Crestwood

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October 27, 2014

Allan Beshore
Director, Central Region
Pipeline and Hazardous Materials Safety Administration
901 Locust Street, Suite 462
Kansas City, MO 64106-2641

Re: Proposed Compliance Order **CPF 3-2014-5007**

Dear Mr. Beshore:

Please accept the enclosed *Direct Current Voltage Gradient Survey (DCVG)* for Crestwood Midstream Partners LP in response to the Proposed Compliance Order.

The DCVG survey was completed July 21, 2014 for the entire length, approximately 21 miles of pipeline. The survey indicates the line segment not jeeped between station numbers 720+00 to 729+00 has coating in good condition. All locations identified, listed as "minor" will be monitored for adequate levels of cathodic protection in accordance with NACE RPO 169-2007.

Weather permitting; a single confirmatory dig will take place within ninety (90) days of our receipt of the Proposed Compliance Order to confirm the coating is in good condition.

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This remedial action ensures the compliance of Crestwood Dakota Pipelines LLC with the pipeline safety regulations.

Respectfully,

Crestwood Dakota Pipelines LLC

Alice Ratcliffe
Pipeline Compliance Manager

PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to Crestwood Dakota Pipelines LP a Compliance Order incorporating the following remedial requirements to ensure the compliance of Crestwood Dakota Pipelines LP with the pipeline safety regulations:

1. Pertaining to the line segment between station numbers 720+00 to 729+00 that was not jeeped, provide a plan to ensure that the coating is in good condition. The plan should include a DCVG survey and provisions for possible excavations and remedial actions.

2. Provide the plan and action schedule within 60 days from the date of receipt of the Final Order.

3. Implement the plan and schedule required by items 1, above, within 90 days from the date of receipt of the Final Order.

4. Crestwood shall maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Linda Daugherty, Director, Central Region, Pipeline and Hazardous Materials Safety Administration, 901 Locust Street, Room 462, Kansas City, MO 64106. Costs shall be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total costs associated with replacements, additions and other changes to pipeline infrastructure.

Pipeline Owner:

Crestwood SM
MIDSTREAM PARTNERS LP

Report

Direct Current Voltage Gradient Survey (DCVG)

21 Miles of 10"ø Pipe – Epping, ND

October 6, 2014

Shailesh Javia
Sr. Corrosion Engineer
NACE CP Technologist #46806

Glenn W. Shreffler
Executive VP of Engineering
NACE CP Specialist # 5160

MATCOR, Inc.
101 Liberty Lane
Chalfont PA 18914

matcor

Experts in Corrosion Prevention

A	Oct-6-2014	MATCOR
Rev	**Date**	**Prepared by**

Table of Contents

1. Introduction

MATCOR® was requested on behalf of Crestwood Midstream Partners LP to conduct a Direct Current Voltage Gradient Survey (DCVG) for approximately 21 miles of 10" ø coated pipe.

The DCVG survey was carried out on each pipeline as follows:

Crestwood 10"ø Pipeline – Epping ND			
Station ID		Pipeline Length (ft) Of DCVG Carried out	MATCOR DCVG File Name
Start	End		
0	26915	26915	INERGY ND DCVG 7-21-2014
26915	44060	17145	INERGY ND DCVG 7-23-2014
44060	77190	33130	INERGY ND DCVG 7-25-2014
77190	108180	30990	INERGY ND DCVG 7-26-2014

The following report gives details of the DCVG Survey.

2. Direct Current Voltage Gradient Survey (DCVG)

A Direct Current Voltage Gradient Survey (DCVG) is the application of a pulsed DC current either from the interruption of the cathodic protection rectifiers or the application of pulsed DC current from a temporary source. Voltage gradients are measured along the pipeline.

A direct current voltage gradient is generated by direct current flowing through the soil to a defect in the coating from a source of direct current power such as a rectifier or temporary power source. The magnitude of the voltage gradient is determined by Ohms Law (E=IR), where E is the voltage gradient, I is the current flow through the soil between the measuring electrodes and R is the resistance of the soil circuit between the measuring electrodes.

