



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials Safety
Administration**

8701 South Gessner, Suite 1110
Houston, TX 77074

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

July 23, 2012

Mr. Wilson Groen
President and CEO
Navajo Nation Oil and Gas Company, Inc.
50 Narbono Circle West
St. Michaels, AZ 86511

CPF 4-2012-5027S

Dear Mr. Groen:

Enclosed is a Notice of Proposed Safety Order (Notice) issued in the above-referenced case. The Notice proposes that you take certain measures with respect to your Running Horse Pipeline in Utah, Colorado, and New Mexico to ensure pipeline safety. Your options for responding are set forth in the Notice. Your receipt of the Notice constitutes service of that document under 49 C.F.R. §190.5.

We look forward to a successful resolution to ensure pipeline safety. Please direct any questions on this matter to me at (713) 272-2852.

Sincerely,

R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: Notice of Proposed Safety Order and Copy of 49 CFR §190.239

**DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION
OFFICE OF PIPELINE SAFETY
Southwest Region
Houston, TX 77074**

In the Matter of

**Navajo Nation Oil & Gas Company, Inc.,)
A Federal corporation)**

CPF 4-2012-5027S

Respondent

NOTICE OF PROPOSED SAFETY ORDER

Background and Purpose

Pursuant to Chapter 601 of title 49, United States Code, beginning on October 3, 2011, the Pipeline and Hazardous Materials Safety Administration (PHMSA) initiated an on-site integrated inspection of the safety of the Running Horse Pipeline (RHP) facilities located in Utah, Colorado, and New Mexico operated by Navajo Nation Oil and Gas Company, Inc. (NNOGC).

As a result of the ongoing inspection, it appears that conditions exist on the RHP facilities that pose a pipeline integrity risk to public safety, property or the environment. Pursuant to 49 U.S.C. §60117(l), PHMSA issues this Notice of Proposed Safety Order (Notice), notifying you of the preliminary findings of the inspection, and proposing that you take measures to ensure that the public, property, and the environment are protected from the potential risk.

Preliminary Findings

- NNOGC has owned and operated the RHP since purchasing it from Giant Industries, Inc. in 2002. The RHP is an 87 mile long 16-inch diameter hazardous liquid pipeline that originates near Montezuma Creek, UT, crosses into southwest Colorado, and terminates near Bisti, NM. The RHP receives produced crude oil from the Greater Aneth Field via a gathering system in Utah and New Mexico and transports approximately 15,000 barrels of crude oil per day to Western Refining near Bisti, NM.
- During PHMSA's inspection, NNOGC stated that the RHP was constructed in 1957 from 16-inch diameter low-frequency electric-resistance welded (ERW) pipe. Letters dated May 22 and May 23, 1974 from Four Way Company to Texas New Mexico Pipeline

Company indicate that the mainline was hydrostatically tested in two segments. The letters state that the predominant wall thickness is 0.250-inch with a lesser length of 0.312-inch wall.

