NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER

VIA E-MAIL TO THE HONORABLE HARRY K. BROWER, JR.

November 18, 2020

The Honorable Harry K. Brower, Jr., Mayor
Mayor of the North Slope Borough
North Slope Borough Energy Management
P.O. Box 69
Utqiagvik, Alaska 99723

CPF 5-2020-0010

Dear Mayor Brower:

From December 9 through 13, 2019, and on March 10, 2020, representatives 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 Barrow natural gas pipeline located in Utqiagvik and Nuiqsut natural gas pipeline in the North Slope Borough, Alaska.

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. § 192.203 Instrument, control, and sampling pipe and components.

(a) ….
(b) *Materials and design*. All materials employed for pipe and components must be designed to meet the particular conditions of service and the following:
(1) ….
(9) Each control line must be protected from anticipated causes of damage and must be designed and installed to prevent damage to any one control line from making both the regulator and the over-pressure protective device inoperative.

On the Barrow natural gas pipeline, the control line between the Primary Gas Handling Facility and Pipeline Valve Station 1 is not protected from anticipated causes of damage as required by § 192.203(b)(9).

Four pressure control valves (PCV214A, PCV214B, PCV237A, and PCV237B) at the Primary Gas Handling Facility (PGHF) reduce the pressure from the upstream gathering system (approximately 900 psig) to the pipeline's normal operating pressure (approximately 290 psig). These pressure control valves share a common stainless steel sensing/control line, which is located on a pipe rack between the PGHF and Pipeline Valve Station 1. The sensing/control line is located outside and shares pipe supports with nearby piping. The sensing line may be damaged by sloughing snow or ice from the adjacent pipes, particularly mid-point of the span between pipe supports. Failure of this sensing line would cause the four pressure control valves to all simultaneously open which could potentially overpressure the pipeline.

2. § 192.465 External corrosion control: Monitoring.

(a) ….
(d) Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring.

North Slope Borough Energy Management (NSBEM) failed to take prompt remedial action to correct deficiencies found during their 2017, 2018, and 2019 cathodic protection (CP) monitoring of the Nuiqsut natural gas pipeline. CP inspections completed in 2017, 2018, and 2019 found locations along the buried portion of the Nuiqsut natural gas pipeline that did not meet one or more applicable criteria contained in appendix D of part 192.

In 2017, NSBEM conducted a survey of the CP levels at each test station. Test Stations 2, 4, and 7 did not meet CP criteria. NSBEM was cited by PHMSA in a 2013 Warning Letter (5-2013-0008W) for failing to maintain the required level of cathodic protection on the Nuiqsut natural gas pipeline. That letter states that NSBEM had reports showing, as far back as 2011, that CP potentials at Test Stations 2, 4, and 7 were inadequate.

In both 2018 and 2019, NSBEM conducted close-interval surveys and test station point surveys of the Nuiqsut natural gas pipeline. The close interval surveys demonstrated that the majority of the pipeline did not meet applicable CP criteria in 2018, and approximately 23 percent of the pipeline did not meet applicable CP criteria in 2019. Portions of the pipeline between Test

Stations 1 and 2, between Test Stations 2 and 3, and between Test Stations 3 and 4, failed to meet CP criteria in both the 2018 and 2019 close-interval surveys.

Despite records showing inadequate CP potentials were found during monitoring, including locations that had inadequate CP potentials for multiple consecutive years, NSBEM has not taken any remedial measures to ensure the pipeline meets the CP criteria specified in appendix D of part 192.

3. § 192.467 External corrosion control: Electrical isolation.

(a) Each buried or submerged pipeline must be electrically isolated from other underground metallic structures, unless the pipeline and the other structures are electrically interconnected and cathodically protected as a single unit.