Generally the larger the voltage gradient the larger the coating defect, but soil resistivity and current attenuation must be considered in the interpretation of the magnitude of the voltage gradient. DCVG surveys do not indicate the level of cathodic protection on a pipeline system.

Traditionally DCVG surveys have been undertaken with an instrument that amplifies the DC voltage between two half cells in contact with the ground and displays the voltage gradient as a millivolt value on an analog meter. Most analog DCVG survey instruments do not store the voltage gradients measured or the location of the voltage gradients indicating defects in the pipeline coating. The defects are marked with stakes or flags and a table produced of the location and size of the defect as shown in Figure 1.

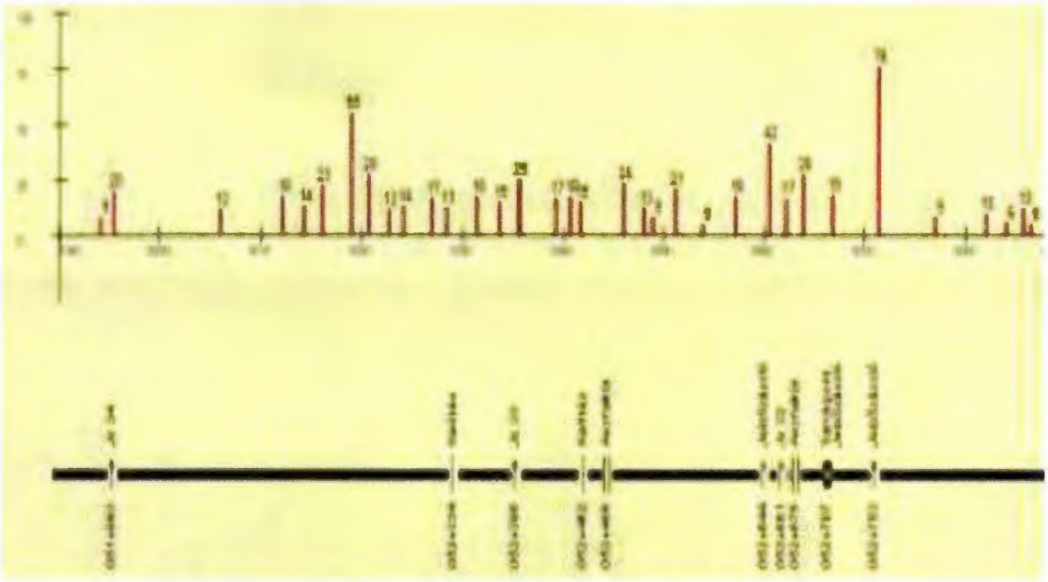


Figure 1

Modern DCVG survey equipment (see Figure 2 for example) is equipped with data logging facility as well as a GPS engine to store coordinates. By storing the voltage gradient values and stamping them with the latitude and longitude, chaining each voltage gradient is unnecessary and any spreadsheet software can produce accurate graphs of the data.

Figure 2 – McMiller Gx Data Logger

2.1 Polarity Considerations

By noting the polarities of the maximum soil-to-soil potential difference recorded with rectifier-current ON and rectifier-current OFF at a defect site, we can determine the corrosion condition of the defect with the CP system current following (ON state) and without the CP system's impressed current flowing (OFF state).

A positive value for delta V, given the polarities of the data-probes and their positioning relative to the pipe, indicates that net current is flowing to the pipe, which is cathodic condition. Whereas, negative value for delta V, indicates that net current is flowing away the pipe, which is an anodic condition. See Figure 3 for sample DCVG survey report.

