

**RECEIVED**

June 28, 2011

JUN 29 2011

**PUBLIC SERVICE COMMISSION**

North Dakota Public Service Commission  
Darrell Nitschke  
Executive Secretary  
600 E. Boulevard Avenue Dept. 408  
Bismarck, ND 58505-0489

Re: Case No. PU-06-317 Contract No. PU-599-10

Dear Mr. Nitschke,

The State of North Dakota, acting through its North Dakota Public Service Commission (NDPSC), Division of Public Utilities, has engaged Keitu Engineers & Consultants, Inc. to perform consulting services for post-construction siting inspections. A final report was sent to you electronically via email. Enclosed is an original and copy of the final report for the post-construction inspection of Case No. PU-06-317.

The Executive Summary identifies items that still need attention by the Commission staff and siting applicant to ensure that the facilities for the project have been constructed in compliance with items identified by the ND Public Service Commission. Once these items are addressed, the Commission can act on final closeout of the construction phase of the project.

Should Commission staff or the NDPSC have any questions, please contact me for assistance.

Sincerely,



Timothy Spilman  
Project Manager

Enclosures



---

**Enbridge Pipelines (North Dakota) LLC  
Upgrade existing Alexander Station (McKenzie), Trenton Station  
(Williams), Beaver Lodge (Williams) and Stanley (Mountrail)  
Crude Oil Pump Stations**

Prepared by Timothy Spilman, Project Manager, Keitu Engineering & Consultants, Inc.  
Final Report

**Executive Summary**

Enbridge upgraded the existing Alexander, Trenton, Beaver Lodge and Stanley pump stations on its existing crude oil pipeline. The additions took place within the perimeter of the existing Enbridge station sites. The upgrade at Alexander Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Trenton Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Beaver Lodge Station included the addition of pumps and associated piping and equipment. The upgrade at Stanley Station included the addition of pumps and associated piping and equipment.

In reviewing Order # 7, The Stanley Station was completed in a continuous and coordinated manner. Not enough information was found in the case file to verify that reclamation was continuous and coordinated with ongoing construction at Beaver Lodge Station, Alexander Station, and Trenton Station. Enbridge should provide the Commission with documentation that cleanup and painting occurred in the spring of 2008. The PSC post construction field inspection verified that reclamation and painting did occur. Enbridge's documentation would complete Order # 7.

No record of tests to establish maximum operating pressure (hydro tests) or the design maximum operating pressure was found for the station piping in the commission's file. Passing the pressure test insures that no irreparable damage occurred on the station piping during construction and operation of the stations are within design limits. A written record of each pressure test at each station should be provided by Enbridge to complete the case file. The station pressure tests and design MOP is required for completion of Order #10.

Enbridge Pipelines (North Dakota) LLC has complied with all other Order requests of the Commission for case file PU-06-317. This report did not address the Order of the Commission dated July 28, 2005 in Case No. PU-05-274 and the Order of the Commission dated October 11, 1983, in Case No. 10,472 mentioned in the Certificate of Site Compatibility for Transmission Facility Corridor Second Amended Corridor Certificate Number 40 and Route Permit for the Construction of a Transmission Facility Second Amended Permit Number 49 for the upgrades at Alexander Station and the Trenton Station.



## Preliminary Statement

On July 19, 2006 Enbridge Pipelines (North Dakota) LLC (Enbridge) filed a consolidated letter of intent and request for waiver of procedures and time schedules, and a request to amend its existing corridor or route permit. Enbridge proposed to upgrade the existing Alexander, Trenton, Beaver Lodge and Stanley pump stations on its existing crude oil pipeline. The proposed additions took place within the perimeter of the existing Enbridge station sites.

The upgrade at Alexander Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Trenton Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Beaver Lodge Station included the addition of pumps and associated piping and equipment. The upgrade at Stanley Station included the addition of pumps and associated piping and equipment.

On July 26, 2006 the Commission acknowledged the Enbridge letter of intent, assessed a filing fee, waived the one-year waiting period between filing a letter of intent and an application, and issued a Notice of Filing and Notice of Opportunity for Hearing. No comments or requests for hearing were received. The Commission determined the matter without a hearing.

