

Garden Creek Plant – Gas Processing
McKenzie County
ONEOK Rockies Midstream, LLC
(Formally Bear Paw Energy, LLC)
ND PSC Case No. PU-10-568
Keitu Project No. 569-209

Post-Construction Inspection Report

April 2014



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ONEOK Rockies Midstream, LLC
Garden Creek Plant – Gas Processing
Phase I Only
(McKenzie County, ND)
Prepared by Keitu Engineers & Consultants, Inc.

Executive Summary

The State of North Dakota, acting through its North Dakota Public Service Commission (NDPSC), Division of Public Utilities, has contracted Keitu Engineers & Consultants, Inc. (Keitu) to perform consulting services for post-construction siting inspections. This report addresses the Orders established by the NDPSC and issues established in File No. PU-10-568. The Garden Creek Plant (Plant) is located in McKenzie County, ND. The Plant is owned and operated by ONEOK Rockies Midstream, LLC (ONEOK). Construction for the Project began in November 2010 and was completed in September 2012. The purpose of the construction inspection was to ensure the Project was constructed in compliance with the siting laws, rules, and the applicable PSC Order for the Project. Prior to the construction inspection, Keitu reviewed all Project documents to identify any and all aspects requiring site verification.

The site was visually inspected on March 27, 2014 by Keitu staff. An onsite interview with Plant employees was also conducted at this time. Overall, the project was very well-maintained and in good condition. It appeared to be constructed as planned with numerous efforts to minimize impacts. However, there were two non-critical issues that may need to be resolved for the Project to be considered in full compliance. Keitu recommends that the PSC request the following from the company: 1) all permits and licenses obtain to complete Order #4, and 2) paper copy and electronic as-built facility design specifications that can be imported into ESRI GIS mapping in order to complete Order 25. The PSC will need to decide whether these recommendations are necessary to fulfill Project obligations. Keitu expects that the follow-up action taken by ONEOK to address these particular issues can be corroborated in writing.

Introduction

The Garden Creek Plant – Gas Processing facility (Project) was opened in January 2010. The Project is operated by ONEOK Rockies Midstream, L.L.C formally known as Bear Paw Energy, LLC (Bear Paw) an indirect, fully owned subsidiary of ONEOK Partners, L.P. (ONEOK). The Project comprises approximately 80 acres. The Garden Creek Gas Plant is a 100 million cubic feet per day cryogenic gas processing plant, designed to process rich Bakken gas production developed in eastern McKenzie County and southwestern Mountrail County. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order on Case No. PU-10-568 on November 19, 2010, granting a Certificate of Site Compatibility for Energy Conversion Facility No. 19.

Purpose and Scope of Inspection

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorizes the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and welfare of the citizens of North Dakota. Construction inspections ensure the Project is constructed in compliance with siting laws, rules, and the applicable Commission Findings of Fact, Conclusions of Law, and Order (Order).

The North Dakota PSC retained Keitu Engineers & Consultants, Inc. (Keitu) to complete a post-construction inspection of the Project. The inspection process included a review of the Application for a Certificate of Site Compatibility, Order, and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings. This report includes, but is not limited to, site visit observations, documentation of compliance deficiencies, and a summary of issues that should be addressed for the Project to be considered complete and in full compliance.

Methods

Keitu reviewed North Dakota siting laws and rules, the Application for a Certificate of Site Compatibility, and the Order for the Project to identify what Project-specific documentation was required for compliance. Keitu then reviewed Project documents in the PSC Online Case Search to identify those siting laws, rules, and Application and Order assertions that already had written verification, those that still required documentation, and those that required physical site verification.

Nathan Gaffrey, Project Engineer, and Heather Patch, Staff Engineer, of Keitu visited the Project area on March 27, 2014. The site was visually inspected by Keitu with a job walk led by

Domingo DelValle, ONEOK Plant Engineer. Digital photographs were taken showing typical Project infrastructure and documenting problem areas (Appendix A).

Orders

The following section includes discussion of a list of components of the Project that were asserted in the Application and Order which could be documented during the post-construction inspection to verify compliance with siting laws, rules and the Order for the Project, via either written documentation or physical site verification. Included are detailed findings and observations from Keitu personnel involved in the post-construction inspection for the Project.

