NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER

VIA ELECTRONIC MAIL TO: mark.hewett@nngco.com , royce.ramsay@nngco.com and Thomas.Correll@nngco.com

April 28, 2021

Mark Hewett
President and CEO
Northern Natural Gas Company
1111 S. 103rd Street
Omaha, NE 68124

CPF 3-2021-027-NOPV

Dear Mr. Hewett:

From February 10, 2020 through May 22, 2020 a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected your procedures, records and natural gas facilities in Omaha, Nebraska.

As a result of the inspection, it is alleged that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The items inspected and the probable violations are:

1. § 192.465 External corrosion control: Monitoring.
(a) . . . .
(b) Each cathodic protection rectifier or other impressed current power source must be inspected six times each calendar year, but with intervals not exceeding 2½ months, to insure that it is operating.

Northern Natural Gas Company (NNG) failed to insure that cathodic protection (CP) rectifiers were operating. PHMSA reviewed NNG's records for CP monitoring and found that four rectifiers at the Clifton storage field were out of service for multiple consecutive inspection intervals. The rectifiers were found to be generating zero amps of protective current and were therefore not operating. NNG's inspections recording the zero output condition are not insurance that the rectifiers are protecting the pipeline from corrosion. To insure that the rectifiers are operating, NNG must take action to repair or replace the rectifier before the next scheduled inspection after finding the rectifier out of service.

M600A-CLI:14.24	3 intervals in 2019
M600A-CLI:22.77	3 intervals in 2017
M600D-CLI:14.34	3 intervals in 2017
M600D-CLI:9.42	4 intervals from 2019 to 2020

2. § 192.481 Atmospheric corrosion control: Monitoring.
(a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipe is located:	Then the frequency of inspection is:
Onshore	**At least once every 3 calendar years, but with intervals not exceeding 39 months**
Offshore	**At least once each calendar year, but with intervals not exceeding 15 months**

NNG failed inspect pipe exposed to the atmosphere under the floors of its meter buildings during inspections for atmospheric corrosion. During the inspection, PHMSA requested records of atmospheric inspections pertaining to known locations with above ground pipe that is not readily accessible to visual observation, which had been identified by NNG at its facilities. To address the need for inspection at these locations, NNG provided records of an annual inspection task in addition to the 3-year inspection for atmospheric corrosion for 38 facilities in Kansas and Nebraska that had piping inaccessible to visual inspection. Although these inspections are more frequent than the 3-year requirement, they are inadequate because they do not provide for inspection of above ground pipe concealed in spaces under the floors of the meter buildings where pipe penetrates the floor and runs between the floor and the ground.

3. **§ 192.605 Procedural manual for operations, maintenance, and emergencies.**
(a) *General.* Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

NNG failed to follow its procedures for excavation. Specifically, NNG did not follow its operations and maintenance procedure section 080.111, "Excavation Observation and Protection" (Procedure), by failing to ensure that the mechanical excavation equipment did not come within 24 inches of the pipeline. Section 5.4.8 of the Procedure prohibits the motion of an excavator bucket within a 24-inch "exclusion zone" of a pipeline. During the inspection, PHMSA requested records of excavation damage. In response, NNG provided records of the following instances of excavation damage caused by its own contractors:

- On August 16, 2019, NNG's contractor damaged its M580B 24" Palmyra to Oakland pipeline when the excavator used excessive downward force, striking the pipeline with the backhoe bucket.
- On October 27, 2019, NNG's contractor damaged its pipeline at the Sunray, Texas compressor station when the excavator and NNG representative inspector agreed to use a jackhammer to remove concrete above a 20" pipe without confirming the pipe depth.

4. **§ 192.605 Procedural manual for operations, maintenance, and emergencies.**
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NNG failed to follow its procedure for leak detection surveys. During the inspection of records for line lowering, PHMSA found that NNG discovered and repaired a gas leak on its 2-inch Delphos branch line described as resulting from "passive corrosion" in 2016. On March 23, 2020, PHMSA requested documentation of the leak "root cause" analysis. NNG did not create a record of the incident or an event root cause analysis, as required by its procedure 080.407, "Gas Leak Detection Survey section 6.6" (Procedure). The Procedure requires NNG to grade a leak as either a Grade 1, 2 or 3 leak, and complete a

10.106a Event Investigation Report, and NNG failed to do so. Accordingly, NNG failed to follow its procedures in violation of the regulation.

