

June 28, 2011

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

PUBLIC SERVICE COMMISSION

Re: Case No. PU-05-274 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-05-274.

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
New East Fork Station (Williams County),
Upgrade existing Alexander Station (McKenzie County)
and Trenton (Williams County) Crude Oil Pump Stations**

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

Executive Summary

Enbridge Pipelines (North Dakota) LLC constructed a new 1500 hp pumping station called East Fork station in Williams County, ND for its 8-inch outside diameter crude petroleum pipeline extending from the Alexander station, near Alexander, ND to the Beaver Lodge station near Tioga, ND. Enbridge also upgrade the Alexander and Trenton existing pumping stations along this line as part of this project.

This post construction report is to help the Commission with verification that Order's set forth by them are completed by Enbridge. This post construction report addressed only the Orders in case file PU-05-274. The first amended facility corridor and route permit (Docket #16) of July 28, 2005 identified that they are subjected to the conditions and limitations noted in the Orders of Case PU-05-274 and the Order of the Commission dated October 11, 1983, in Case No. 10,472.

No record of a test to establish Maximum Operating Pressure was found for each station's new 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 pressure test should be requested from Enbridge by the Commission to complete the case file Order # 5 and # 9.

On May 6, 2006 Pat Fahn, Commission staff, sent a informal email reminder to John Pechin of Enbridge that design specifications for construction showing the location of the station as built diagrams were required. Docket #44 in the case file show this letter with a copy of follow up correspondence from Enbridge that they were going to provide the Commission with the as built diagrams within two weeks. No other records were found in the case file that as built diagrams were sent. Enbridge needs to provide 2005 as built diagrams for Order # 9 and 10 to be completed.

Enbridge Pipelines (North Dakota) LLC has complied with all other Order requests of the Commission.



Preliminary Statement

On May 2, 2005, Enbridge filed a consolidated letter of intent and request for waiver of procedures and time schedules, and a request to amend its existing Corridor Certificate No. 40 and Route Permit No. 49. Enbridge proposed to construct a new 1500 horsepower pumping station called the East Fork Station in the SE ¼ of the SE ¼ of Section 36, Township 156 North, Range 100 West of Williams County. Enbridge also proposed to upgrade the existing Alexander Station and Trenton Station (pumping stations) of that pipeline. Siting for the locations of the Alexander Station and Trenton Station was granted in October 1983 in Case No. 10,472.

The State of North Dakota, acting through its North Dakota Public Service Commission (NDPSC), Division of Public Utilities, has acquired 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 case file No. PU-05-274. The first amended facility corridor and route permit of July 28, 2005 identified that they are subjected to the conditions and limitations noted in that order and the Order of the Commission dated October 11, 1983, in Case No. 10,472. This post construction inspection addressed only the orders in case file No. PU-05-274.

The Commission Orders:

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

The Commission granted the First Amended Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and the First Amended Permit for the Construction of a Transmission Facility No. 49 on July 28th, 2005 (Docket #16). Order # 1 completed.

- 2. 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 August 2, 2005, a pre-construction conference (Docket # 21) was held (by conference call). Enbridge provided digital photos of the project sites. In attendance were John Pechin (Enbridge project manager) located in Superior WI, Tony Glassburner (Enbridge project coordinator) located at the Trenton Station ND, and Pat Fahn, Commission staff.

The conference included a review of the order's findings of fact and ordering clauses, the penalty provisions of NDCC § 49-22-21, and a question and answer period. Order # 2 is completed.



- 3. 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.**

Reviewing the case file PU-06-274, Enbridge contacted the following state and federal agencies: North Dakota State Historic Preservation Office (SHPO); United States Fish and Wildlife Service (USFWS); North Dakota Parks and Recreation Department, and the ND Health Department.

On May 23, 2005 (Docket # 9) the SHPO office authored a letter to Enbridge's environmental firm about cultural resource investigation for this project. They concurred that no survey (Class III) is warranted and with a "No Historic Properties Affected" determination provided the project nature specified and the project took place in the location platted/described in the correspondence.

