NOTICE OF AMENDMENT

VIA ELECTRONIC MAIL TO: mhummel@northstarmidstream.com , tsullivan@northstarmidstream.com, pbautista@northstarmidstream.com

February 9, 2021

McMillian Hummel
President / CEO
NST Express LLC
10077 Grogans Mill Road, Suite 530
The Woodlands, TX 77380

CPF 3-2021-5004M

Dear Mr. Hummel:

From January 29, 2018 through September 21, 2018, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected NST Express LLC's (NST) programs, procedures, plans and records for the Operations and Maintenance (O&M) Manual, Operator Qualification (OQ) program, Control Room Management (CRM) Manual, and the Integrity Management Plan (IMP) in The Woodlands, TX.

On the basis of the inspection, PHMSA has identified the apparent inadequacies found within NST'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.

NST's O&M Manual (dated February 15, 2018) is inadequate because it contains incorrect references and does not address different types of overpressure protective devices. First, the Table of Contents (Itemized) located at the beginning of the O&M Manual does not correlate with the specifics noted in Section 18 Forms Table of Contents. Section 18 of the O&M Manual has a separate Forms Table of Contents. Specifically, Form 18.8(a) Rectifier Inspection Form, Form 18.8(b) Rectifier Maintenance Form, and Form 18.8(c) Critical Bond Inspection Form are denoted for rectifier O&M activities in Section 18 of the O&M Manual. However, only one of these three forms are listed in the Table of Contents (Itemized) located at the beginning of the O&M Manual. Additionally, the one form that is referenced in the Table of Contents (Itemized) is referenced incorrectly, specifically Form 18.8 is listed at the beginning of the O&M Manual as Rectifier Maintenance Report, which is Form 18.8(b).

Further, Section 10.6 Rectifier Inspections in the O&M Manual contains a reference to Form 18.8 called Rectifier Inspection Form but this form is 18.8(a). The three forms that are included in the Forms Section 18 of the O&M (Form 18.8(a) Rectifier Inspection Form, Form 18.8(b) Rectifier Maintenance Form, and Form 18.8(c) Critical Bond Inspection Form) do not have corresponding reference in Section 10.6 regarding when and how the forms should be used. All three of the forms require clarification on maintenance requirements (when to use and what is required to be populated for the step by step instruction).

Second, the O&M Manual is inadequate because it references forms that are not included in Section 5.4 Pressure Limiting Device Inspections. Section 5.4 references the use of Form 18.4, which is included in the O&M Section 18 Forms Table of Contents as the Safety Device Inspection. However, Form 18.4 does not exist in the actual forms provided in Section 18. Instead, Section 18 includes Form 18.4(a) Pressure Limiting Device Inspection, Form 18.4(b) Pressure Switch Calibration, and Form 18.4(c) Pressure and Temperature Transmitter Calibration. Again, all three of these forms require clarification on maintenance requirements (when to use and what is required to be populated for the step by step instruction).

Further, Section 5.4 Pressure Limiting Device Inspection in the O&M Manual is inadequate because it does not address different types of overpressure protective devices. NST uses pressure transmitters, pressure switches, and pressure limiting devices such as thermal reliefs. NST's Alexander and East Fairview stations incorporate pressure transmitters and pressure switches in their control narratives. However, NST's Form 18.4(a) does not allow for the pressure transmitters range to be recorded nor does it allow for pressure switch and pressure transmitter "as found" and "as left" pressure values to be recorded. Forms 18.4(b) and 18.4(c) would allow this data to be recorded, but as noted above, these forms are not referenced with specifics about when these individual forms should be utilized.

Additionally, the O&M Manual contains incorrect references to the section on Abnormal Operating Conditions (AOCs). Throughout the O&M Manual other sections refer to Section 2.6 Abandoning Pipeline Facilities (for example, 4.2 Inspection Frequency). However, these references to 2.6 should be amended to Section 2.7 Abnormal Operating Conditions.