The buried segment of the Nuiqsut natural gas pipeline was not electrically isolated from other underground metallic structures and was not electrically interconnected with those structures and cathodically protected as a single unit. Cathodic protection inspection reports completed in 2017, 2018, and 2019 noted that a bare copper wire was bonded to the Nuiqsut transmission pipeline, which bypassed the di-electric isolation flange kit at the pressure reducing valve (PRV) at the downstream end of the pipeline, shorting the pipeline to the PRV's grounding system. The PRV skid and the pipeline are not electrically interconnected and cathodically protected as a single unit. The operator removed the grounding wire during the March 10, 2020 site inspection, but could not verify that the pipeline was isolated from PRV facility piping.

4. § 192.467 External corrosion control: Electrical isolation.

(a) ….
(d) Inspection and electrical tests must be made to assure that electrical isolation is adequate.

NSBEM failed to make inspections and electrical tests to assure that electrical isolation is adequate at the upstream end of the buried segment of the Nuiqsut natural gas pipeline. During the March 10, 2020 inspection, PHMSA observed potential lack of isolation between the pipeline and the buried, bare steel vertical support members (VSMs) which support the above ground pipeline. The VSMs were not intended to be electrically interconnected with the pipeline and protected as a single unit. Specifically, PHMSA observed that the pipeline is not equipped with an insulating device (for example a dielectric insulating flange) to electrically isolate the buried segment from the above-ground segment. The above-ground segment was braced to bare steel horizontal support members (HSMs) and VSMs using steel U-bolts. In addition, the Nuiqsut pipeline was supported between the HSMs by steel brackets that were connected via U-bolts to the pipeline and three other neighboring pipelines that did not appear to be isolated from the VSMs. This above-ground segment has historically had coating failures and may be electrically continuous with the bare steel vertical support members.

NSBEM was unable to demonstrate that an inspection and electrical test had occurred at this location and that the electrical isolation was adequate. The NSBEM conducts isolation inspecting and testing annually at other locations on this pipeline, the results of which are presented in the cathodic protection monitoring reports. The reports do not include testing at the upstream end of the buried segment. The reports do show that test stations near this end of the pipeline have not consistently met cathodic protection criteria, indicating isolation may be necessary to facilitate the application of corrosion control.

5. § 192.479 Atmospheric corrosion control: General.

(a) Each operator must clean and coat each pipeline or portion of pipeline that is exposed to the atmosphere, except pipelines under paragraph (c) of this section.

The operator did not clean and coat each portion of the Nuiqsut natural gas pipeline that was exposed to the atmosphere as required by § 192.479(a), nor did they meet the exceptions to the requirement to do so under paragraph § 192.479(c). Between 2010 and 2018, the Nuiqsut natural gas pipeline operated without adequate atmospheric corrosion control coating and with corrosion present that was beyond that of a light surface oxide. In addition, the operator failed to demonstrate that the corrosion would not affect the safe operation of the pipeline before the next scheduled inspection per § 192.479(c)(2).

In 2013, PHMSA cited the operator for failing to protect the Nuiqsut gas pipeline from atmospheric corrosion per § 192.479. PHMSA stated in a May 23, 2013 Warning Letter (CPF 5-2013-0008W) to the operator that PHMSA observed that the pipeline was exposed to the atmosphere at numerous locations where the coating was damaged; that water was present beneath the damaged coating; and that pitting and corrosion beyond a light surface oxide were present at these locations. The warning letter indicated that the operator had coating inspection records dating back to 2010 that showed damage to the coating and corrosion that was beyond a light surface oxide.

Atmospheric corrosion inspection records for the Nuiqsut natural gas pipeline completed in April 2014 and April 2017 show that the damaged coating had not been repaired. In February and March 2018, NSBEM repaired the damaged coating on the pipeline. During the repairs, the operator noted pitting with a depth of 20 mils (0.020 inches) or deeper at 43 locations, with the deepest pit depth of 47 mils (0.047 inches, or approximately 23 percent wall loss).