- The RHP includes two pump stations located at Montezuma Creek, UT and Morgan Lake, NM. The stated maximum operating pressure (MOP) of the mainline pipeline between Montezuma Creek, UT and Morgan Lake, NM is 700 psig. The stated MOP of the mainline pipeline between Morgan Lake, NM and Bisti, NM is 445 psig. NNOGC also operates a terminal facility at the terminus of the pipeline located near Bisti, NM, including station piping, a measurement loop, and a truck loading facility.
- The pipeline traverses areas designated as high consequence areas (HCAs) by 49 CFR 195.450, including unusually sensitive areas (USAs) and other populated areas. The USAs include ecological unusually sensitive areas and drinking water areas as defined by 49 CFR 195.6. In addition, the pipeline route is within 5 miles of a highly populated area, the city of Farmington, NM. The RHP facility in Montezuma Creek is located within ½ mile of an elementary school and a secondary school.
- In 2004 and 2006, NNOGC was cited by PHMSA for non-compliance with the Part 195 regulations including not performing required inspections, failing to maintain required documentation, and failing to perform certain other actions to ensure the integrity and safety of the pipeline system (CPF 4-2006-5029, CPF 4-2004-5024). The 2006 case was resolved by means of a consent agreement whereby NNOGC agreed to perform additional actions to improve the safety of the RHP. The additional actions include implementing a maintenance management software system, including the entire pipeline in the RHP Integrity Management program, and performing emergency responder training. The requirements of this consent order have not yet been completed.
- During the inspection, NNOGC was unable to produce documentation demonstrating that atmospheric corrosion inspections had been performed as required for above-ground piping at Montezuma Creek, Morgan Lake and Bisti. In addition, NNOGC also failed to produce records of other inspections required by Part 195 including documentation of whether cathodic protection measurements meet the required criteria at some test locations.
- During the inspection, NNOGC was unable to produce documentation (e.g., mill records, drawings, materials lists, vendor specifications, materials tests, etc.) of the pipe materials, valves, or fittings for the RHP mainline or the station piping at Montezuma Creek, Morgan Lake and Bisti Stations. This documentation is a necessary part of the information needed to establish and confirm the pipeline MOP and was the subject of a PHMSA Advisory Bulletin, *Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation*, (ADB-11-01) that states “these records shall be traceable, verifiable, and complete.”

- NNOGC does not have complete hydrostatic test records or records for the entire line showing previous operational pressures that were used to establish the MOP according to 49 CFR 195 Subpart E. NNOGC has photocopies of documents indicating that the mainline was hydrostatically tested and records showing that some of the piping from the tanks at Montezuma Creek was tested but did not have records to substantiate the MOPs of the station piping at Montezuma Creek, Morgan Lake, or Bisti.
- During the inspection, NNOGC was unable to produce records to validate a number of the basic pipe characteristics needed in making important operating and maintenance decisions, including the source mill, specified minimum yield strength (SMYS), type of weld seam, and coating type.
- Records for RHP indicate that the overpressure protection devices at Montezuma Creek and Morgan Lake Stations were set more than 110% above the stated MOP of the pipeline. For example, a relief at Montezuma Creek was set to 280 psig for a pipeline with an apparent MOP of 150 psig. RHP personnel indicated that the 150 psig MOP was not correct but could not produce documentation of the pipe and fittings or a hydrostatic test record to substantiate any MOP much less a higher one. Also, records for inspection of overpressure protection devices at Morgan Lake Station indicate that in one instance the relief pressure was erroneously set to the design rating of the device rather than the MOP of the pipeline (1,000 psig vs. 450 psig). Relief devices are required to prevent potential failures that may result from events that can cause pipeline pressures above the design limits of the pipe and components and must be inspected according to 49 CFR 195.428. Errors in setting relief pressures could increase the risk of failures and also calls into question the effectiveness of NNOGC's Operator Qualification program required by 49 CFR Subpart G.
- The pre-1970 low frequency ERW pipe used in the construction of the RHP is considered to be susceptible to the risk of longitudinal weld seam failures. While the RHP does not have a documented history of weld seam failures, NNOGC personnel indicated that the previous operator had to make longitudinal weld seam repairs. NNOGC has not performed any specific integrity assessments using an In-line Inspection (ILI) or direct examination to confirm the integrity of the longitudinal weld seam.
- The RHP system includes three 80,000 barrel above-ground tanks located at Montezuma Creek Station. Montezuma Creek Station is located in the town of Montezuma Creek which is designated as a USA. These tanks receive the crude oil gathered from the Greater Aneth Field and deliver the crude into the RHP. NNOGC has never designated these tanks as regulated breakout tanks under Part 195 in its records. A piping and instrumentation diagram (P&ID) for Montezuma Creek reviewed by OPS during the inspection shows that surge from the mainline pump units can be relieved into these tanks, making them PHMSA regulated breakout tanks. However, the tanks have never been inspected in accordance with applicable requirements. These tanks are located within one-half mile of an elementary school and a secondary school located in Montezuma Creek.