Further, NST's O&M Manual references control room, SCADA and controller in the definitions Section 1.8, but nothing further is found for these terms in the O&M Manual. The O&M references control center rather than control room in Section 2.4 Communications. The O&M Manual also references the term contract operator in several sections, including Section 2 regarding abnormal operations procedures. The operator confirmed verbally during the inspection that the contract operator for the control room was ROC (Remote Operations Center). The operator also confirmed verbally during the inspection that the control room management procedures utilized for NST's pipeline facilities (assets) was the 2018 ROC CRM Manual. However, the O&M Manual did not address how integration of procedures between the O&M Manual and applicable control room management plan (as identified by NST during the inspection) would be accomplished.

Further, NST's O&M procedures are inadequate because points that can impacts safety relevant to control room management are not identified. NST's O&M procedures do include safety devices, alarming, and associated responses related to alarms. Without identifying points that can impact safety, the points specific to NST regulated pipeline facilities utilized by the control room required to have a point-to-point verification conducted between SCADA displays and related field equipment when field equipment is added or moved are unknown [195.446(c)(2)]. NST must amend its O&M Manual to adequately identify points that can impact safety (safety related points) so that procedures are clear as to when point to point verifications will be conducted between SCADA displays and related field equipment.

Therefore, NST must amend its O&M Manual to address the incorrect references described above, provide the specifics for when various forms should be utilized for O&M tasks, and provide missing step by step instructions for the various maintenance tasks when using the included forms. NST must also amend its O&M Manual to consistently address those functions relevant to coordination with NST and the control room that operates NST regulated pipeline facilities, provide required emergency response coordination, identify points related to safety relevant to control room operations, and address how procedures are integrated between §§ 195.402 and 195.446.

2. §195.446 Control room management.

(a) General. This section applies to each operator of a pipeline facility with a controller working in a control room who monitors and controls all or part of a pipeline facility through a SCADA system. Each operator must have and follow written control room management procedures that implement the requirements of this section. The procedures required by this section must be integrated, as appropriate, with the operator's written procedures required by § 195.402. An operator must develop the procedures no later than August 1, 2011, and must implement the procedures according to the following schedule. The procedures required by paragraphs (b), (c)(5), (d)(2) and (d)(3), (f) and (g) of this section must be implemented no later than October 1, 2011. The procedures required by paragraphs (c)(1) through (4), (d)(1), (d)(4), and (e) must be implemented no later than August 1, 2012. The training procedures required by paragraph (h) must be implemented no later than August 1, 2012, except that any training required by another paragraph of this section must be implemented no later than the deadline for that paragraph.

(b) Roles and responsibilities. Each operator must define the roles and responsibilities of a controller during normal, abnormal, and emergency operating conditions. To provide for a controller's prompt and appropriate response to operating conditions, an operator must define each of the following: (1) (1) A controller's authority and responsibility to make decisions and take actions during normal operations;

NST provided a control room management manual (2018 ROC CRM Manual[1]) as the procedures relevant to operation of NST's regulated pipeline facilities. These control room management procedures are inadequate because the roles and responsibilities of the controllers identified in the CRM procedures are not specific to NST. Specifically, Section 3 Responsibilities in the 2018 ROC CRM Manual is generic and does not provide roles and responsibilities of a controller for normal, abnormal and emergency operating conditions specific to NST.

NST must provide amendments to the control room management procedures relevant to operation of NST's regulated pipeline facilities to ensure the roles and responsibilities of applicable controllers are specifically defined for NST's regulated pipeline facilities for normal, abnormal and emergency operating conditions.

[1] Remote Operations Center (ROC) is a control room contract operator that operates portions of NST's assets.

3. §195.446 Control room management.

(a) . . .
(e) Alarm management. Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1) Review SCADA safety-related alarm operations using a process that ensures alarms are accurate and support safe pipeline operations;

NST provided a control room management manual (2018 ROC CRM Manual) as the control room procedures relevant to operation of NST's regulated pipeline facilities during the inspection. The CRM manual is inadequate regarding alarm management, contains incorrect references, conflicts with the NST O&M, and requires amendment.

Specifically, the 2018 ROC CRM manual references Section 8.7.6 Reporting Alarm Problems/Malfunctions multiple times; however, there is no Section 8.7.6. The correct section is Section 8.9.6 Reporting Alarm Problems/Malfunctions. Also, the reference included in the 2018 ROC CRM Manual of 8.3.1 Safety-Related Alarms and Points found in Section 8.9.7 is incorrect as this does not exist. The correct Section is Section 8.6 Safety-related Alarms and Points.