NSBEM failed to demonstrate that corrosion pitting on the Nuiqsut natural gas pipeline would not affect the safe operation of the pipeline before the next scheduled inspection. For example, the report for the April 2017 atmospheric corrosion inspection does not show that pitting was observed in the 234 inspection sites covered by that report; however, in 2018, the NSBEM repaired 3,543 damaged coating sites and found pitting at 43 locations. This suggests the 2017 atmospheric corrosion inspection failed to identify the pitting and therefore cannot demonstrate it would not affect the safe operation of the pipeline before the next scheduled inspection.

6. § 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 pipeline 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

Consecutive atmospheric corrosion inspections of aboveground portions of the Barrow natural gas pipeline occurred in July 2014 and then in September 2018, which exceeded the maximum 39-month inspection interval for pipelines located onshore.

7. § 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 pipeline 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

During their September 2018 atmospheric corrosion inspection, NSBEM failed to inspect every portion of the Barrow natural gas pipeline that was exposed to the atmosphere for evidence of atmospheric corrosion. Specifically, the NSBEM failed to inspect the "S-Curve" separator at Valve Station 2 and its associated aboveground piping and valves as part of the September 2018 atmospheric corrosion inspection. The report for the September 2018 atmospheric corrosion inspection shows the boundaries of the areas of the pipeline that NSBEM inspected (piping circuit diagrams and tabulated inspection data). This report shows that NSBEM omitted the "S-Curve" and its associated aboveground piping from that inspection. During the December 10, 2019 inspection, PHMSA observed wide-spread coating failures and atmospheric corrosion at this location.

8. § 192.481 Atmospheric corrosion control: Monitoring.

(a) ….

(b) During inspections the operator must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under disbonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water.

NSBEM failed to inspect the Nuiqsut natural gas pipeline at soil-to-air interfaces and under thermal insulation. The Nuiqsut pipeline has thermal insulation at the soil-to-air interfaces, but atmospheric corrosion records for inspection reports 2014 and 2017 showed that NSBEM inspected the pipeline but did not inspect soil-to-air interfaces and areas under thermal insulation, as required by § 192.481(b).

9. § 192.614 Damage prevention program.

(a) ….
(c) The damage prevention program required by paragraph (a) of this section must, at a minimum:
(1) Include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located.

NSBEM's damage prevention program failed to include the identity, on a current basis, of persons who normally engage in excavation activities in the area in which the pipeline is located. During the inspection, NSBEM personnel stated that they did not maintain a list of any such excavators.

10. § 192.616 Public awareness.

(a) ….
(c) The operator must follow the general program recommendations, including baseline and supplemental requirements of API RP 1162, unless the operator provides justification in its program or procedural manual as to why compliance with all or certain provisions of the recommended practice is not practicable and not necessary for safety.

NSBEM failed to follow the general recommendations of API RP 1162. Specifically, NSBEM did not annually complete an audit or review of the Public Awareness Program's implementation, as required in Section 8.3 of API RP 1162. During the inspection, NSBEM provided to PHMSA personnel a completed internal self-assessment worksheet for 2018; however, NSBEM personnel stated that an audit or review for the years prior to 2018 was never completed. NSBEM did not provide justification as to why compliance with that provision was not practicable or necessary for safety.

In addition, as of January 7, 2020, the operator had not evaluated the effectiveness of their public awareness program, which is required by § 192.616(c), Section 8.4 of API 1162, and their own procedures. Their written Public Awareness Plan (Rev. 6, January 2019) stated:

> "The deadline for the first Effectiveness Evaluation will be based on the creation and implementation date of the original written plan, December 2015. With this in mind, the four-year deadline for this evaluation is calculated at July 2019 in order to keep in compliance with the federally established deadline as described in RP 1162."

The operator did not complete the 4-Year Effectiveness Evaluation in 2019. The operator did not provide justification as to why compliance with that provision was not practicable or necessary for safety.