5. **§ 192.605 Procedural manual for operations, maintenance, and emergencies.**
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NNG failed to follow its procedures for documenting the abandonment of its pipelines. PHMSA requested records of abandonment related to NNG's ongoing A line decommissioning project, but documentation was not found. In December 2019, NNG abandoned the M540A pipeline from Palmyra, NE to Oakland, IA, but did not document the abandonment on its "Record of In Place Facility Abandonment", as required by NNG procedure 080.408, "Abandonment of Facilities". NNG created a record of the abandonment after the inspection.

6. **§ 192.907 What must an operator do to implement this subpart?**
(a) *General.* No later than December 17, 2004, an operator of a covered pipeline segment must develop and follow a written integrity management program that contains all the elements described in § 192.911 and that addresses the risks on each covered transmission pipeline segment. The initial integrity management program must consist, at a minimum, of a framework that describes the process for implementing each program element, how relevant decisions will be made and by whom, a time line for completing the work to implement the program element, and how information gained from experience will be continuously incorporated into the program. The framework will evolve into a more detailed and comprehensive program. An operator must make continual improvements to the program.

NNG failed to follow its integrity management (IM) program. Specifically, NNG failed to ensure that is personnel were adequately trained to carry out its IM program. Section 192.915(b) requires that an IM program include "criteria for the qualification of any person who: (1) conducts an integrity assessment allowed under this subpart; or (2) who reviews and analyzes the results from an integrity assessment and evaluation; or (3) who makes decisions on actions to be taken based on these assessment."

NNG personnel conducting integrity assessment hydrotests lacked the qualifications required for conducting integrity assessments by pressure testing. Section 5.8.1.2 of NNG procedure 140.415, "Integrity Assessment Pressure Tests", provides in relevant part as follows: "Qualifications of Northern Natural Gas personnel providing the pressure test

specification and completing the pressure test review are adequate and documented". During a review of records for integrity assessments, PHMSA requested records of qualifications for the company representative chief inspector who approved the results of a hydrotest on the NEB48601 Ralston 4" pipeline, which is located in an HCA. Per a review of the operator qualifications for this inspector, it was found that he lacked the qualification for task 501 "Conduct a Pressure Test"; therefore, NNG failed to follow its integrity management procedures for review of assessment results.

7. § 192.935 What additional preventive and mitigative measures must an operator take?

(a) . . . .

(c) *Automatic shut-off valves (ASV) or Remote control valves (RCV).*

If an operator determines, based on a risk analysis, that an ASV or RCV would be an efficient means of adding protection to a high consequence area in the event of a gas release, an operator must install the ASV or RCV. In making that determination, an operator must, at least, consider the following factors—swiftness of leak detection and pipe shutdown capabilities, the type of gas being transported, operating pressure, the rate of potential release, pipeline profile, the potential for ignition, and location of nearest response personnel.

NNG's risk analysis failed to consider swiftness of leak detection and pipe shutdown capabilities, the type of gas being transported, operating pressure, the rate of potential release, pipeline profile, the potential for ignition, and location of nearest response personnel when it concluded that ASVs or RCVs would not be an efficient means of protecting high consequence areas. The regulation requires that an operator consider, at least, those factors prior to making such a determination.

During the inspection, PHMSA requested records of the consideration for installation of ASVs. NNG responded by providing a short position paper that broadly applies an assessment of ASVs and RCVs as ineffective. The paper states: "NNG does not use automatic shutoff valves" and "Northern's position is not to install RCVs" and bases the rationale against the use of ASVs on the need for deliveries. Additionally, the paper bases the rationale against RCVs on reasoning that most injuries will have already occurred due to an incident, citing the conclusions of a 1998 white paper sponsored by the Gas Research Institute (GRI-98/0076) in favor of more recent studies.

NNG also provided a guideline for application of its paper which shows how other preventive and mitigative measures are applied to reduce risk, however this application fails to technically justify the conclusions on the need for, or lack of need for, the installation of ASVs or RCVs in specific HCAs. The primary consideration used in ruling out ASVs and RCVs given in the guideline is that there are no HCAs that had an unmitigated high risk of failure (ROF). Accordingly, NNGs integrity management process eliminates the use of ASVs and RCVs to reduce risk by concluding their use to

be inherently inefficient, without consideration of the mandated criteria, and has therefore failed to comply with § 192.935.