Additionally, NST's O&M Defines Alarm in Section 1.8 Definitions as an audible or visual means of indicating to the controller that equipment or processes are outside operation-defined, safety-related parameters. The O&M Section 2.7.6 Activation of a Safety Device considers any alarm that activates during system operations an abnormal operating condition (AOC) and further indicates this may include but are not limited to, high or low pressure alarms, temperature alarms, and flow alarms. Furthermore, this section requires alarm verification to ensure continued safety and integrity of the pipeline system, as well as to identify and correct the condition that caused the alarm (see the picture of this portion of the manual below):

2.7.6 Activation of a Safety Device 195.402(d)(1)(iv)

Any alarm that activates during system operations is considered an abnormal operating condition which must be investigated. Alarms may include, but are not limited to:	
➢	High or low pressure alarms.
➢	High or low temperature alarms.
➢	High or low flow alarms.
Confirmation of an alarm must result in:	
➢	Responses that ensure the continued safety and integrity of the system.
➢	Identifying and correcting the condition that caused the alarm.

NST's O&M further mentions alarms in Section 13.4 and describes the potential of intrusion alarms.

Conversely, Section 8.6 Safety-Related Alarms and Setpoints of the 2018 ROC CRM Manual provides a definition for safety related point, which is a SCADA point necessary to maintain pipeline integrity or that could lead to the recognition of a condition that could impact the integrity of the pipeline, or a developing abnormal or emergency situation. And then identifies the safety related alarms for these various points. These SCADA Points and Alarms identified in the 2018 ROC CRM Manual are listed in the table in Section 8.6 (Page 8-4) and presented below:

SCADA Point	Safety Related
Mainline Pressure	Yes
Tank Level / Volume	Yes
ESD Status / Command	Yes
Valve Status / Commands	Yes
Communication Status	Yes
Pump / Compressor Status and Commands	Yes
Filtering Equipment Levels	Yes
Power Supply	Yes

Figure 1 Safety Related Points

SCADA Alarm	Safety Related
High-High Pressure	Yes
High-High Tank Levels	Yes
Valve Failure to Close / Open	Yes
Valve Reject Close / Open	Yes
Communication Failure	Yes
Safety Equipment Failure /Out of Range	Yes

Figure 2 Safety Related Alarmsl

NST's O&M procedures are inadequate because sections of procedures conflict as presented in the 2018 ROC CRM Manual regarding safety related alarms and points. In addition, the 2018 ROC CRM Manual also does not reference the potential of intrusion alarms as safety-related.

NST must provide amendments to the Control Room Management procedures that eliminate incorrect references, and eliminate the conflict between the O&M Manual provided and the Control Room Management procedures. The alarm management portion of the CRM procedures provided by the operator requires amendment to be integrated with the NST O&M manual to ensure that alarms are accurate and support safe pipeline operations.

4. §195.446 Control room management.

(a) . . .
(e) Alarm management. Each operator using a SCADA system must have a written alarm management plan to provide for effective controller response to alarms. An operator's plan must include provisions to:

(1) . . .
(3) Verify the correct safety-related alarm set-point values and alarm descriptions when associated field instruments are calibrated or changed and at least once each calendar year, but at intervals not to exceed 15 months;

NST provided a control room management manual (2018 ROC CRM Manual) as the control room procedures relevant to operation of NST's regulated pipeline facilities during the inspection. NST's CRM Manual (provided during the inspection) is inadequate because it does not have a plan for the verification of the correct safety-related alarm set-point values and descriptors for effective controller response when field instruments are calibrated, changed or during other reviews required under §195.446(e)(3).

The 2018 ROC CRM Manual provided by the operator does not ensure NST personnel are involved in the review of the plan and that NST verifies correct alarm set-point values and descriptors.

NST must provide amendments to the Control Room Management procedures to include verification by NST of correct safety-related alarm set-point values and alarm descriptions implemented by the control room when associated field instruments are calibrated, changed, or when conducting required reviews.