On August 23, 2006 the Commission adopted the Order, and issued a Second Amended Corridor Permit # 93, and issued Route Permit # 103. The corridor and route permits were to upgrade the operation of the Beaver Lodge and the Stanley crude oil pipeline pumping stations with associated facilities and pipeline interconnections in Williams and Mountrail Counties, ND. The Order (item #1) issued Second Amended Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and Second Amended Permit for the Construction of a Transmission Facility No. 49 granting authority to upgrade the Alexander Station and the Trenton Station.

The State of North Dakota, acting through its North Dakota Public Service Commission (NDPSC), Division of Public Utilities, has engaged Keitu Engineers & Consultants, Inc. to perform consulting services for post-construction siting inspections. This report only addresses the Orders established by the NDPSC and issues established in File No. PU-06-317.

### **The Commission Orders:**

- 1. Enbridge is issued Second Amended Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and Second Amended Permit for the Construction of a Transmission Facility No. 49 granting authority to upgrade the Alexander Station and the Trenton Station.**

On August 23, 2006 the Commission granted a Certificate of Site Compatibility for Transmission Facility Corridor Second Amended Corridor Certificate No. 40 and Route Permit for Construction of a Transmission Facility Second Amended Permit 49 (Docket #17) for construction and operation of an eight-inch crude oil pipeline with associated facilities and pipeline



interconnections in Williams and McKenzie Counties, ND. The associated facilities were for upgrades to the Alexander Station and the Trenton Station. Order # 1 completed.

- 2. Enbridge is issued Certificate of Site Compatibility Facility Corridor No. 93 and Permit for the Construction of a Transmission Facility No. 103 granting authority to upgrade the Beaver Lodge Station and the Stanley Station.**

On August 23, 2006 the Commission granted a Certificate of Site Compatibility for Transmission Facility Corridor - Corridor Certificate No. 93 and Route Permit for Construction of a Transmission Facility - Permit 103 (Docket #15) for upgrade and operation of the Beaver Lodge and the Stanley crude oil pipeline pumping stations with associated facilities and pipeline interconnections in Williams and McKenzie Counties, ND. Order # 2 completed.

- 3. A preconstruction conference shall be held prior to the commencement of any construction. The conference shall include an Enbridge representative, Enbridge's construction supervisor, and Commission staff, to ensure that Enbridge fully understands the conditions set forth in this order.**

On October 2, 2006, a pre-construction conference (Docket # 22) was held (by WebEx meeting). In attendance was Brent Horton, Supervisor Special Projects (Enbridge), Mike Harris, Senior Lands and Right-of Way Specialist (Enbridge); Kris Benson, Environment Analyst (Enbridge); Trent Mattick, Senior Construction Coordinator (Enbridge), Fred Washek, Construction Coordinator (Enbridge); Kim Strandberg, Project Clerk (Enbridge), Ed Kelly, Project Manager for Station Construction (Rooney Engineering), Troy Pierantoni, Project Manager (Rooney Engineering); Ty France, Project Manager of Phase V Pipeline (Rooney Engineering); Jared Heath, and Associate Engineer for Station Construction (Rooney Engineering); and Pat Fahn, ND Commission staff.

The conference included a review of the order's findings of fact and ordering clauses, a review of penal provisions in the siting statute, and a question and answer period. Order #3 was completed.

- 4. Enbridge shall comply with all the rules and regulations of all other agencies having jurisdiction over any phase of the proposed project, and shall obtain all other necessary licenses and permits, and shall provide copies to the Commission prior to any construction.**

Environmental assessments that were previously performed for the existing pipeline under Case No. 10,472 were updated for purposes of the Alexander and Trenton stations. For the Beaver Lodge and Stanley stations, cultural resource survey material was compiled for the application. The proposed station upgrades took place within the existing Enbridge stations. Cultural and environmental issues were discussed in the Application (Docket #1).