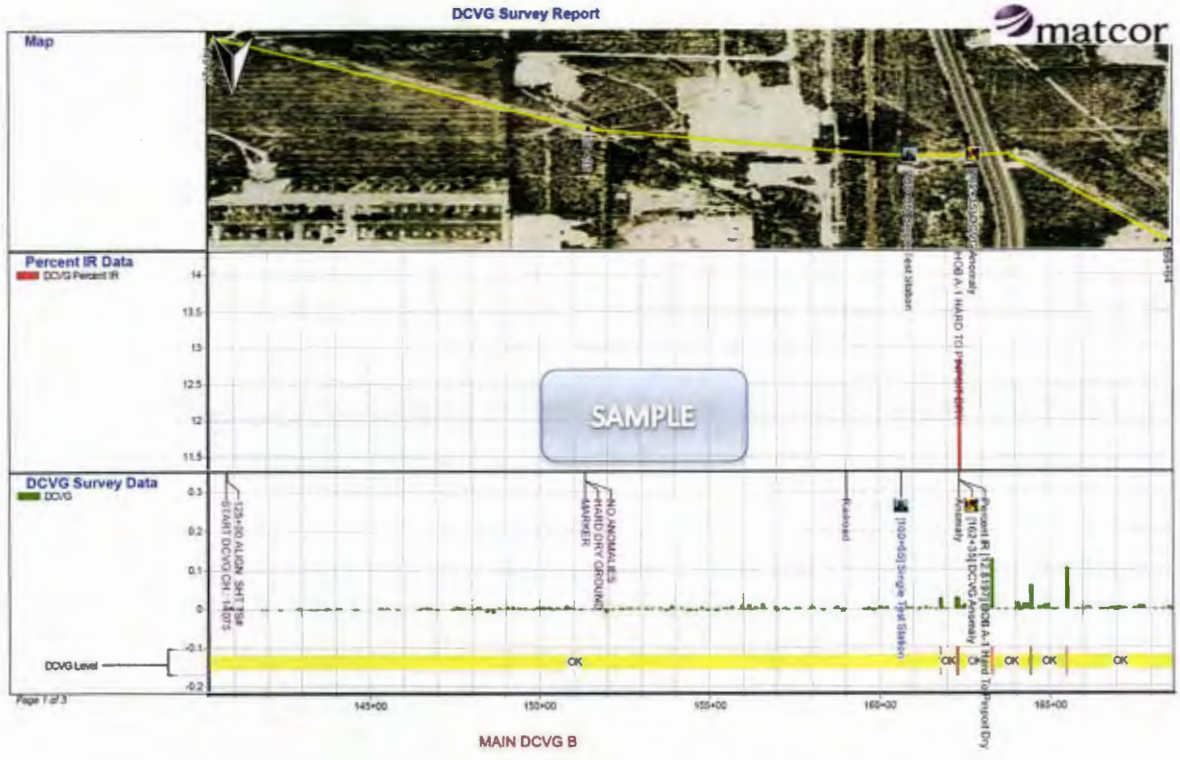


Figure 3: Typical Direct Current Voltage Gradient Survey

3. Objective of DCVG's Survey

The objective of conducting a DCVG survey is to determine any locations of coating related anomalies.

4. Equipment Used

The McMiller Gx Data-Logger (see Figure 4) was used to complete the DCVG Survey.