1. Bear Paw Energy, LLC's application for a waiver of procedures and time schedules is granted.

In a September 22, 2010 motion (Docket #7), PFJ moved the Commission to deem the application complete and issue a Notice of Filing and Notice of Hearing in the request of Bear Paw Energy, LLC (now ONEOK Rockies Midstream, LLC) for a certificate of site compatibility for the construction and operation of a 100 million standard cubic feet per day gas processing plant in McKenzie County of North Dakota, Case No. PU-10-568.

Order #1 is complete.

2. Certificate of Site Compatibility for Energy Conversion Facility No. 19 is issued to Bear Paw Energy, LLC for the construction, operation and maintenance of the Garden Creek Gas Processing Plant. For purposes of the Certificate, the Site consists of the 80-acre project site.

On November 19, 2010 the Commission designated an energy conversion facility site for Bear Paw Energy, LLC (now ONEOK Rockies Midstream, LLC) for the construction of a 100 million cubic feet per day gas processing plant (the Garden Creek Gas Plant) in McKenzie County, North Dakota. The certificate (Docket #46) was issued in accordance with the Order of the Commission dated November 19, 2010 in Case No. PU-10-568 and was subject to the conditions and limitations noted in the order.

Order #2 is complete.

3. The October 19, 2010 Certification Relating to Order Provisions – Facility Siting is incorporated by reference and attached to this order.

Order Provisions/ Facility Sitings

- 1. Bear Paw understands and agrees that the Certificate of Site Compatibility will be issued by the Commission Subject to the conditions and criteria set forth in Chapter 40-22 of the North Dakota Century Code and Chapter 69-06-08 of the North Dakota Administrative Code, and that Bear Paw will be responsible for compliance with this order and conditions and criteria set forth in the applicable laws and rules.**

On November 19, 2010 the Commission designated an energy conversion facility site for Bear Paw Energy, LLC (now ONEOK Rockies Midstream, LLC) for the construction of a 100 million cubic feet per day gas processing plant (the Garden Creek Gas Plant) in McKenzie County, North Dakota. The certificate (Docket #46) was issued in accordance with the Order of the Commission dated November 19, 2010 in Case No. PU-10-568 and was subject to the conditions and limitations noted in the order. No issues of blatant non-compliance with this order and conditions and criteria set forth in the applicable laws and rules have been found during the post-construction inspection.

Order #1 is complete.

- 2. Bear Paw agrees to hold a preconstruction conference prior to commencement of any construction, which must include a Bear Paw representative, its construction supervisor, and a representative of Commission Staff, to ensure that Bear Paw fully understands the conditions set forth in the Commission's order.**

A preconstruction meeting was held to ensure all contractors fully understand the conditions set forth in the Order.

The preconstruction conference (Docket #49) was held on November 22, 2010. In attendance was Patrick Fahn (PJF), representing the ND PSC, as well as representatives from ONEOK and Linde Process Plants (ONEOK's contractor).

The conference included a review of the conditions in the Order in detail. The notes contain all action items for the group and the designated project personnel that will be responsible for reporting requirements during the project.

Order #2 is complete.

- 3. Bear Paw agrees to comply with the rules and regulations of all other agencies having jurisdiction over any phase of the proposed energy conversion facility/expansion including all city, township, and county zoning regulations.**

ONEOK initiated consultant with numerous federal and state agencies as noted in the Siting Application (Docket #4). According to these notification lists in the Siting Application three federal agencies, six state agencies and one county were notified of the Project.

Order #3 is complete.

- 4. Bear Paw agrees that it shall obtain all other necessary licenses and permits, and shall provide copies of all licenses and permits to the Commission prior to construction activity associated with the energy conversion facility/expansion that requires said license or permit.**

According to the preconstruction conference meeting minutes (Docket #49), Bill McCarthy stated that all permits required for initial construction had been obtained. The air permit application was in process, but not required for initial construction and the discharge permit for hydrostatic testing of pipe was in process but not yet required. During the site visit and employee interview, Mitchell Anderson, Environmental Engineer with ONEOK, stated all environmental permits were up to date. After a review of the Commission's Project files, it appears not all permits have been supplied to the Commission. Commission can request documentation of permits, if required.

Order #4 is complete contingent on permits being supplied to the Commission upon request.