**PU-06-317 Post-Construction Report  
Enbridge Pipeline (North Dakota) LLC  
Crude Oil Pumping Stations- McKenzie,  
Williams, and Mountrail County June 13, 2011**

Reviewing the case file PU-06-317, Enbridge contacted the following state and federal agencies: North Dakota State Historic Preservation Office (SHPO) and the United States Fish and Wildlife Service (USFWS).

On July 19, 2006 (Docket # 6) the SHPO office authored a letter to Enbridge about cultural resource investigation for this project. They concurred with a "No Historic Properties Affected" determination of the four projects construction sites.

The US Fish and Wildlife Service Ecological Services ND Field Office replied to the Commission's Notice of Filing and Notice of Opportunity for Hearing (Docket # 7) on July 31, 2006. The USFWS determined that as the project was described, it will have no significant impact on fish and wildlife resources. No endangered or threatened species were known to occupy the project area. No record was found in the weekly construction reports (Docket # 30-86) that critical habitat of threatened or endangered species, or of bald or golden eagles were seen in the area during construction.

No record was found in the Commission's file that the North Dakota Parks and Recreation Department was contacted. The North Dakota Parks and Recreation Department scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities). The pumping stations as defined did not affect state park lands that the North Dakota Parks and Recreation Department manages or Land and Water Conservation Fund recreation projects that they coordinate. At that time, the North Dakota Natural Heritage Inventory had limited rare species information from the project area. The KLJ Environmental report which was part of the Application had determined that because the upgrades disturbed existing sites within fenced areas, it was anticipated that no endangered species or their habitats will be disturbed by this project. Also a fact was the stations are on Enbridge private property. Being the project was on Enbridge private lands and did not affect the ND Parks and Recreation Department scope that they manage and coordinate, correspondence from this agency was not required for this project.

No correspondence from the ND Department of Health for this project was found in the Commission's file. The Health Department usually identifies mitigative measures to minimize and control environmental impacts from the proposed construction with proper construction methods. They usually spelled out temporary sediment barriers, site restoration, and installation of permanent erosion control measures. Enbridge's application indentified mitigative measures stating that best management practices would be implemented to control erosion. Impacts were minimal and temporary in nature. No sediment entered streams, wetlands, lakes, drainage ditches, or water bodies due to the construction. Sediment was contained within the station fence. Therefore, erosion and sedimentation control was accomplished. Site restoration and installation of permanent erosion control measures were implemented.



No record was found in the Commission's file that the North Dakota State Water Commission staff reviewed the pumping stations for environmental impacts. They usually:

- Identify the property as not in floodplain and evaluates the project to make sure it will not affect an identified floodplain. The KLJ Environmental report in the application determined that the sites were not in a floodplain.
- Mandate all waste material associated with the project must be disposed of properly and not placed in identified floodway areas.
- Identify no sole-source aquifers have been designated in ND.

These are usually the concerns associated with a pump station project that affect the State Water Commission or State Engineer regulatory responsibilities. Due to the sites being less than 5 acres and on private property of Enbridge, correspondence was not required.

No review from the Natural Resources Conservation Service (NRCS) was found in the Commission's file. They are responsible for determining whether the projects affect farmland dealing with the Farmland Protection Policy Act (FPPA). NRCS identified that they are the lead agency for wetland delineation on agricultural lands, including cropland, rangeland, and pastureland. NRCS recommended that impacts to wetlands be avoided. No wetlands were affected by the upgrades of the pumping stations. Reclamation was on Enbridge private property. Therefore no NRCS correspondence was required for this project.

No water or wetland crossings were required on this project. The Corp of Engineers (COE) usually has involvement when a water crossing or wetlands are involved in a station. No wetlands or floodplain is part of this project. COE correspondence is not required.

The new construction occurred on four separate parcels of land that was owned by Enbridge. The pumping stations did not require any road crossings. Therefore, no road crossing permits were required. Enbridge used existing public roads. No road damage occurring due to construction.