- RHP's emergency plan for the Montezuma Creek Station facility involves reliance on a small local volunteer fire department in Montezuma Creek to respond in the event of an emergency. NNOGC does not have documentation for liaison activities to confirm that the volunteer fire department has the equipment, personnel, or expertise to properly respond to an emergency at this facility. The situation is similar for the Morgan Lake Station facility. NNOGC's nearest Oil Spill Response Organization (OSRO) is over 1 ½ hours of travel time away from Montezuma Creek. NNOGC is required by the [DATE] consent agreement to perform responder emergency training, but as of the time of the inspection had not yet completed this training.
- The RHP is operated using a Supervisory Control and Data Acquisition (SCADA) system. The primary computer terminal used to control the system is located at the RHP office at Montezuma Creek Station. The SCADA computer terminal sits unsecured in an open office area. NNOGC operates the pipeline on a continuous basis but staffs the control center only during office hours. After office hours, NNOGC personnel rely on the SCADA system to shut the system down automatically and provide notification via a call service in the event of a significant alarm (i.e., line balance, loss of pressure, increased flow rate, etc.). The line balance is determined only by measurement at the beginning and end of the 87 mile pipeline (Montezuma Creek, Bisti) and the route includes significant changes of elevation. NNOGC has not performed documented tests to confirm the performance of the alarming and shutdown for timely notification of personnel in the event of a line balance alarm, an abnormal operation or other significant alarm.
- NNOGC performed an ILI on the RHP in 2007 using caliper and MFL tools. This ILI identified some immediate repairs as defined by 49 CFR 195.52(h). These repairs were made using a Clock Spring composite wrap. However, the RHP operations and maintenance procedures required these repairs to be made only by cut out and replacement or a full encirclement pressure-containing welded sleeve. In addition, the repairs were made by personnel that had not been properly qualified under the RHP Operator's Qualification (OQ) program. Further, the OQ program did not include a covered task for the installation of a Clock Spring composite wrap. The ILI indications were primarily top side dents thought to be caused by third-party damage. However, NNOGC did not perform documented non-destructive testing at these sites to determine if stress cracks may have resulted from the impact or to confirm the appropriateness of using a composite wrap to make the repairs.

Given the top side dents identified by ILI and attributed to third-party damage, the operator's damage prevention and public awareness programs were reviewed by OPS during the inspection. While NNOGC has taken actions to improve its public awareness program, there are still issues with damage prevention. For example, the patrolling records contained no sightings for several months in succession. During the inspection, NNOGC acknowledged that it determined the aerial patrolling contractor had not been flying the correct route. Also, the field inspection revealed that some pipeline markers still did not have the correct operator name and contact number as required.

- In early 2011, NNOGC personnel made a temporary repair of an internal corrosion leak on one of the tank lines at Montezuma Creek. The temporary repair consisted of installing a non-pressure-containing sleeve on the pipe. NNOGC did not perform documented a lockout-tagout procedure to ensure that the affected facilities were not operated until a pressure-containing clamp was installed or permanent repairs were completed. There was no lockout in the SCADA system to prevent operation or any indication in the controller's log that the segment should not be operated. Operation of the pipeline segment containing a temporary repair not qualified for the potential pipeline pressure could result in a failure and release of crude oil.
- In early 2011, NNOGC experienced an internal corrosion leak at the Montezuma Creek Station. However, NNOGC has not used internal corrosion coupons or taken other action to monitor for internal corrosion at this location. Complaints about corrosiveness from RHP's customer at Bisti prompted the installation of an internal corrosion coupon at this location and the injection of inhibitor at Montezuma Creek. NNOGC's Integrity Management (IM) program determined the piping immediately downstream of Montezuma Creek has a high risk of internal corrosion. However, NNOGC has no documentation showing that it monitors inhibitor residuals and does not have an internal corrosion testing and monitoring program that can effectively determine if there are internal corrosion issues elsewhere on the RHP system. In addition, RHP has yet to implement preventative and mitigative (P&M) measures consistent with the identified threats as part of its IM program.

