relocated and rebuilt in April 2010 by installing control valves and extending the main mains to a new location. However, at the time of inspection in 2011 the cathodic protection criterion had not been met. Upon further review of construction documentation it became apparent that there are cathodic shorts preventing the new steel piping from meeting the -.0850mv criterion. During the inspection it was indicated that the corrosion department was not aware that the DRS facility had been relocated. Visual inspection of the design elements indicated that the corrosion department was to “determine insulating requirements” prior to construction.

It was also noted that this section of pipe was not monitored for more than one year after it was installed.

References cited for this concern:

192.455 External corrosion control: Buried or submerged lines

192.463 External corrosion control: Cathodic protection

192.467 External Corrosion control: Electrical isolation

192.465 External corrosion control: Monitoring

Black Hills O&M section 41

Response:

A repair order has been created to install an insulator and isolate the new section of pipe from the bare steel system it is currently tied to. An anode will also be installed on the new section of pipe to bring it into appropriate cathodic protection levels. After the anode is installed it will be monitored going forward on an annual basis to ensure it remains above the 0.850mv threshold. It is anticipated that this work will be performed in the spring of 2012.



Nebraska State Fire Marshal Pipeline Safety Section Inspection Report

SFM Deputy Conducting Inspection:

Arnie Bates

Call#:

8738

Report Date:

8/16/2012

Inspection Type:

COMPLIANCE FOLLOW-UP

Inspection Date(s):

08/16/2012

Operator Name:

Black Hills Energy

Unit:

Papillion

Town/Site:

Louisville

Facility ID:

02-07-101

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION
FOLLOW-UP INSPECTION:**

Name of Operator:	Black Hills Energy	Unit # Papillion	Town ID 02-07-101
Operator Address: Black Hills Energy 501 West 6th Street PAPILLION NE 68046		Phone Number: 402 935 4871 Fax Number: 402 223 3397 Emergency: 1-800-694-8989 Federal ID: 15359	
Persons Interviewed	Title	Phone No.	
Tim Proksel	Operations Field Supervisor	402 935 4870	
Nathan Stewart	Nebraska State Compliance, Lincoln	402 437 1734	
Person conducting Inspection Arnie Bates DSFM 8738			Date: August 16, 2012
Description: Issue: Ext Corrosion Code 192.463 Date of Letter: 20110823 Type: NOPV			
Portion of Unit Inspected: Correction of issue discovered during field inspection, no CP on new piping.			

Louisville:

Concern:

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It was also noted that this section of pipe was not monitored for more than one year after it was installed.

References cited for this concern:

- 192.455 External corrosion control: Buried or submerged lines, corrected
- 192.463 External corrosion control: Cathodic protection, corrected.
- 192.467 External Corrosion control: Electrical isolation, corrected.
- 192.465 External corrosion control: Monitoring, corrected.

Response: 09/23/11 from Nathan Stewart

**NEBRASKA STATE FIRE MARSHAL - PIPELINE SAFETY SECTION
FOLLOW-UP INSPECTION:**

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Work plan accepted: 10/31/11

08/16/2012 Met with Tim Proksel discussion of repairs to DRS #1 located at 2nd St and Oak streets in Louisville, Ne. Indications are that insulating devices had been installed to isolate DRS from bare mains in the area.

Traveled to Louisville to visually inspect and confirm repairs have been made. Visually work had recently happen in this area. Fire Valves located approximately 40' due west of DRS.

Cathodic protection level P/S indicated -1.185 for DRS.

Will consider this matter addressed.

STATE OF NEBRASKA



Letter of Approval

Dave Heineman
Governor

STATE FIRE MARSHAL
John Falgione
Fire Marshal

Kevin Jarosz
Black Hills Energy
501 West 6th Street
Papillion, NE 68046

August 17, 2012

RE: 2011 Facilities inspections

The State Fire Marshal Office, Fuels Division, Pipeline Safety Section has completed follow-up inspections with regard to Notice of Probable Violation, 20110823-N. As a result of this inspection, correction has been made and closes action on referenced violation of Title 155 Nebraska Administrative Code Chapter 1.001 adopting by reference Pipeline Safety Regulations Title 49, Code of Federal Regulations, Part 191, 192, 199, & 40.

Of concern was the cathodic protection for new steel piping added to the District Regulating Station #1 located at Oak Street and 2nd Street, Louisville NE. The following details the specific findings of the inspection

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§192.465 External corrosion control: Monitoring.

(a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463.

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 14th Street, Lincoln, NE 68508-1804 or telephone 402-471-9644.



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



Clark Conklin,
Chief Deputy Fire Marshal
Fuels Safety Division
402-471-9467

cc: Nathan Stewart, P. O. Box 83003, Lincoln, NE 68501-3008
Tim Proksel, 501 West 6th Street, Papillion, NE 68046