No Tree/Shrub Inventory Plan was found in case file PU-06-317. All four stations were upgrades with all work being done within the inside of the existing fence. No trees or shrubs required replacement at these sites. Therefore, no trees or shrubs had to be removed and replaced due to the construction. Since no trees or shrubs required removal, no action was required by the Commission of a Tree/Shrub Inventory Plan.

None of the agencies had any objection to the pumping stations upgrades. Enbridge complied with all the rules and regulations of all other agencies having jurisdiction over any phase of the proposed project, and obtain all other necessary licenses and permits. Order # 4 is completed.



- 5. If any cultural resource, paleontological, archeological, historical or grave site is discovered, it shall be marked, preserved, and protected from further disturbances until a professional examination can be made by the State Historical Society, a report filed with the Commission, and clearance to proceed is given.**

A Class I literature and files search was done for the four station sites. The following were the findings:

Alexander Station: One cultural resource site has been previously recorded; however, it is not within the project area. Two previous cultural resource investigations were conducted for the project area.

Trenton Station: No cultural resource sites have been previously recorded and four previous cultural resource investigations were conducted for the project area.

Beaver Lodge Station: No cultural resource sites have been previously recorded and three previous cultural resource investigations were conducted for the project area.

Stanley Station: Two cultural resource sites have been previously recorded; however, they are not within the project area. Two previous cultural resource investigations were conducted for the project area.

On July 19, 2006 (Docket #06), The North Dakota State Historic Preservation Office reviewed ND SHPO REF.: 06-0897 Enbridge pipelines (North Dakota) LLC Pipeline upgrades – Alexander [T152N R101W Section 18] Trenton [T154N R102W Section 34] Beaver Lodge [T156N R95W Section 32] and Stanley Station [T156N R91W Section 27] North Dakota and concurred with a “No Historic Properties Affected,” determination.

All surface area within the station perimeters had been previously disturbed. The upgrades of the four station occurred within the existing stations. No new lands were impacted.

No cultural resource, paleontological site, archeological site, historical site, or grave site was discovered during construction at any of the four sites. This is based on review of weekly construction progress reports and verification that no correspondence was identified in the case file. Order # 5 was followed.

- 6. Construction must be suspended during periods when weather conditions are such that construction activities would cause irreparable harm to the environment, unless adequate measures approved by the Commission are taken.**

Construction was suspended or delayed during periods of bad weather. The weekly construction progress report ending the week of December 4, 2006 (Docket #36) reported that construction was slowed due to weather and equipment breakdowns at the Beaver Lodge Station. The weekly construction progress report for the weeks of May 23 and May 30, 2007 (Docket # 59, 60) mentioned weather caused a delay in excavating a new tank foundation for two weeks. In the weekly progress



reports for September 19 through December 19, 2007 (Docket #75-86), station painting was identified as delayed until spring for Beaver Lodge, Trenton and Alexander Stations.

Enbridge acted responsible based on review of the construction progress reports. The weekly progress reports identified hydro tests at Trenton Station (Docket # 80), Stanley Station planned December 3rd (Docket #81), and Alexander Station (Docket #84, 85). No record of tests to establish Maximum Operating Pressure was found for each station's piping in the Commission's file. Passing the pressure test insures that no irreparable damage occurred on the station piping during construction. A written record of the piping's pressure tests should be requested from Enbridge by the Commission to complete the Case file.

Based on review of the progress reports, construction was suspended when weather conditions were such that construction should not occur. Order # 6 was followed.

**7. Any reclamation required shall be performed by a reclamation crew and coordinated with ongoing construction.**

The project had four site locations. All four were previous constructed sites with upgrades of equipment occurring. All surface area within the stations upgrade areas was previously disturbed. No new lands were impacted. All four sites had dirt/gravel surfaces upon completion with fence around the sites. The site locations are owned by Enbridge and required a separate clean up at each site location.

Construction work started in November 2006 for the Beaver Lodge Station. Beaver Lodge Station 2<sup>nd</sup> commission occurred June 20, 2007. 50% of the cleanup at the Beaver Lodge Station was completed by November 8, 2007. Beaver Lodge Station final cleanup and painting was to be completed in the spring of 2008. No written record was found in the file that final reclamation occurred then.