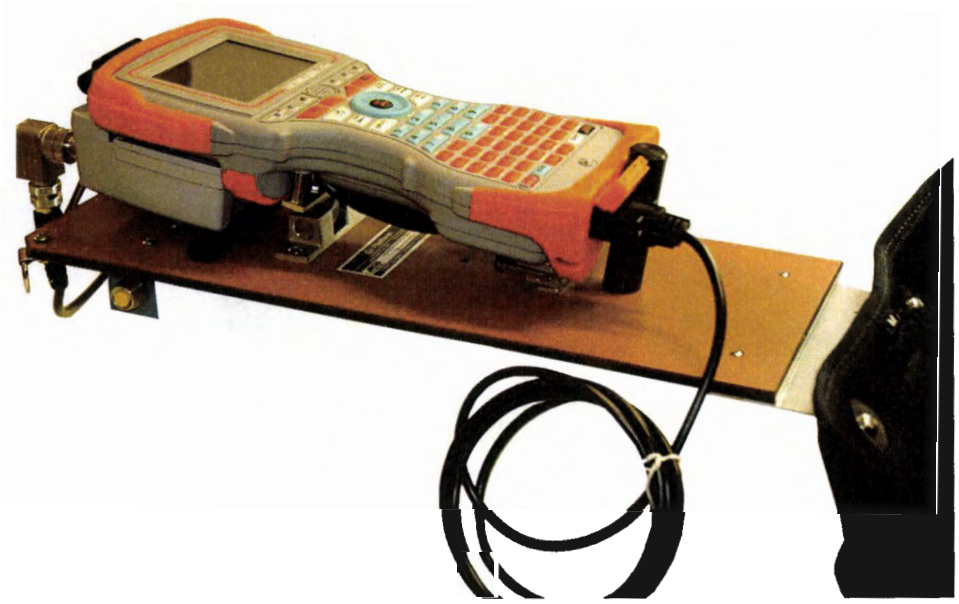


Figure 4 – McMiller Gx Datalogger with survey pack

4.1 GX Data Logger Setup for DCVGs Survey

Data Version	11
Survey Type	DCVG
Rectifier Mode	Cycle ON/OFF
Cane Button Allowed To -- DCP	Accept -> Save
Cane Button Allowed To - Survey	Read Read
Survey Walking Direction	Increasing
Use Ohm*cm	Y
Max. acceptable Far and Near Ground Reading Difference %	5
AC System	60 Hz
Maximum Acceptable Low Voltage	9999
Auto Log GPS at Flags	Y
DCVG Defect Max mV = 1st read of Tot mV	Y
Auto Log GPS Interval	Every Reading
Max PDOP	3
Submeter GPS Installed	Y
Use Submeter GPS	Y
CIS Flag Read Count %	20
Distance per reading (ft.)	5
Distance between Flags (ft.)	100
Name of P/L	Inergy
Current Station	269+15.0000
Time To Walk Between Flags In Secs.	45
Enable Auto Learn	Y
Auto Pace	Y
Number of Data Probes	Two
Location Style	Station Number
Technician Name	-
Date / time	7/21/2014 8:06
Read Mode	On/Off Pairs (DSP mode)
Range	5.7 V DC - 400 MΩ
Moving Average Samples	4
Rectifier Cycle On Time	700
Rectifier Cycle Off Time	300
GPS Sync On Read Delay	150
GPS Sync Off Read Delay	150
GPS Sync Downbeat	Each Minute
GPS Sync Cycle Start = On->Off	Y

5. Survey Procedure

1. Set up the DCVG signal with amplitude at approx 250 mV.
2. The rapid decay of the signal should be measured at two locations.
3. The amplitude is the difference between the ON and OFF potential measured on the pipe while the interrupter is operating.
4. To get the DCVG signal at the full strength the ideal source is the CP system itself.
5. Increase the signal by increasing the current from the T/R unit.
6. The Reference Cells are connected.
7. Adjust the voltage range of the meter.
8. Make one of the probes on and set the bias so that the deflection doesn't go out of the meter range.
9. Measure the signal level at the test post by putting one probe on ground and connecting the one with the TLP cable.
10. The signal strength is to be recorded for the reference at the test-post.
11. For starting the survey adjust the meter in approx 100mV range so that a small defect can be identified.
12. Walk along the pipeline route placing and spacing the probes at approx 5 to 7 feet on the soil.
13. At an anomaly, note the highest mV drop between two half cell sticks to pinpoint the exact location