8. § 192.947 What records must an operator keep?

An operator must maintain, for the useful life of the pipeline, records that demonstrate compliance with the requirements of this subpart. At minimum, an operator must maintain the following records for review during an inspection.

(a) . . . .

(d) Documents to support any decision, analysis and process developed and used to implement and evaluate each element of the baseline assessment plan and integrity management program. Documents include those developed and used in support of any identification, calculation, amendment, modification, justification, deviation and determination made, and any action taken to implement and evaluate any of the program elements;

NNG failed to document the changes to the approved hydrotest plan for the Ralston 4" pipeline. Hydrotest records for the Ralston 4" pipeline showed that the June 1, 2017 approved pressure test plan was not followed. Specifically, the test plan submitted by the testing contractor was for an 8-hour test, and operating personnel decided to conduct a 1-hour test. According to NNG Engineering Standard 8101, "General Specifications for Pressure Testing", NNG failed to revise its test plan on the Ralston 4-inch pipeline in accordance with section 2.5 of that standard, which provides that "[t]esting shall be conducted in accordance with a pre-established test plan to be created by the testing entity and reviewed by the company's representative prior to the start of testing. Testing entity shall not proceed with the test plan execution until both contractor and company review the testing plan and all revisions are incorporated as appropriate."

Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed $222,504 per violation per day the violation persists, up to a maximum of $2,225,034 for a related series of violations. For violation occurring on or after July 31, 2019 and before January 11, 2021, the maximum penalty may not exceed $218,647 per violation per day the violation persists, up to a maximum of $2,186,465 for a related series of violations. For violation occurring on or after November 27, 2018 and before July 31, 2019, the maximum penalty may not exceed $213,268 per violation per day, with a maximum penalty not to exceed $2,132,679. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed $209,002 per violation per day, with a maximum penalty not to exceed $2,090,022. We have reviewed the circumstances and supporting documentation involved for the above probable violations and recommend that you be preliminarily assessed a civil penalty of $56,900 as follows:

Item number	PENALTY
1	$25,200
3	$31,700

Warning Items

With respect to items 4, 5, 6 and 8 we have reviewed the circumstances and supporting documents involved in this case and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to promptly correct these items. Failure to do so may result in additional enforcement action.

Proposed Compliance Order

With respect to items 2 and 7, pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Northern Natural Gas Company. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Enforcement Proceedings*. Please refer to this document and note the response options. All material you submit in response to this enforcement action may be 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, or request a hearing under 49 CFR § 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 a Final Order. If you are responding to this Notice, we propose that you submit your correspondence to my office within 30 days from receipt of this Notice. This period may be extended by written request for good cause.

In your correspondence on this matter, please refer to **CPF 3-2021-027-NOPV** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Gregory A. Ochs
Director, Central Region, OPS
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Enforcement Proceedings

Cc: Royce Ramsay, Vice President Operation, Northern Natural Gas, royce.ramsay@nngco.com
Thomas Correll, Director Pipeline Safety, Northern Natural Gas, Thomas.Correll@nngco.com

PROPOSED COMPLIANCE ORDER

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

A. In regard to Item 2 of the Notice pertaining to failure to inspect pipe at meter buildings for atmospheric corrosion, NNG must, within **180** days of receipt of the Final Order:

- Perform an adequate visual inspection of all 38 sites identified in the Notice by paying special attention to pipe hidden under the floors of each facility, removing the floor or obstruction if necessary, and provide evidence of the completed inspections to the Director, PHMSA Central Region.
- Based on the findings of the visual inspections, schedule necessary remediation or repair to all pipe and facilities and provide the schedule and description of proposed repairs to the Director, PHMSA Central Region.

B. In regard to Item number 7 of the Notice pertaining to performing a risk analysis to determine the effectiveness of ASVs and RCVs, NNG must perform a thorough analysis for the population HCA areas in SE Nebraska near Omaha and Lincoln based on a consideration of, at a minimum, the criteria set forth in § 192.935(c). NNG must complete the analysis and provide evidence of its determinations to the Director, PHMSA Central Region, within **180** days of receipt of the Final Order.

D. It is requested (not mandated) that Northern Natural Gas Company maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Gregory A. Ochs, Director, Central Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.