The US Fish and Wildlife Service Ecological Services ND Field Office (USFWS) replied to the Commission's Notice of Filing and Notice of Opportunity for Hearing (Docket # 8) of May 24, 2005. The USFWS determined that as the project is 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 # 23-43) that critical habitat of threatened or endangered species, or of bald or golden eagles were seen in the area during construction.

The North Dakota Parks and Recreation Department (Docket # 12) reviewed the application to construct a pumping station located in Section 36, T156N, R100W, in Williams County, ND. Their agency scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities). The pumping station 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. Due to the lack of available survey data they had, they could not give an accurate assessment as to potential impacts to rare species and associated habitats.

Enbridge received a Storm Water Pollution Prevention Plan (SWPPP) (Docket # 22) July 2005 from the ND Department of Health for the East Fork station. The plan is used to minimize and control environmental impacts from the proposed construction with proper construction methods. The plan spelled out temporary sediment barriers, site restoration, and installation of permanent erosion control measures. The temporary sediment barriers identified temporary slope breakers, noise and dust control, hazardous materials, and refueling /equipment care. The site restoration and installation of permanent erosion control measures discussed final cleanup and grading, permanent erosion control measures, and road repair. No sediment entered streams, wetlands, lakes, drainage ditches, or water bodies due to the construction. Therefore, erosion and sedimentation control was accomplished. Site restoration and installation of permanent erosion control measures were implemented and discussion in Orders # 6, 7, and 8.



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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. Excess materials were hauled off site to a fabrication plant in Sidney, MT or a warehouse yard. Concrete debris is usually hauled away to the local landfill.
- 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.

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 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 three 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 (Hwy 8 and Hwy 11) and constructed a new access road to the East Fork station site. The new access road was constructed to be permanent road to access the pump station throughout its life. Existing roads that were paved or graveled did not require modification. The East Fork station punch list to be completed had a check off item that Enbridge met with the Williams County road supervisor to verify the roads used and new approach met his satisfaction. Existing roads and access roads were in place at the Alexander and Trenton stations with no road damage occurring due to construction.

The East Fort pumping station has station piping that turns 45° with elbows off the main line and enters the pumping station site. This pipe is underground on Enbridge private property. This piping should be at a minimum depth of 48 inches which is under graveled station land. Depths were found acceptable during the post-construction inspection by Keitu Engineering & Consultants, Inc.

A Tree/Shrub Inventory Plan proposal (Docket # 50) from November 13, 2006 was found in case file PU-05-274. No action was taken on the proposal. The Alexander and Trenton stations were upgrades with all work being done within the inside of the existing fence. No trees or shrubs required replacement at these sites. In using Google Earth 2011 and reviewing a June 28, 2003 image of the East Fork station site location, no trees or shrubs were found in the area. The East



Fork station was constructed on agricultural cultivated field as stated in the application with no trees in the area. Therefore, no trees or shrubs had to be removed and replaced due to the construction of the East Fork station. Since no trees or shrubs required removal, no action was required by the Commission of the Tree/Shrub Inventory Plan proposal.

None of the agencies had any objection to the pumping stations. 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 # 3 is completed.

- 4. 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 (SHPO), a report filed with the Commission, and clearance to proceed is given.**

The two pump station upgrades did not require earthwork except in areas that were previously constructed in. Foundations and wire trenches were completed at these sites. Previous cultural resource investigations were done at these sites and approved by the SHPO prior to case PU-05-274. The new East Fork Station required new earthwork within the entire site. Cultural resource investigation was performed for the East Fork Station site. The application (Docket # 2) had identified that a Class I cultural resource investigation completed as of May 16, 2005 for the three sites. No cultural resources were identified in Section 36 Township 156 N Range 100 W in Williams County, ND which is the location of the East Fork Station.

On May 23, 2005 (Docket # 9) the SHPO office authored a letter to Enbridge's environmental firm about cultural resource investigation for this project. They concurred that no survey (Class III) is warranted and with a "No Historic Properties Affected" determination provided the project nature specified and the project took place in the location platted/described in the correspondence.