5. § 195.452 Pipeline integrity management in high consequence areas

(a) Which pipelines are covered by this section? This section applies to each hazardous liquid pipeline and carbon dioxide pipeline that could affect a high consequence area, including any pipeline located in a high consequence area unless the operator effectively demonstrates by risk assessment that the pipeline could not affect the area. (Appendix C of this part provides guidance on determining if a pipeline could affect a high consequence area.) Covered pipelines are categorized as follows:

(1) . . .
(3) Category 3 includes pipelines constructed or converted after May 29, 2001.

NST's IMP Section 2.2 Direct Intersection of Pipelines and HCAs does not adequately identify all pipelines that could affect an HCA. PHMSA reviewed "Northstar Midstream Services Company, LLC – Liquid HCA Analysis" dated June 29, 2018 (2018 Analysis) and noted that Alexander Junction, a regulated pipeline facility and pump station, was determined to be in a

could affect HCA at the time of the inspection. However, IMP Section 2.2 states that "Northstar has (as part of this process) determined there are no jurisdictional terminals, pump stations or other facilities that directly intersect an HCA." Section 2.2 further stated that "Northstar will continually evaluate jurisdictional facilities to determine if they could potentially impact HCAs," yet NST did not update its IMP to include the findings from its 2018 Analysis, specifically as it relates to Alexander Junction. NST must amend its IMP to identify Alexander Junction or any other pipeline facility and pump stations that could affect an HCA.

6. §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) . . .
(4) Include in the program a framework that—

(i) Addresses each element of the integrity management program under paragraph (f) of this section, including continual integrity assessment and evaluation under paragraph (j) of this section; and

NST's IMP is inadequate regarding continual integrity assessment and evaluation. Section 1.4 Integrity Management Team states that the IMT will continually verify and validate the risk assessment results, however, it is not clear how everyone on the IMT will be made aware of data related to integrity as it changes.

Section 1.4 also indicates that the SVP of Operations will be the owner of the IMP and will direct employees and manage the IMT accordingly. However, because information that may result in necessary changes to the IMP is not routinely reviewed by the SVP of Operations, it is unclear in the IMP how the continual risk assessment and evaluation will be sufficiently managed.

In addition, the IMP plan does not identify who will call the Integrity Management Team (IMT) meetings designed to review data that could impact the risk and continual assessment for the pipeline.

NST must amend its IMP to clarify how data changes that could impact risk, continual integrity assessment and evaluation will be managed, and identify who will call IMT meetings.

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

(a) . . .
(j) What is a continual process of evaluation and assessment to maintain a pipeline's integrity?

(1) . . .
(5) Assessment methods. An operator must assess the integrity of the line pipe by any of the following methods. The methods an operator selects to assess low frequency electric resistance welded pipe or lap welded pipe susceptible to longitudinal seam failure must be capable of assessing seam integrity and of detecting corrosion and deformation anomalies.

(i) In-Line Inspection tool or tools capable of detecting corrosion and deformation anomalies, including dents, gouges, and grooves. For pipeline segments that are susceptible to cracks (pipe body and weld seams), an operator must use an in-line inspection tool or tools capable of detecting crack anomalies. When performing an assessment using an In-Line Inspection tool, an operator must comply with § 195.591;
(ii) Pressure test conducted in accordance with subpart E of this part;
(iii) External corrosion direct assessment in accordance with § 195.588; or
(iv) Other technology that the operator demonstrates can provide an equivalent understanding of the condition of the line pipe. An operator choosing this option must notify OPS 90 days before conducting the assessment, by sending a notice to the address or facsimile number specified in paragraph (m) of this section.

NST's IMP is inadequate because it contains inconsistent information regarding methods for assessing the integrity of line pipe in could affect HCAs. Specifically, Figure 4.1 and Figure 4.2 of NST's IMP are in conflict. Figure 4.1 – Assessment Method Decision Process does not allow for a piggable pipeline to use hydrotest as an appropriate assessment method. However, during the inspection it was verbally communicated to PHMSA by the operator that a hydrotest could be used as a possible reassessment method. In response to inquiry about assessment methods in NST's IMP, NST communicated to PHMSA verbally during the inspection that Figure 4.1 would be removed, leaving Figure 4.2 to be used in the future. NST further indicated verbally that Figure 4.2 is used as the decision tree for making the reassessment method determination. Therefore, NST must amend its IMP to identify all assessment methods that it can utilized as part of the integrity management plan.