Construction work started January 22, 2007 on Stanley Station with commissioning occurring on June 23, 2007. The Stanley Station cleanup was finished November 8, 2007. Stanley Station was cleaned up in a continuous and coordinated manner.

Construction work started March 12, 2006 for the Alexander Station. No record was found as to when the Alexander Station was put on line. The last weekly progress report was December 19, 2007 (Docket #86). According to this report, the Alexander Station was to be commissioned on January 7<sup>th</sup>, 2008 with cleanup and painting to occur in the spring of 2008. No written record was found in the file that final reclamation cleanup occurred then.

May 9<sup>th</sup>, 2007 was the first week the Trenton Station construction occurred. The Trenton Station was completed November 14<sup>th</sup>, 2007 with final restoration cleanup and painting to occur in the spring of 2008. No written record was found in the Commission's file that the final reclamation cleanup occurred.



The PSC post construction field inspection on June 8<sup>th</sup>, 2011 verified that reclamation did occur. The Stanley Station was completed in a continuous and coordinated manner. Not enough information was found in the Commission's file to verify that reclamation was continuous and coordinated with ongoing construction at Beaver Lodge Station, Alexander Station, and Trenton Station. Enbridge should provide the Commission with documentation that cleanup and painting occurred in the Spring of 2008 to complete Order #7.

**8. If any reclamation, reseeding, or fertilization is required, it is to be done in accordance with the National Resources Conservation Service recommendations, unless otherwise specified by the landowner and approved by the Commission.**

No correspondence about reclamation, fertilization, and reseeding measures were found in the Commission's file. The property used for the four sites are owned by Enbridge. The station upgrades were constructed within the Class 5 graveled and fenced perimeters of the existing stations. Therefore, no reclamation, fertilization and reseeding was required. Since the site is owned by Enbridge, reclamation and seeding can occur as they wish. Class 5 gravel material was installed around upgraded facilities. Order # 8 is complete.

**9. Enbridge's obligation for reclamation and maintenance of the right-of-way shall continue throughout the life of the pipeline.**

The upgrades of the four stations are in fenced and graveled property owned by Enbridge. No new lands were impacted at these sites. The reclamation and maintenance required at these pump stations sites will be annual weed control. Google Earth 2011 had a most recent site image of 8/31/09 for all four sites. The station are located as Stanley Station (lat 48.304542, long -102.374058), Alexander Station (lat 47.980167, long -103.660603), Trenton Station (lat 48.112841, long -103.778143), and Beaver Lodge Station (lat 48.284606, long -102.926557). The 2009 aerial Google views looked to have proper weed control. Green vegetation areas looked to have been mowed or cut around the stations. At the June 8<sup>th</sup>, 2011 PSC field inspection; the sites had excellent weed control and maintenance. Therefore, proper maintenance occurs at this facility. Enbridge has maintained the station sites since construction has been completed. Order # 9 is currently being complied with.

**10. Enbridge shall construct and operate the pipeline in the manner described in its application, and in accordance with all applicable safety requirements.**

Design, construction and operation of the pipeline and related facilities were to be in accordance with U.S. Department of Transportation regulations governing the 195 of Title 49 of the Code of Federal Regulations, Transportation of Hazardous Liquids by Pipelines.



Size, type, and design information was identified in the amended corridor certificate/route permit application (Docket #1). The application, weekly progress reports (Docket # 30-86), and as built drawings (Docket # 87) gave information to assist in the evaluation of Order # 10.

In the application (Docket # 1), size and design was spelled out in Section 1.3. The application in this section identified what was to be done at each of the four stations. A location map of the four Enbridge crude oil pumping stations was also provided (Docket # 5).

The weekly progress reports identified start dates, and had minor construction information about the design. The weekly progress reports identified what, where, and when things were completed on the project. The weekly reports did mention hydro testing of piping at the stations.

The as built diagrams showed the actual piping design, storage capacity additions, and a bill of materials. The new upgrade piping at each station was connected to the pipeline's cathodic protection.