11. § 192.616 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:
(3) Physical indications that such a release may have occurred;

NSBEM's 2019 Public Awareness flyer, which was used to educate the public in Nuiqsut on the physical indications of a possible release, stated that "Natural gas smells like rotten eggs." NSBEM's Nuiqsut natural gas pipeline is un-odorized, thus the information provided to the public in the flyer failed to educate the public as required by the regulation.

12. § 192.707 Line markers for mains and transmission lines.

(a) ….
(c) *Pipelines aboveground*. Line markers must be placed and maintained along each section of a main and transmission line that is located aboveground in an area accessible to the public.

On the Barrow natural gas pipeline, NSBEM failed to place and maintain line markers along each section of its transmission line that is located aboveground in an area accessible to the public. There is an above-ground portion of the Barrow pipeline located on a causeway that is accessible to the public that did not have pipeline markers on either side.

13. § 192.739 Pressure limiting and regulating stations: Inspection and testing.

(a) Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is—

NSBEM failed to inspect each pressure regulating station at least once each calendar year at intervals not to exceed 15 months. The Barrow natural gas pipeline's pressure is regulated by six pressure control valves (PCVs) at two facilities (specifically, PCV214A, PCV214B, PCV237A, and PCV237B at the Primary Gas Handling Facilities and PCV001 and PCV002 at the South Gas Handling Facility). These PCVs are the primary pressure control on the pipeline; they reduce the pressure from the upstream gathering system (maximum 900 psig) to the Barrow natural gas pipeline's normal operating pressure (approximately 290 psig). NSBEM provided records showing that the pressure regulating stations on the Barrow natural gas pipeline were inspected on June 11, 2016 and December 7, 2017, which exceeded the maximum 15-month interval.

14. § 192.739 Pressure limiting and regulating stations: Inspection and testing.

(a) Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is—
(1) In good mechanical condition;
(2) Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;
(3) Except as provided in paragraph (b) of this section, set to control or relieve at the correct pressure consistent with the pressure limits of §192.201(a); and
(4) Properly installed and protected from dirt, liquids, or other conditions that might prevent proper operation.

NSBEM failed to ensure that a pressure control valve, PCV-214A, was "in good mechanical condition" during its June 2016 inspection. PCV-214A is a Pressure Control Valve at the PGHF, which is a pressure regulating facility for the Barrow natural gas pipeline. The worksheet for the June 2016 inspection indicated that there was audible leak-by at PCV-214A and that the valve needed to be re-built, but the operator had not repaired the valve by the December 2017 inspection (the leak-by was still present and noted on the December 2017 inspection worksheet). During PHMSA's 2019/2020 inspection the operator stated that the leak-by had still not been repaired.

15. § 192.743 Pressure limiting and regulating stations: Capacity of relief devices.

(a) Pressure relief devices at pressure limiting stations and pressure regulating stations must have sufficient capacity to protect the facilities to which they are connected. Except as provided in §192.739(b), the capacity must be consistent with the pressure limits of § 192.201(a). This capacity must be determined at intervals not exceeding 15 months, but at least once each calendar year, by testing the devices in place or by review and calculations.

NSBEM failed to test in place or review the capacity of the relief devices at the pressure regulating stations in the Primary Gas Handling Facility (PGHF) and South Gas Handling Facilities (SGHF). The PGHF and SGHF both have pressure regulating stations that reduce the pressure from the gathering system (maximum approximately 900 psi) to the Barrow transmission pipeline's operating pressure (typically 290 psi). PSV 360 and RV005 are the relief valves in the PGHF and SGHF, respectively. NSBEM stated during the inspection that they had never tested the devices in place nor reviewed the capacity calculations.

16. § 192.807 Recordkeeping.

(a) ….
(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task. Records of prior qualification

and records of individuals no longer performing covered tasks shall be retained for a period of five years.

NSBEM failed to retain Operator Qualification (OQ) records prior to 2016. Personnel operating pipelines for the North Slope Borough work under contract; the operator stated that, in 2016, the prior contract company, operating on behalf of the North Slope Borough, destroyed the OQ records.

Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to 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 violations 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 violations 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. For violations occurring prior to November 2, 2015, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. 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 $151,900 as follows:

Item number	PENALTY
6	$38,000
13	$55,200
14	$58,700

Warning Items

With respect to items 10, 11, and 16, 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 1, 2, 3, 4, 5, 7, 8, 9, 12, 14, and 15, pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to North Slope Borough Energy Management. 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 5-2020-0010** and, for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

Dustin Hubbard
Director, Western Region
Pipeline and Hazardous Materials Safety Administration

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

cc: PHP-60 Compliance Registry
PHP-500 Jake Gano (#166675, #166676, #166677)

PROPOSED COMPLIANCE ORDER

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

A. In regard to **Item 1** of the Notice pertaining to the control line for the pressure control valves on the Barrow natural gas pipeline, North Slope Borough Energy Management must:

A.1 Within **90** days of receipt of the Final Order, provide to the Director of the Western Region a written work plan to secure the stainless-steel sensing line. The work plan must include design drawings showing a configuration that ensures that the sensing line is protected from damage, and that the pipeline's MAOP cannot be exceeded as a result of the failure of the sensing line.

A.2 Upon receiving a notice of non-objection from the Director of the Western Region, North Slope Borough Energy Management must implement that work plan within **90** days.

A.3 Within **30** days of completing the activities described in A.2, provide to the Director of the Western Region as-built drawings and photographs demonstrating that activities were completed consistent with the work plan.

B. In regard to **Item 2** of the Notice pertaining to inadequate levels of cathodic protection on the Nuiqsut natural gas pipeline, North Slope Borough Energy Management must:

B.1 Within **180** days of receipt of the Final Order, provide to the Director of the Western Region a written assessment of the viability of meeting cathodic protection criteria on the pipeline. The assessment must show the horizontal and vertical alignment of the pipeline; locations of current and historic inadequate cathodic protection levels along the alignment; and the horizontal and vertical locations of known permafrost (for example from boreholes, thermistor data, original construction data) and relevant surface features (for example ponding, thaw bulbs, river channels).

B.2 If the assessment described in B.1 shows areas of inadequate cathodic protection levels where the pipeline is buried coinciding with locations that cannot be demonstrated to be permafrost, the assessment in B.1 must also include a written work plan to address the areas of inadequate cathodic protection and/or the data gaps.

B.3 Upon receiving a notice of non-objection from the Director of the Western Region, North Slope Borough Energy Management must implement the work plan described in B.2 within **180** days, and must provide to the Director of the Western Region the records associated with that work within **90** days of completion.

C. In regard to **Items 3 and 4** of the Notice pertaining to inadequate electrical isolation on the Nuiqsut natural gas pipeline, North Slope Borough Energy

Management must, within **180** days of receipt of the Final Order, install electrical insulating device(s) at the upstream end of the buried segment; conduct testing at both the upstream and downstream end of the buried segment to show that the pipeline is electrically isolated from other buried structures that are not intended to be cathodically protected as a single unit (including, at a minimum, the PRV station at the downstream end of the buried segment and the nearest vertical support member at the upstream end of the buried segment); and, within **30** days of completing these activities, provide records demonstrating the electrical isolation of the pipeline to the Director of the Western Region.

D. In regard to **Item 5** of the Notice pertaining to coating of the Nuiqsut Natural gas pipeline, North Slope Borough Energy Management must:

D.1 Within **90** days of receiving the Final Order, submit to the Director of the Western Region a written assessment and maintenance plan for maintaining the atmospheric corrosion control coatings on its pipelines in accordance with the regulations. The plan must be incorporated into North Slope Borough Energy Management's written corrosion control procedures. The plan must include, at a minimum, how NSBEM will determine and document whether a corroded segment meets the criteria for exemption from atmospheric corrosion control per § 192.479(c), and the plan must include specific time frames for repairing any coating damage not meeting the criteria for exemption.