Areas of the RHP system are subject to significant soil erosion that has compromised structural support for the pipeline in some areas. NNOGC has contracted to have support structures installed but OPS observed that these are also being undercut by erosion. In some cases, the erosion has removed the soil from around the pipeline but left the ground surface intact. This makes it difficult to assess the extent of the erosion, but it appears that structural support of the pipeline has potentially been compromised in some areas. In addition, the loss of electrolyte around the circumference of the pipeline will not allow the pipeline to be adequately cathodically protected yet the portions of pipe exposed to the atmosphere cannot be completely inspected for atmospheric corrosion.

- NNOGC has not performed documented atmospheric corrosion inspections on the above-ground station piping at Montezuma Creek, Morgan Lake, and Bisti. Failing to perform atmospheric corrosion inspections was previously cited in the 2004 case. The failure to perform the required inspections according to the requirements of 49 CFR 195.583 and take actions to protect against atmospheric corrosion as required by 49 CFR 195.581 could result in the presence of corrosion.
- Based on OPS' review of the RHP corrosion control records during the inspection, there are segments on the pipeline that do not have adequate cathodic protection according to the requirements of 49 CFR 195.571. This issue was also previously cited. The failure to perform the required inspections according to the requirements of 49 CFR 195.573 and ensure one of the applicable cathodic protection criteria is being met could result in the presence of corrosion.

- In 2010, NNOGC constructed a new truck loading facility at Bisti, NM. This facility is connected to the RHP mainline that has a stated MOP of 450 psig. However, construction records show that some components are not qualified to operate at the mainline MOP. The Part 195 regulations do not allow the use of a gradient to protect a facility from an overpressure condition. RHP states they have recently transferred the truck loading facility to another NNOGC legal entity but there is no isolation of pipeline pressure between facilities. The failure to ensure that the facility design will not overstress the lower pressure-rated components according to 49 CFR 195.104 could result in unsafe operation.
- Additional issues with NNOGC's operations and maintenance procedures, operator qualification program, integrity management program, inspection records, and personnel training were identified by OPS during its inspection that potentially compromise the safe operation of the pipeline.

Proposed Issuance of Safety Order

Section 60117(l) of Title 49, United States Code, provides for the issuance of a safety order, after reasonable notice and the opportunity for a hearing, requiring corrective measures, which may include physical inspection, testing, repair, or other action, as appropriate. The basis for making the determination that a pipeline facility has a condition or conditions that pose a pipeline integrity risk to public safety, property, or the environment is set forth both in the above-referenced statute and 49 CFR §190.239, a copy of which is enclosed.

After evaluating the foregoing preliminary findings of fact and considering the age of the pipe involved, the manufacturer, the hazardous nature of the product transported and the pressure required for transporting such product, the characteristics of the geographical areas where the pipeline facility is located, the absence of MOP validation and other records, the safety inadequacies identified in the inspection including apparent non-compliance with breakout tank requirements, emergency plans, cathodic protection and corrosion control, SCADA alarm handling and training, repair procedures, overpressure protection, and structural support requirements, and the likelihood that the conditions could worsen or develop on other areas of the pipeline and potentially impact its serviceability, it appears that the continued operation of the affected pipeline without corrective measures would pose a pipeline integrity risk to public safety, property, or the environment.

Accordingly, PHMSA issues this Notice of Proposed Safety Order to notify Respondent of the proposed issuance of a safety order and to propose that Respondent take the measures specified herein to address the potential risk.

Response to this Notice

In accordance with §190.239, you have 30 days following receipt of this Notice to submit a written response to the official who issued the Notice. If you do not respond within 30 days, this constitutes a waiver of your right to contest 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 Safety Order. In your response, you may notify that official that you intend to comply with the terms of the Notice as proposed, or you may request that an informal consultation be scheduled (you will also have the opportunity to request an administrative hearing before a safety order is issued). Informal consultation provides you with the opportunity to explain the circumstances associated with the risk condition(s) alleged in the notice and, as appropriate, to present a proposal for a work plan or other remedial measures, without prejudice to your position in any subsequent hearing. If you and PHMSA agree within 30 days of informal consultation on a plan and schedule for you to address each identified risk condition, we may enter into a written consent agreement (PHMSA would then issue an administrative consent order incorporating the terms of the agreement). If a consent agreement is not reached, or if you have elected not to request informal consultation, you may request an administrative hearing in writing within 30 days following receipt of this Notice or within 10 days following the conclusion of an informal consultation that did not result in a consent agreement, as applicable. Following a hearing, if the Associate Administrator finds the facility to have a condition that poses a pipeline integrity risk to the public, property, or the environment in accordance with §190.239, the Associate Administrator may issue a safety order.