- 5. Bear Paw understands and agrees that the Certificate of Site Compatibility is subject to suspension or revocation and may, in an appropriate and proper case, be suspended or revoked for failure to comply with the Commission's order, the conditions and criteria of the certificate or subsequent modification, or failure to comply with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies.**

ONEOK has complied with the applicable statutes, rules, regulations, standards, and permits of other state or federal agencies to date. The Commission has not suspended or revoked for failure to comply with the Commission's order, the conditions and criteria of the certificate.

Order #5 is complete.

- 6. Bear Paw agrees to maintain records that will demonstrate that it has complied with the requirements of the Commission's order and the Certificate of Site Compatibility, and that it will preserve these records for Commission inspection at any reasonable time upon reasonable notice.**

According to the preconstruction conference meeting minutes (Docket #49), Al Cuykendall of ONEOK was designated as the keeper of records for ONEOK.

Order #6 is complete.

- 7. Bear Paw agrees to inform the Commission of its intent to start construction on the energy conversion facility/expansion prior to the commencement of construction. Once construction has started, Bear Paw shall keep the Commission updated of construction activities on a weekly basis.**

ONEOK informed the Commission of their intent to start on November 22, 2010 (Docket #50) prior to the commencement of construction. Once construction started, ONEOK submitted Weekly Progress reports of construction to the Commission. Two weekly progress reports are missing. Progress reports for weeks ending 1-15-2012, 2-12-2012, 3-11-2012, 4-22-2012, 7-8-2012, and 9-16-2012 are missing. Construction progress for the weeks can be inferred by comparing progress reports before and after. It is at the discretion of the Commission to decide whether or not to request this additional documentation.

In Keitu's opinion, Order #7 is complete.

- 8. Bear Paw agrees to construct and operate the energy conversion facility/expansion in the manner described in Bear Paw's application, in any late filed exhibits and supplemental materials, and in accordance with all applicable safety requirements.**

ONEOK constructed the Project in accordance with the application and all applicable safety requirements. Based on site inspection the facility was constructed as proposed to the Commission. The construction and operation of the facility is in accordance with all safety requirements.

Order #8 is complete.

- 9. Bear Paw agrees to report promptly to the Commission the presence in the permit area of any critical habitat or threatened species, endangered species, bald eagles, or golden eagles that Bear Paw becomes aware of and which were not previously reported to the Commission.**

A review of the weekly construction progress reports (Docket #'s 50-77, 79, 81-142) did not note any critical habitat in the area during construction. No report of any critical habitat of threatened or endangered species, or of bald or golden eagle's notification to the Commission was found in Case File No. PU-10-568.

Order #9 is complete.

- 10. Bear Paw understands that all cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office and approved prior to the start of any fieldwork and construction activity in the affected area.**

A Class I files and records search, and also a Class III pedestrian survey of the entire 80-acre proposed site for archeological and cultural resources was done by SWCA Environmental Consultants (SWCA). These surveys supported a finding of "no historic properties affected" and "no significant sites affected" and was recommended as clearance to proceed as planned by SWCA (Docket #4). The North Dakota State Historical Society issued a concurrence in September, 2010 (Docket #5). The North Dakota State Historical Society also issued a letter of concurrence with the Unanticipated Discovery Plan in November, 2010 (Docket #44).

Order #10 is complete.

- 11. Bear Paw understands and agrees that if any cultural resource, paleontological site, archeological site, historical site, or grave site is discovered during construction, it must be marked, preserved and protected from further disturbances until a professional examination can be made by the State Historical Society, a report of such examination is filed with the Commission, and clearance to proceed is given by the Commission.**

No cultural resource, paleontological site, archeological site, historical site, or grave site was discovered during construction. This is based on review of weekly construction progress reports and verification that no correspondence was identified in the Commission's file.

Order #11 is complete.

- 12. Bear Paw understands and agrees that any underground piping or electric line crossings of graded roads shall be bored unless the responsible governing agency specifically permits Bear Paw to open cut the road.**

According to the preconstruction conference meeting minutes (Docket #49), Russ Clark of ONEOK stated that there were no roads being open cut or requiring boring and the electrical lines were in an easement on the southern boundary of the property and would not be required to be relocated.

Order #12 is complete.

- 13. Bear Paw understands and agrees that all pre-existing township and county roads and lanes used during construction must be repaired or restored to a condition that is equal to or better than the condition prior to the construction of the energy conversion facility/expansion and that will accommodate their previous use, and that areas used as temporary roads or working areas during construction must be restored to their original condition.**

Existing roads and trails were to be left in a comparable or better condition than what existed before construction. During the site visit on March 27, 2014, access roads to the Project appeared to be well maintained. No existing roads were noted to be in unfavorable condition.