No cultural resource, paleontological site, archeological site, historical site, or grave site was discovered during construction at any of the three sites. This is based on review of weekly construction progress reports and verification that no correspondence was identified in the Commission's file. Order # 4 was followed.

- 5. 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 during periods of bad weather. The weekly construction progress report ending the week of October 5, 2005 (Docket #25) reported that construction was closed down 2 to 3 days due to 8" of snow at the East Fork Station. The weekly progress report for the week of November 11, 2005 (Docket # 32) mentioned that on Saturday heavy rains stopped work. The week of November 20, 2005 (Docket # 33) documented that work was slowed due to weather. The weekly progress report of January 5th, 2006 (Docket #37) noted that a minor punch



list of remaining items at the East Fork Station and the Trenton Station would be completed in the spring due to weather.

Enbridge acted responsible based on review of the construction progress reports. No record of a test 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. Weekly progress reports for the week of October 24, 2005 (Docket #28) and October 30, 2005 (Docket #29) mentioned a hydro-test on piping. A written record of the pressure test 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 review of the progress reports, construction was suspended when weather conditions were such that construction should not occur. Once the pressure test for each station is obtained (new East Fork Station, Alexander and Trenton upgrades) Order # 5 will be complete.

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

The project had three site locations. Two were previous constructed sites with upgrades of equipment occurring. The third, East Fork station was a new construction site. All three sites had gravel/rock (Class 5 material) surfaces upon completion with fence around the site. The site locations are owned by Enbridge and required a separate clean up at each site location. The motor/pumps that were replaced at the Trenton station were moved and used at the Alexander station. Construction work started in October, 2005 for the East Fork and Trenton stations. The Alexander station construction started in early December, 2005. Partial clean up at the Trenton station occurred the week of November 11 based on the weekly progress report (Docket #32) and was finalized when the station punch list was completed May 16, 2006 (Docket # 43). The East Fork station site cleaning was mentioned the week of December 9th, 2005 (Docket # 36) which included completion of the fence. The final station punch list was completed May 16, 2006. The Alexander station identified some cleanup in January, 2006 with the final station punch list completed May 16, 2006.

Clean up at the stations were completed in a continuous and coordinated manner. Order # 6 was completed. The June 8th, 2011 PSC field inspection verified clean up was 100%.

7. 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 three sites were purchased by Enbridge. The



station sites where construction occurred were graveled and fenced. Therefore, no reclamation, fertilization and reseeding was required. Part of the East Fork station has vegetation. Since the site is owned by Enbridge, reclamation and seeding can occur as they wish. Access roads and fencing of these sites were part of the project. The June 8th, 2011 PSC field inspection verified reclamation and reseeding occurred. Order # 7 is complete.

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

The site development for the three stations required the facilities to be fenced and graveled. The Alexander and Trenton sites were previously graveled with Class 5 material and fenced prior to the upgrades. No new lands were impacted at these sites. Additional Class 5 material was installed around the new facilities within these sites. Gravel and fencing of the East Fork station was also completed. The sites are graded such that runoff should occur off these sites. The East Fork station was designed with a containment drain basin in the northeast corner of the site. The reclamation and maintenance required at these pump stations sites will be annual weed control with possible mowing or cutting of grassland at East Fork station. A PSC post construction field inspection was held on June 8th, 2011. The fenced station area had no weeds present at any of the three stations. Enbridge stated during the PSC inspection that a weed spraying contractor is hired annually for weed control. Therefore, proper maintenance occurs at this facility. Enbridge has maintained the station sites since construction has been completed. Order # 8 is currently being complied with.

9. 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 and/or route permit application (Docket #2). The application, weekly progress reports (Docket # 23-43), and as built drawings (Docket # 44) gave information to assist in the evaluation of order # 9.

In the application (Docket # 2), size, type, and design was spelled out in Section 1. A location map of the three Enbridge crude oil pumping stations was also provided.

The weekly progress reports identified start dates, and had construction information about the design. On November 6, 2005 the Trenton station was operationally complete. On November 30th, 2005 the East Fork station was operationally complete. On January 19th, 2005 the Alexander station was made operationally complete with the completion of pump #1.