8. **§195.452 Pipeline integrity management in high consequence areas.**

   (a) . . .
   (l) What records must an operator keep to demonstrate compliance? —

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

   (i) . . .
   (ii) Documents to support the decisions and analyses, including any modifications, justifications, deviations and determinations made, variances, and actions taken, to implement and evaluate each element of the integrity management program listed in paragraph (f) of this section.

NST's IMP is inadequate because it does specify those documents that must be maintained for the useful life of the pipeline to support decisions and analyses, including any modifications, justifications, deviations and determinations made, variances, and actions taken, to implement and evaluate each element of the integrity management program. For example, pursuant to NST's IMP, Emergency Flow Restriction Device (EFRD) Analysis include cost estimates, calculations and evaluations as described in Section 7.7 and 7.8 of the plan; however, these analyses including decisions made were not clearly defined as records that would be documented in Section 9.6 Records.

Additionally, Section 9.6 Records only contains Table 9.1 Record Retention. Table 9.1 does not provide adequate detail to identify all records to support decisions relevant to the integrity program as required by §195.425(l)(1)(ii).

NST must amend its IMP to sufficiently identify all documents that support the decisions and analyses, including justification for why something was not implemented along with other elements such as modifications, justifications for why something was done, deviations and determinations made, variances, and action taken to implement and evaluate each element of the integrity management program.

9. **§195.505 Qualification program.**

   Each operator shall have and follow a written qualification program. The program shall include provisions to:

   (a) Identify covered tasks; . . .

NST's written Operator Qualification (OQ) program is inadequate because it does not appropriately identify covered tasks for its hazardous liquid pipelines. Specifically, Section 15.1 Contractors of the OQ program does not appropriately identify all covered tasks that are performed as a requirement of 49 CFR Part 195. Section 15.1 states that "All personnel

(Northstar Management, contractor or subcontractor) working on Northstar pipelines must be qualified in accordance with 49CFR 192 Subpart N (gas pipelines)/49CFR Subpart G (liquid pipelines) prior to performing any covered task listed in this plan. However, at the time of the inspection, NST did not own or operate any natural gas pipelines subject to the requirements of 49 CFR Part 192.

The covered tasks identified in Section 8 of the OQ program and the associated AOCs had not all been written correctly to address the requirements for hazardous liquid pipelines under Part 195. For example, in OQ covered task 34, the AOC identifies "unexpected presence of gas" but does not reference an unexpected presence of liquid or hazardous vapor in the event of a leak.

NST's Form 16.3 Contractor Evaluation, question 7, in its OQ program contains references to Subpart N (49 CFR Part 192), but not Subpart G (49 CFR Part 195).

NST must amend its written OQ program to ensure that its covered task list appropriately references covered tasks that are performed as a requirement of Part 195, including associated AOCs, as well as include a reference to Part 195, Subpart G in Form 16.3.

10. §195.505 Qualification program.

Each operator shall have and following a written qualification program. The program shall include provisions to:

(a) . . .
(g) Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed; . . .

NST's written OQ program is inadequate as it does not provide sufficient detail regarding its qualification process. Specifically, the OQ program does not reference NST as the operator in Section 11.1 or clarify if Reliance is a third-party contractor to NST. In Section 11.1 Qualifications Intervals the program states "A Reliance representative will monitor qualifications frequencies and schedule appropriate operator qualification assessments when needed."

Additionally, Section 11 of the written OQ program describes a 3-year interval for qualifications and describes qualification for new hires, but does not make a distinction between initial qualification process and the re-qualification process for NST personnel performing covered tasks.

NST must amend its written OQ program to identify what it will require for the evaluation intervals for the various covered tasks. If less than 3 years is identified for the requalification interval, NST amend its procedures to include a process that describes how this interval of requalification will also be accomplished. The written OQ program must reference NST as the operator or clarify if Reliance is a third-party contractor to NST.

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 Enforcement 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 30 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 NST maintain documentation of the safety improvement costs associated with fulfilling this Notice of Amendment (preparation/revision of plans, procedures) and submit the total to Greg Ochs, Director, Central Region, Pipeline and Hazardous Materials Safety Administration. In correspondence concerning this matter, please refer to **CPF 3-2021-5004M** 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

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

Cc: Thomas Sullivan, Vice President – Operations, NST Express,
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