Order #13 is complete.

- 14. Bear Paw understands and agrees that construction must be suspended when weather conditions are such that construction activities will cause irreparable damage to roads or land, unless adequate protection measures approved by the Commission are taken.**

According to the weekly progress report for week ending 12-26-2010 (Docket #55) workers were sent home early for the Holidays due to heavy snow early in the week. Based on review of the progress reports, construction was suspended or delayed when weather conditions were such that construction should not occur.

Order #3 was followed.

- 15. During construction, at least 12 inches of topsoil, where available (or topsoil to the depth of cultivation, whichever is greater), over and along areas where facilities will be placed must be stripped and segregated from subsoil. Any area on which excavated subsoil will be placed must first be stripped of topsoil. After backfilling with subsoil is completed, any excess subsoil must be placed over the excavation area, blending the grade into existing topography. Topsoil must not**

be placed within the footprint of the facilities, and must be placed over areas containing topsoil.

This item is difficult to verify during a post-construction inspection. Based on previous adherence by ONEOK to the orders and provision, it could be inferred that this item was followed. However, if requested by the commission, ONEOK should provide documentation that the topsoil was replaced properly.

In Keitu's option, Order #15 is complete.

16. Bear Paw understands and agrees that reclamation, fertilization, and reseeding is to be done according to the Natural Resources Conservation Service recommendations, unless otherwise approved by the Commission.

Construction activities disturbed soils and vegetation to an extent that would require some reseeding following completion of operations. According to weekly progress reports (Docket #142), reseeding for the property was complete the week ending 9-23-2012. The majority of the site will not be reclaimed due to the nature of the gas plant operation. During the site visit on March 27, 2014 no issues regarding the reclamation of the surrounding area were noted.

In Keitu's opinion, Order #16 is complete.

17. Bear Paw understands and agrees that its obligation for reclamation and maintenance of the energy conversion facility site, associated facilities, and roadways will continue throughout the life of the energy conversion facility.

Regular maintenance and inspections are performed during the life of the facility to ensure its continued integrity. When problems are found, repairs will be scheduled. The facility is graveled and fenced. ONEOK conducts inspections and service orders are established if maintenance is required.

Based on a post construction inspection, ONEOK has performed reclamation and maintenance of the facility has continued since the facility have been in operation.

Order #17 has been followed to date.

18. Attached is a document titled Tree and Mitigation Specifications. Bear Paw agrees to comply with these specifications, if the Commission chooses to include all or a portion of the requirements and conditions contained in this attachment in its Order.

According to the Application, no trees required removal for the construction of the Project. No woodland areas were found on the site.

Order #18 is complete.

19. Bear Paw agrees that staging areas or equipment shall not be located on land owned by somebody other than Bear Paw unless otherwise negotiated with landowners.

A review of the Project files did not indicate that any temporary staging areas were required on land other than owned by ONEOK.

Order #19 was followed.

20. Bear Paw agrees that it shall remove any waste that is a product of construction and operation, restoration, and maintenance of the site, and properly dispose of it on a regular basis.

A review of the weekly construction reports showed that ONEOK and its contractors were diligent in site cleanup throughout the construction of the Project. No unusual waste was noted during the site visit on March 27, 2014.

Order #20 is complete.

21. Bear Paw agrees that it shall provide any necessary safety measures for traffic control or to restrict public access to the energy conversion facility/expansion.

ONEOK restricts public access to site. All visitors must check-in at the front office and go through a safety orientation before being allowed to enter the Garden Creek Gas Plant.

Order #21 is complete.

22. Bear Paw agrees that it shall advise the Commission of any extraordinary events which take place at the site of the energy conversion facility/expansion, including but not limited to injured workers or private individuals, the death of any threatened or endangered species, or the discovery of a large number of dead birds or bats on the site within five business days of such event.

A review of the Project files indicated an injury report on file (Docket #78). A worker was injured on May 9th, 2011 and the Commission received initial email notification on May 13th, 2011. The final injury report (Docket #80), including actions taken and root case was received by the Commission on May 31st, 2011.

Order #22 was followed.