On May 6, 2006 Pat Fahn with the Commission sent a informal email reminder to John Pechin of Enbridge that design specifications for construction showing the location of the station as built



diagrams were required. Docket #44 in the case file show this letter with a copy of follow up correspondence from Enbridge that they were going to provide the Commission with the as built diagrams within two weeks. No other records were found in the case file that as built diagrams were sent. Enbridge needs to provide as built diagrams for Order # 9 to be completed.

The East Fork station required an access road/fencing, a main line sectionalizing valve, a pump/motor, a power variable frequency drive, and a control building. The Trenton and Alexander stations required a change out of the pump/motor to upgrade each facility. Each station's facilities were tied to Enbridge's existing Supervisory Control and Data Acquisition System.

In the August 5th, 2005 Storm Water Pollution Prevention Plan (Docket # 22), the contractor was to take all reasonable steps to control construction-related noise. Looking at the construction pictures in the weekly progress reports (Docket #25, 27, 30, 32, 36) newer equipment was used which reduces noise levels at the sites. No premises are located within 1000 feet of the East Fork station. Noise issues were not a concerns with neighboring buildings that far from the station.

The stations piping were connected to the cathodic protection system of the existing pipeline. No record of tests to establish Maximum Operating Pressure 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 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 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 looks to be following the manner described by the Commission's requirements. Once the pressure tests and as built diagrams for each station are filed in the Commission file, Order # 9 is complete.

10. Enbridge shall provide the Commission with a copy of the design specifications for the construction of the East Fork Station, the Alexander Station, and the Trenton Station showing the location of the project facilities as built.

In the application (Docket # 2), size, type, and design was spelled out in Section 1. A location map of the three Enbridge crude oil pumping stations was also provided.

On November 6, 2005 the Trenton station was operationally complete. On November 30th, 2005 the East Fork station was operationally complete. On January 19th, 2005 the Alexander station was made operationally complete with the completion of pump #1. On May 6, 2006 Pat Fahn with the Commission sent a informal email reminder to John Pechin of Enbridge that design specifications for construction showing the location of the station as built diagrams were required. Docket #44 in the Commission's file show this letter with a copy of follow up correspondence



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from Enbridge that they were going to provide the Commission with the as built diagrams within two weeks. No other records were found in the Commission's file that as built diagrams were sent. Enbridge needs to provide as built diagrams for Order # 10 to be completed. The PSC June 8th, 2011 field inspection verified construction was complete.

11. 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.

The Commission on October 11, 1983 order in Case No. 10,472 granted authority to Portal Pipeline Company for construction of this pipeline. On the same date 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 for this project. In 1998 Portal Pipeline Company changed its name to Enbridge Pipelines (North Dakota) Inc. and the Commission reissued Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and Permit for the Construction of a Transmission Facility Permit No 49 effective December 16, 1998. Effective May 9, 2001 the Commission again reissued Certificate of Site Compatibility for Transmission Facility Corridor No. 40 and Permit for the Construction of a Transmission Facility Permit No 49 to Enbridge Pipelines (North Dakota) LLC due to company reorganization.

On July 28, 2005 the Commission granted a first amended Corridor Certificate No. 40 and a first amended Route Permit No. 49 (Docket # 16). The first amended corridor certificate and route permit was for Enbridge to construct a new 1500 horsepower pumping station called the East Fork Station in the SE 1/4 of the 1/4 of Section 36, Township 156 North, Range 100 West of Williams County and upgrade the existing Alexander station and Trenton station (pumping stations) of that pipeline. Siting for the locations of the Alexander station and Trenton station was granted in October 1983 in Case No. 10,472.

Should the Commission deem necessary in the future to modify the corridor certificate and route permit it can do so if deemed necessary to further protect the public or the environment. Case file PU-05-274 does not contain any additional information that the Commission should deemed necessary to modify the Certificate of Corridor Compatibility (Number 40) and Route Permit (Number 49) after the July 28th, 2005 first amended certificate of corridor and route permit.