No record of tests to establish maximum operating pressure hydro tests or the design maximum operating pressure (MOP) was found for the station piping in the case file. Passing the pressure test insures that no irreparable damage occurred on the station piping during construction and operation of the stations are within design limits. A written record of each pressure test at each station should be requested from Enbridge by the Commission to complete the case file. A letter can be submitted with a summary of description what was tested, actual pressure, length of time tests occurred, final pressure, and dates. The letter should state that all new materials and equipment was tested and has proper pressure rating.

Based on the limited information in the case file and a post-construction field inspection, Enbridge had constructed the pipeline in the manner identified in the application, late exhibits and supplemental material. Enbridge is currently operating the pipeline and is following the manner described by the Commission's requirements. Once the Enbridge provides station pressure tests and the design MOP, Order # 10 is complete.

**11. Enbridge shall provide the Commission with a copy of the design specifications for the construction of the Alexander Station, the Trenton Station, the Beaver Lodge Station, and the Stanley Station showing the location of the project facilities as built.**

In the application (Docket # 1), size and design was spelled out in Section 1.3. A location map of the four Enbridge crude oil pumping stations (Docket #05) was also provided.

Beaver Lodge Station 2<sup>nd</sup> commission occurred June 20, 2007. The Stanley Station commissioning occurring on June 23, 2007. The Trenton Station was completed November 14<sup>th</sup>, 2007. The Alexander Station was to be commissioned on January 7<sup>th</sup>, 2008. Tony Pierantoni with Rooney Engineering on behalf of Enbridge provided as built drawings for Enbridge's pumping station upgrades on March 17, 2008 (Docket #87). Order # 11 in completed.



**12. The authorization granted by the route permit is subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.**

Enbridge Pipelines (North Dakota) LLC (Enbridge) owns and operates an existing crude petroleum pipeline extending from near Alexander, North Dakota, to Clearbrook, Minnesota.

Enbridge upgraded the existing Alexander, Trenton, Beaver Lodge and Stanley pump stations on its existing crude oil pipeline. The additions took place within the perimeter of the existing Enbridge station sites. The upgrade at Alexander Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Trenton Station included the addition of pumps, a storage tank, and associated piping and equipment. The upgrade at Beaver Lodge Station included the addition of pumps and associated piping and equipment. The upgrade at Stanley Station included the addition of pumps and associated piping and equipment.

The Beaver Lodge and Stanley stations were initially constructed prior to North Dakota Century Code Chapter 49-22 for the siting of transmission facilities. The Alexander and Trenton stations were initially constructed by Portal Pipeline Company under authority granted by the Commission in an October 11, 1983 order in Case No. 10,472. In that proceeding, the Commission issued Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and Permit for the Construction of a Transmission Facility Permit No 49. In 1998 Portal Pipeline Company changed its name to Enbridge Pipelines (North Dakota) Inc. and the Commission reissued Certificate No. 40 and Permit No 49 effective December 16, 1998. Effective May 9, 2001 the Commission again reissued Certificate No. 40 and Permit No 49 to Enbridge Pipelines (North Dakota) LLC due to company reorganization. In its July 28, 2005 order the Commission amended Certificate No. 40 and Permit No 49 to Enbridge Pipelines (North Dakota) LLC for an upgrade of the Alexander and Trenton Stations and construction of a new station called the East Fork Station.

Should the Commission deem necessary in the future to modify the corridor certificates and route permits it can do so if deemed necessary to further protect the public or the environment. Case File No. PU-06-317 does not contain any additional information that the Commission should deemed necessary to modify the Certificate of Corridor Compatibility (Number 93) and Route Permit (Number 103) of August 23, 2006 for the upgrade and operation of the Beaver Lodge and the Stanley crude oil pipeline pumping stations or Certificate of Site compatibility for Transmission Corridor Second Amended Corridor Certificate (Number 40) and Route Permit the construction of a Transmission Facility Second Amended Permit (Number 49) of August 23, 2006 for construction and operations of an eight-inch crude oil pipeline with associated facilities and pipeline interconnections (Trenton Station and Alexander Station).