NOTICE OF AMENDMENT

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 29, 2018

Mr. David Sauer
Sr. Vice President & COO
Dakota Gasification Company
1717 East Interstate Avenue
Bismarck ND 58503-0564

CPF 3-2018-5003M

Dear Mr. Sauer:

On January 30–February 3, 2017, February 6-10, 2017, February 13-17, 2017, March 27-31, 2017 and May 8-12, 2017, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected Dakota Gasification Company's (DGC) carbon dioxide pipeline procedures for operations, maintenance, public awareness, operator qualification, integrity management, corrosion and control room near Beulah, North Dakota.

On the basis of the inspection, PHMSA has identified apparent inadequacies found within Dakota Gasification Company's plans or procedures, as described below:

1. §195.402 Procedural manual for operations, maintenance, and emergencies.
(a) *General.* Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline system commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

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

(1) . . . .

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

DGC's procedural manual failed to include procedures for operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of subpart F and subpart H of Part 195. 49 CFR §195.575(e) requires that "[i]f a pipeline is in close proximity to electrical transmission tower footings, ground cables, or counterpoise, or in other areas where it is reasonable to foresee fault currents or an unusual risk of lightning, you must protect the pipeline against damage from fault currents or lightning and take protective measures at insulating devices." DGC did not have a procedure to address the mitigation of fault currents. DGC must add such a procedure to its corrosion control procedures.

2. §195.402(a) & (c) See above

DGC's procedural manual failed to include procedures for operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of subpart F and subpart H of Part 195. 49 CFR §195.577(a) requires operators to have a program to identify, test for, and minimize the detrimental effects of such currents for pipelines exposed to stray currents. 49 CFR §195.577(b) requires operators to "design and install each impressed current or galvanic anode system to minimize any adverse effects on existing adjacent metallic structures." DGC's procedure '74-004 Cathodic Protection Surveys' is missing procedures for identification and mitigation of interference currents. DGC must amend its procedures to address this deficiency.

3. **§195.402(a) & (c)** See above

DGC's procedural manual failed to include procedures for operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of subpart F and subpart H of Part 195. 49 CFR §195.573(a)(2) requires operators to "[i]dentify not more than 2 years after cathodic protection is installed, the circumstances in which a close-interval survey or comparable technology is practicable and necessary to accomplish the objectives of paragraph 10.1.1.3 of NACE SP 0169 (incorporated by reference, see § 195.3)." DGC's procedures did not address the circumstances to determine when close interval surveys (CIS) is practicable and necessary. On August 23, 2017, DGC developed and sent to PHMSA decision criteria to determine when a CIS will be conducted. PHMSA found this procedure adequate. Therefore, no further amendment is required in this item.

4. **§195.440 Public awareness**

(a) . . . .

(d) The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:

(1) Use of a one-call notification system prior to excavation and other damage prevention activities;

(2) Possible hazards associated with unintended releases from a hazardous liquid or carbon dioxide pipeline facility;

(3) Physical indications that such a release may have occurred;

(4) Steps that should be taken for public safety in the event of a hazardous liquid or carbon dioxide pipeline release; and

(5) Procedures to report such an event.

(e) The program must include activities to advise affected municipalities, school districts, businesses, and residents of pipeline facility locations.

(f) The program and the media used must be as comprehensive as necessary to reach all areas in which the operator transports hazardous liquid or carbon dioxide.

Public Awareness Programs for Pipeline Operators, API RECOMMENDED PRACTICE 1162, FIRST EDITION, DECEMBER 2003

2.2 OVERVIEW FOR MEETING PUBLIC AWARENESS OBJECTIVES

In general, Public Awareness Programs should communicate relevant information to the following stakeholder audiences (as defined in Section 3):

3 Stakeholder Audiences

One of the initial tasks in developing a Public Awareness Program is to identify the audience(s) that should receive the program's messages. This section defines the intended audiences for the operator's Public Awareness Program and provides examples (not all inclusive) of each audience. Further explanation and examples are included in Appendix B. This information should help the operator clarify whom it is trying to reach with its program. The following audiences are considered stakeholders of the pipeline operator's Public Awareness Program. The four intended Stakeholder Audiences include:

- **Affected public**
- **Emergency officials**
- **Local public officials**
- **Excavators.**

The operator should consider tailoring its communication coverage area to its particular pipeline location and release consequences. The operator would be expected to consider areas of consequence as defined in federal regulations. Where specific circumstances suggest a wider coverage area for a certain pipeline location, the operator should expand its communication coverage area as appropriate. The Stakeholder Audience definitions listed in the table below are used in the remaining sections of this RP, as applicable.

DGC's public awareness plan did not include enough details to adequately define buffer zones for each audience along the pipeline. DGC must amend its PA plan to adequately define buffer zones. On January 5, 2018, DGC amended its PA plan with buffer zones in accordance with its 2017 air dispersion model. PHMSA reviewed this information and determined it satisfactory. No further amendments are required regarding this item.

5. §195.452 Pipeline integrity management in high consequence areas.
(a) . . . .
(b) *What program and practices must operators use to manage pipeline integrity?* Each operator of a pipeline covered by this section must:
(1) Develop a written integrity management program that addresses the risks on each segment of pipeline in the first column of the following table not later than the date in the second column:

Pipeline	**Date**
Category 1	**March 31, 2002.**
Category 2	**February 18, 2003.**
Category 3	**1 year after the date the pipeline begins operation.**

. . . .
(f) ***What are the elements of an integrity management program?*** **An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**
(1) . . . .
(4) Criteria for remedial actions to address integrity issues raised by the assessment methods and information analysis (see paragraph (h) of this section) . . .