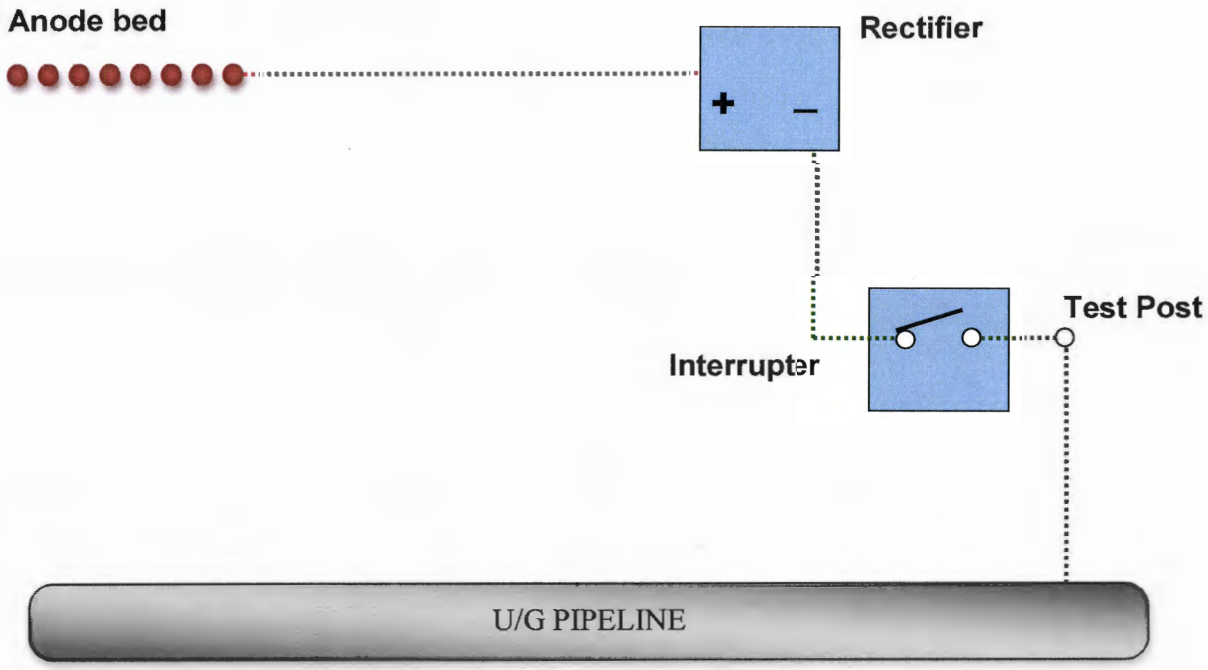


Figure 5: Coated pipeline under survey with anode bed and rectifier

6. Categorization

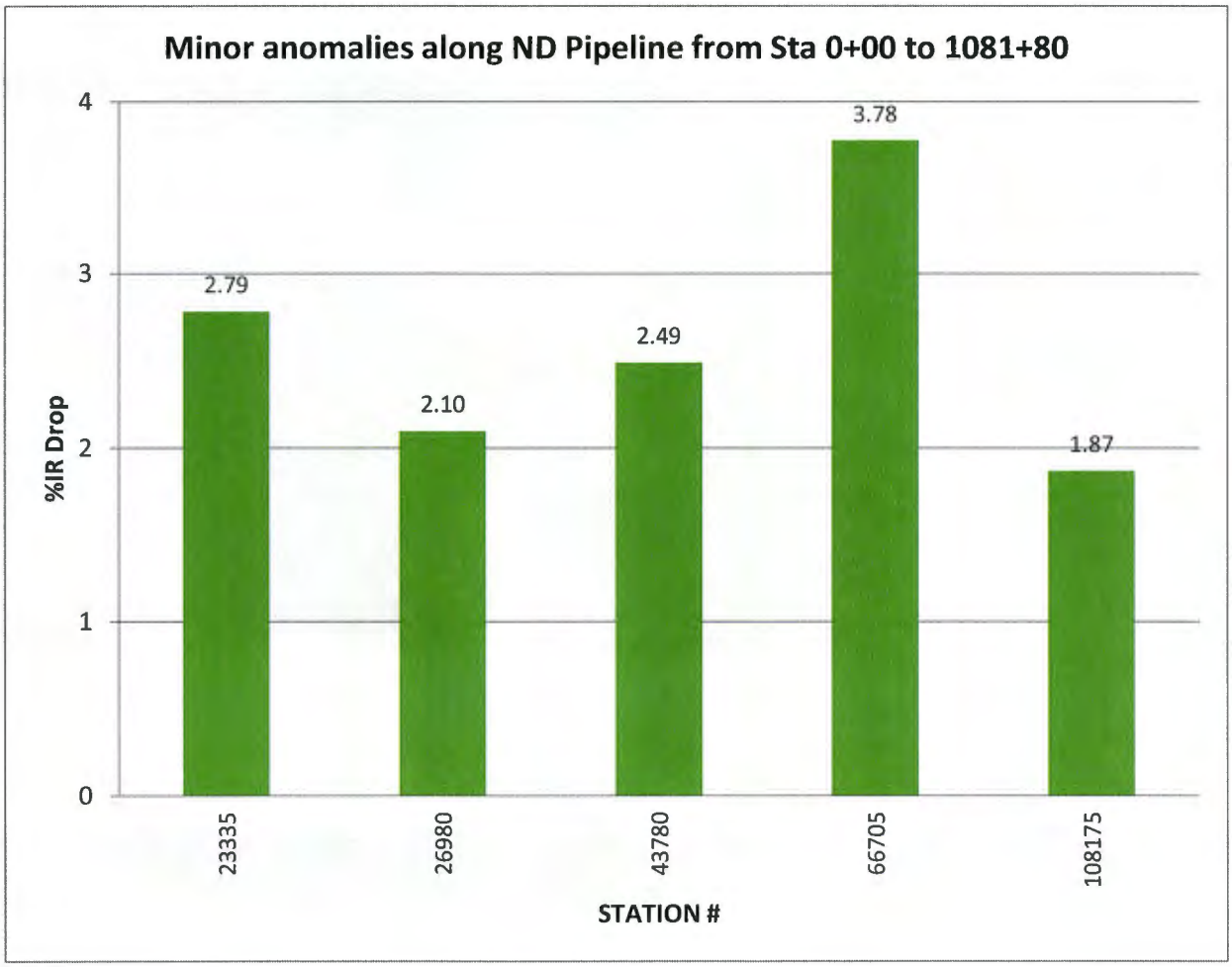
Survey indications were classified using the most conservative criterion as shown below:

Tool/Environment	Minor 0-20	Moderate 21-40	Severe Above 41
Direct current voltage gradient survey, similar conditions	Low IR drop; cathodic conditions at indication when CP is on and off	Medium IR drop and/or neutral conditions at indication when CP is off	High IR drop and/or anodic conditions when CP is on or off

7. Observations

Upon analysis of DCVG Survey, %IR drop coating anomalies are summarized as follows:

Station No	%IR Drop	Comments
23335	2.787526	DCVG 1
26980	2.102132	DCVG 2
43780	2.49314	DCVG 3
66705	3.779999	DCVG 4
108175	1.874985	DCVG 5



Color Chart for Digs	
Color	**Criteria for Digs**
Severe	Immediate
Moderate	Scheduled
Minor	Monitored
Good	N/A

8. Recommendations

1. All locations listed as "severe" should be excavated and direct examination should be performed in accordance with NACE SPO 502-2010.

2. All locations listed as "moderate" should be scheduled for direct examination in accordance with NACE SPO 502-2010.

3. All locations listed as "minor" should be monitored for adequate levels of cathodic protection in accordance with NACE RPO 169-2007. If cathodic protection levels cannot be maintained, direct examination should be performed in one location per pipeline segment as a verfication dig.

4. One location per pipeline segment should be scheduled for direct examination validation dig to confirm validity of survey.