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).

In your correspondence on this matter, please refer to **CPF 4-2012-5027S** for each document you submit, please provide a copy in electronic format whenever possible.

Proposed Corrective Measures

Pursuant to 49 U.S.C. §60117(l) and 49 C.F.R. §190.239, PHMSA proposes to issue to Navajo Nation Oil and Gas Company a safety order incorporating the following remedial requirements with respect to its Running Horse Pipeline located in Utah, Colorado, and New Mexico:

1. Within 60 days after a safety order is issued, NNOGC must develop and submit to the Director, Southwest Region for approval a work plan and schedule to achieve compliance and ensure the safe operation of the RHP and carry out the work plan as follows:

- (A) NNOGC must engage an independent third-party auditor with the appropriate expertise, qualifications, and experience to prepare the work plan and to oversee the correction of all compliance deficiencies identified during the OPS inspection of the RHP system and its operations. Selection of the auditor must be approved by the Southwest Region Director prior to initiating work required by this Order. The auditor must submit all findings, recommendations, and proposed actions to remedy the deficiencies, in writing, directly to the Southwest Region Director. The auditor must also make periodic written status reports on the implementation of the work plan directly to the Southwest Region Director.
- (B) Compile, organize, and retain all documentation necessary to confirm the MOP of the RHP system according to the guidelines specified by Advisory Bulletin ADB-11-01 and as required by 49 CFR 195. The records used to validate the MOP must be traceable, reliable, and complete. The pipe characteristics must be validated by appropriate records or by actual measurements and destructive testing using coupons taken from the pipeline in various specified locations. All pipe, valves, fittings, and components must be identified and accompanied by supporting documentation for the rated operating pressure. NNOGC must also define and implement a means to document any changes made to the pipeline system and reflect these changes in the records, drawings, maps, etc., of the RHP.
- (C) If NNOGC cannot confirm the MOP of any pipeline segment on the RHP system, it must work with PHMSA to establish a site specific technically acceptable MOP based on existing records, old or new hydrostatic tests, possible material replacements, etc. Compile, organize, and retain accurate, complete drawings, maps, and records of all RHP facilities including Montezuma Creek Station, Morgan Lake Station, and Bisti Station according to 49 CFR 195.404 and 49 CFR 195.402(c)(1). Ensure that the RHP is accurately located and that the operator has current maps showing the location of the pipeline system. Develop and implement procedures to ensure that all maps and drawings are periodically updated to ensure they are accurate.
- (D) Given the susceptibility of the ERW longitudinal weld seam to failure, NNOGC must include in its Integrity Management Plan a means to evaluate the integrity of the longitudinal weld seam of the RHP, determine if any integrity-threatening conditions exist, and take appropriate Preventative and Mitigative measures. RHP must ensure that personnel performing this work have the appropriate qualifications.
- (E) Perform a documented review of the location, design, and adequacy of overpressure protection devices on the RHP and ensure that all

overpressure protection devices are set to protect the pipeline from an overpressure condition according to the requirements of 49 CFR 195.