DGC's integrity management program (IMP) did not describe the elements in enough detail to provide criteria for remedial action to address integrity issues raised by the assessment methods and information analysis. DGC's procedure 028 did not contain sufficient detail to address this code section. DGC must amend its procedure to include more details.

6. §195.452 Pipeline integrity management in high consequence areas.

(a) . . . .
(f) ***What are the elements of an integrity management program?*** **An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**
(1) . . . .
(7) Methods to measure the program's effectiveness (see paragraph (k) of this section) . . .
(k) ***What methods to measure program effectiveness must be used?*** **An operator's program must include methods to measure whether the program is effective in assessing and evaluating the integrity of each pipeline segment and in protecting the high consequence areas. See Appendix C of this part for guidance on methods that can be used to evaluate a program's effectiveness.**

DGC's IMP failed to include methods to measure the program's effectiveness. Specifically, DGC's IMP procedures, Section IX A, did not clearly define the use of performance metrics in evaluating program performance. Additionally, the procedures failed to consider bench-marking performance metrics using data from outside the company. Therefore, DCG's IMP procedures were inadequate to measure whether the program is effective in assessing and evaluating the integrity of each pipeline segment and in protecting the high consequence areas. DGC must amend its procedures to address these issues.

7. §195.452 Pipeline integrity management in high consequence areas.

(a) . . . .

(f) *What are the elements of an integrity management program?* An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:

(1) . . . .

(3) An analysis that integrates all available information about the integrity of the entire pipeline and the consequences of a failure (see paragraph (g) of this section) . . .

(g) *What is an information analysis?* In periodically evaluating the integrity of each pipeline segment (paragraph (j) of this section), an operator must analyze all available information about the integrity of the entire pipeline and the consequences of a failure. This information includes:

(1) Information critical to determining the potential for, and preventing, damage due to excavation, including current and planned damage prevention activities, and development or planned development along the pipeline segment;

(2) Data gathered through the integrity assessment required under this section;

(3) Data gathered in conjunction with other inspections, tests, surveillance and patrols required by this Part, including, corrosion control monitoring and cathodic protection surveys; and

(4) Information about how a failure would affect the high consequence area, such as location of the water intake.

(j)(2) *Evaluation.* An operator must conduct a periodic evaluation as frequently as needed to assure pipeline integrity. An operator must base the frequency of evaluation on risk factors specific to its pipeline, including the factors specified in paragraph (e) of this section. The evaluation must consider the results of the baseline and periodic integrity assessments, information analysis (paragraph (g) of this section), and decisions about remediation, and preventive and mitigative actions (paragraphs (h) and (i) of this section).

DGC's IMP failed to include a procedure to analyze all available information about the integrity of the entire pipeline and the consequences of a failure. Specifically, DGC did not have a procedure for assessing the risk factors of its aboveground facilities in HCAs, namely, the Tioga Pump Station and any other similar facilities. DGC must amend its procedures to address these issues.

8. §195.452 Pipeline integrity management in high consequence areas.
(a) . . . .
(f) ***What are the elements of an integrity management program?*** **An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:**
(1) A process for identifying which pipeline segments could affect a high consequence area . . .

DGC's procedures did not include a process for identifying which pipeline segments could affect a high consequence area. DGC must amend its IMP plan to define, justify and document unusually sensitive areas (USAs) and other types of HCAs.

9. §195.452 Pipeline integrity management in high consequence areas.
(a) . . . .
(f) What are the elements of an integrity management program? An integrity management program begins with the initial framework. An operator must continually change the program to reflect operating experience, conclusions drawn from results of the integrity assessments, and other maintenance and surveillance data, and evaluation of consequences of a failure on the high consequence area. An operator must include, at minimum, each of the following elements in its written integrity management program:

> **(1) A process for identifying which pipeline segments could affect a high consequence area . . .**

DGC's air dispersion modeling did not address overland downhill flow of heavy CO_2 vapors. Without this effect in the modeling it was not possible to determine if could affect HCAs were properly identified. On October 27, 2017, DGC amended its IMP plan with an air dispersion model that PHMSA determined to provide technical justification for the dispersion distances on all terrains. No further amendment is required in relation to this item.

Response to this Notice

This Notice is provided pursuant to 49 U.S.C. § 60108(a) and 49 C.F.R. § 190.206. Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

Following the receipt of this Notice, you have 30 days to submit written comments, revised procedures, or a request for a hearing under §190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue an Order Directing Amendment. If your plans or procedures are found inadequate as alleged in this Notice, you may be ordered to amend your plans or procedures to correct the inadequacies (49 C.F.R. § 190.206). If you are not contesting this Notice, we propose that you submit your amended procedures to my office within [number of days] days of receipt of this Notice. This period may be extended by written request for good cause. Once the inadequacies identified herein have been addressed in your amended procedures, this enforcement action will be closed.

It is requested (not mandated) that [Company name] maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to [Region Director's name], Director, [Region], Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2018-5003M** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Allan C. Beshore
Director, Central Region, OPS
Pipeline and Hazardous Materials Safety Administration

Enclosure: *Response Options for Pipeline Operators in Compliance Proceedings*