D.2 NSBEM must provide to the Director of the Western Region a listing of all locations on the pipelines that are uncoated or the coating is damaged, the results of any corrosion assessment performed at those locations, and a written repair plan for those locations. NSBEM must submit the plan within **90** days of receiving the final order, and must implement the repair plan as required by the regulations.

E. In regard to **Item 7** of the Notice pertaining to atmospheric corrosion inspections at Valve Station 2 of the Barrow Natural gas pipeline, North Slope Borough Energy Management must:

E.1 Within **90** days of receipt of the Final Order, complete an atmospheric corrosion inspection of Valve Station 2, which must include all valves, the "S Curve" separator, the associated drain lines, and any other components through which natural gas may flow.

E.2 Within **90** days of completing the inspection described in E.1, protect areas where atmospheric corrosion is found as required by § 192.481(c).

E.3 Within **30** days of completing the activities described in E.1 and E.2, provide records of the inspection and coating repairs or replacement to the Director of the Western Region.

F. In regard to **Item 8** of the Notice pertaining to the insulated soil-to-air interface on the Nuiqsut natural gas pipeline, North Slope Borough Energy Management must assess the condition of the insulation and outer coating within **180** days of receipt of the Final Order. If damage to the outer coating is found during the assessment, North Slope Borough Energy Management must, as soon as practicable but no later than **30** days following the assessment, assess the condition of the inner pipe and inner pipe's coating; assess the presence or extent of wet insulation; and

repair or replace any wet insulation and damaged inner or outer coating.

G. In regard to **Item 9** of the Notice pertaining to identifying excavators for the purpose of damage prevention notifications, North Slope Borough Energy Management must, within **90** days of receipt of the Final Order, amend its mailing list for damage prevention notifications to include excavators who normally engage in excavation activities in the area in which the Barrow and Nuiqsut natural gas pipelines are located. North Slope Borough Energy Management must consider, at a minimum, excavators who frequently use the one-call system but are not located in Barrow or Nuiqsut and therefore are not currently part of their mailing list.

H. In regard to **Item 12** of the Notice pertaining to line markers on the Barrow natural gas pipeline, North Slope Borough Energy Management must install line markers on the Barrow natural gas pipeline at all areas where the pipeline is above-ground and accessible to the public (including, at a minimum, the above-ground pipeline segment at the causeway crossing) within **180** days of receipt of the Final Order. The North Slope Borough must provide notice to the Director of the Western Region with **30** days of completing the installation.

I. In regard to **Item 14** of the Notice pertaining to the audible leak on Pressure Control Valve PVC214A at the Primary Gas Handling Facility on the Barrow natural gas pipeline, North Slope Borough Energy Management must repair or replace PCV-214A within **180** days of receipt of the Final Order. The North Slope Borough must provide notice to the Director of the Western Region within **30** days of completing the repair or replacement.

J. In regard to **Item 15** of the Notice pertaining to review of capacity calculations for pressure relief valves protecting the Barrow natural gas pipeline, North Slope Borough Energy Management must:

J.1 Within **90** days of receipt of the Final Order, provide to the Director of the Western Region calculations of the required capacity for each relief device consistent with § 192.201 and calculations of the relief capacities for each device under conditions which it operates consistent with § 192.743(b).

J.2 If the activities described in J.1 demonstrate that any relief valves lack adequate capacity, the operator must provide, along with the calculations, a written work plan to address any deficiencies.

J.3 Upon receiving a notice of non-objection from the Director of the Western Region, implement that work plan within **90** days.

J.4 Within **30** days of completing the activities described in J.3, provide to the Director of the Western Region as-built drawings and photographs demonstrating that activities were completed consistent with the work plan.

K. It is requested (not mandated) that North Slope Borough Energy Management maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Dustin Hubbard, Director, Western 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.