- 23. Bear Paw agrees that it shall implement a procedure for how complaints concerning the proposed energy conversion facility/expansion will be handled by Bear Paw.**

According to the preconstruction conference meeting minutes (Docket #49), Dick Vande Bossche of ONEOK was designated to be the point of contact for all complaints concerning the facility.

Order #23 is complete.

- 24. Bear Paw agrees to provide the Commission with engineering design drawings showing surveyed structure prior to construction, and understands and agrees that it must obtain approval from the Commission or from Commission Staff prior to any changes in the energy conversion facility/expansion.**

ONEOK provided sufficient design specifications in the Application and exhibits prior to construction to understand and verify the proposed energy conversion facility. ONEOK filed a plot plan that was overlaid on the drawing for construction Stormwater permit.

Order #24 was followed.

- 25. Bear Paw agrees to provide the Commission with both an electronic and a paper copy of the design specifications for the construction of the energy conversion facility showing the location of the energy conversion facility as built, and will provide this information within three months of the completion of the construction. Bear Paw also agrees, to provide an electronic version of the as-built facility design specifications that can be imported into ESRI GIS mapping software within 3 months of the completion of the construction. This electronic map data must be referenced to the North Dakota coordinate system of 1983, North and/or South zones US. Survey feet (NAD 83) UTM Zone 13N or 14N feet (NAD 83), or geographic coordinate system (WGS 84) feet. The vertical data must be in the appropriate vertical datum for the coordinate system used. All submissions must specify the datum in which the data was developed.**

ONEOK initially provided sufficient design specifications in the Application and exhibits to understand and verify the proposed energy conversion facility. A review of the Project files did not indicate whether or not ONEOK has provided final as-built electronic and paper copies of the design specifications. If not already done so, ONEOK should provide a paper copy and electronic as-built facility design specifications that can be imported into ESRI GIS mapping in order to complete Order 25.

- 26. Bear Paw understands and agrees that the authorizations granted by the Certificate of Site Compatibility for the energy conversion facility are subject to**

modification by order of the Commission if deemed necessary to protect further the public or the environment.

A review of the Project files did not indicate that any authorizations granted by the Certificate of Site Compatibility for the energy conversion facility were modified by the Commission to date.

Order #26 is complete.

27. Bear Paw agrees to inform the Commission in writing of any modifications to the energy conversion facility or of any plans to modify the site plan for the energy conversion facility. Any additions or modifications to the site plan for the energy conversion facility must be approved in writing by the Commission or Commission staff. Approval may be granted after notice and opportunity for hearing.

ONEOK submitted an additional application for certificate of site compatibility in September 2012 for the construction of an additional 100 million cubic feet per day gas processing facility (Garden Creek II) adjacent to the Garden Creek Gas Plant. The Commission issued a Certificate of Site Compatibility for Energy Conversion Facility No. 31 on December 21, 2012. The certificate was amended on May 22, 2013 to include an additional 100 million cubic feet per day gas processing plant (Garden Creek III).

Order #27 was followed.

Conclusions

Overall, the Project appeared to be constructed as designed with minimal impacts to the surrounding natural and human environment. The Project site was in good condition and well maintained. Keitu recommends that the PSC request the following from the company: 1) all permits and licenses obtain to complete Order #4, and 2) paper copy and electronic as-built facility design specifications that can be imported into ESRI GIS mapping in order to complete Order #25. The PSC will need to decide whether these recommendations are necessary to fulfill Project obligations. Keitu expects follow-up action taken by ONEOK to address these particular issues can be corroborated in writing.

Appendix A – General Project/ Plant Pictures



Picture 1 General Site Layout



Picture 2 Inlet Gas Piping



Picture 3 Storage Tanks



Picture 4 Stabilizer Reboiler



Picture 5 Heat Exchanger



Picture 6 Propane Refrigeration Condensers



Picture 7 Propane Refrigeration Compressor



Picture 8 Blow down/ Sampling Station



Picture 9 Diesel-Fired Emergency Electric Generator



Picture 10 Residue Gas Compressor



Picture 11 Instrument Control Air



Picture 12 Flare Stack and Associated Pipe Rack



Picture 13 Residue Gas Cooler



Picture 14 Fractionation Column



Picture 15 Methanol Vessel



Picture 16 Expander



Picture 17 Hot Oil Heater



Picture 18 Product Storage Vessels



Picture 19 Pipeline Pig Receivers



Picture 20 Twelve inch diameter pipeline "PIGs"