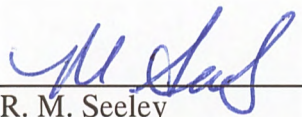
- (F) Ensure that the breakout tanks at Montezuma Creek are fully compliant with all applicable requirements of 49 CFR 195, including all API 653 required inspections. If the API 653 required inspections identify breakout tank repairs or modifications necessary to comply with any Part 195 breakout tank requirements, NNOGC must have documentation that the repairs or modifications have been completed or an engineering analysis showing why the repairs were not determined to be necessary for the safety of the breakout tanks.
- (G) Ensure that all controllers have been trained and qualified under the RHP Operator Qualification plan as well as 49 CFR 195.446 and that NNOGC is in compliance with the requirements of 49 CFR 195.446.
- (H) Remedy all deficiencies with the RHP operations and maintenance procedures and ensure that all personnel are fully trained in the procedures. Implement a means to perform a documented review of the effectiveness of the procedures and incorporate identified changes. Ensure that the RHP maintenance management program is implemented to prompt for all Part 195 required inspections and that the inspections are documented and actions taken to remedy any identified deficiencies in a timely manner.
- (I) Confirm that patrolling of the pipeline is performed and documented as required by 49 CFR 195, and that activities on or near the right-of-way are being properly identified to appropriate personnel in a timely manner. Immediately remove and replace all pipeline markers with the incorrect operator name and/or telephone number.
- (J) Remedy all deficiencies with the RHP Operator Qualification program including ensuring all covered tasks are defined, thoroughly training appropriate personnel, and making improvements to the re-qualification process. Repairs previously made by unqualified personnel must be re-inspected to ensure that they are adequate.
- (K) Remedy all deficiencies with the RHP Integrity Management program including ensuring that all threats have been appropriately identified, the risks have been properly documented and evaluated, and that appropriate Preventive and Mitigative measures have been defined and implemented.
- (L) Remedy all deficiencies with the RHP cathodic protection system and ensure that all parts of the pipeline system are compliant with the cathodic protection criteria required by 49 CFR 195.571 Subpart H.

- (M) Remedy all deficiencies with the RHP atmospheric corrosion program including defining procedures for making accurate, consistent assessments of above-ground and exposed piping, ensuring all inspections are performed within the intervals specified by Part 195, identifying any work that is required to protect the pipeline system from atmospheric corrosion and scheduling identified work within an appropriate time period.
 - (N) Define and implement an internal corrosion program to monitor for corrosive conditions, define appropriate Preventative and Mitigative measures, and monitor the results (effectiveness) of the program.
 - (O) Implement appropriate measures to ensure that erosion compromising the structural support of the pipeline is addressed and appropriate measures taken to prevent recurrence.
 - (P) Implement appropriate measures to ensure that the RHP Emergency Procedures are adequate to respond to a fire involving any of the pipeline facilities and that the appropriate liaison has been established with local officials to ensure that any agency used by to fulfill NNOGC's emergency response responsibilities under Part 195 has adequate equipment, training, and staffing.
2. NNOGC must revise the work plan if necessary to incorporate new information obtained during the preparation and implementation of the work plan and is to submit any such plan revisions to the Director, Southern Region for approval. The Director may approve plan revisions incrementally.
 3. The work plan and all revisions will become incorporated into the safety order.
 4. Beginning 90 days after a safety order is issued, RHP is to prepare and submit monthly progress reports to the Director, Southwest Region, with sufficient detail to allow the Director to track the progress of the work plan and to provide the Director an opportunity to observe and inspect activities as they occur.
 5. NNOGC must implement the work plan as it is approved by the Director, including any revisions to the plan.
 6. The Director may grant an extension of time for compliance with any of the terms of the safety order upon a written request timely submitted demonstrating good cause for an extension.
 7. RHP may appeal any decision of the Director to the Associate Administrator for Pipeline Safety. Decisions of the Associate Administrator shall be final.

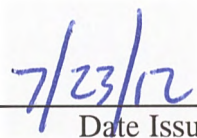
The actions proposed by this Notice of Proposed Safety Order are in addition to and do not waive any requirements that apply to Respondent's pipeline system under 49 C.F.R. Parts 190

through 199, under any other order issued to Respondent under authority of 49 U.S.C. § 60101 et seq., or under any other provision of Federal or state law.

After receiving and analyzing additional data in the course of this proceeding and implementation of the work plan, PHMSA may identify other safety measures that need to be taken. In that event, Respondent will be notified of any proposed additional measures and, if necessary, amendments to the work plan or safety order.



R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration



Date Issued