

June 29, 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-06-349

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-06-349.

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
Blaisdell (Mountrail County), Denbigh (McHenry County),
Penn (Ramsey County) and Larimore (Grand Forks County)
Pump Stations**

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

Executive Summary

Enbridge Pipelines (North Dakota) LLC constructed four new pump stations near Blaisdell, Denbigh, Penn, and Larimore on its existing Alexander to Clearbrook crude petroleum pipeline. This post construction report is to help the Commission with verification that Order's set for by them are completed by Enbridge. This post construction report addressed the Orders in case file PU-06-349.

The Amended Findings of Fact, Conclusions of Law and Order stated that Enbridge testified that the precise locations of the stations were not finalized prior to the Orders being issued. The post construction report questioned land descriptions at Penn and Larimore stations. No record was found in the case file stating the final land description locations of the two pumping stations. Enbridge should provide final as built land descriptions before Order # 3 is complete.

As part of Order #5, USFWS recommended the timing of construction to late summer (after July 15) or fall so as not to disrupt waterfowl or other wildlife during the nesting season and to avoid high water conditions. Constructions occurred in small areas of 2 acres or less and were not ideal locations for habitat nesting. Some construction did occur during nesting season.

As part of Order # 5, the North Dakota State Water Commission commented that all waste material associated with the project must be disposed of properly and not placed in identified floodway areas. No record was found in the case file of where the demolition at the Penn station site debris was hauled away to. Enbridge should provide a letter and any documentation to the Commission of where the Penn station demolition materials were disposed.

Weekly Construction Progress Reports were provided on a regular weekly basis. The last weekly construction progress report was filed on December 17, 2007. This last report noted that cleanup and painting was set for spring at the Penn station and Denbigh station. No construction reports were filed in the spring 2008 that this work was completed. The PSC field inspection verified painting and cleanup had occurred. The 2008 weekly progress reports for the spring painting and



cleanup or a letter that it occurred should be provided from Enbridge to complete Order #7 and #16.

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. Enbridge should provide a written record of station pressure tests to complete Order #8 & #13.

On September 16th, 2006 (PU-06-300, Docket #29) Enbridge addressed potential noise levels. Enbridge calculated dBA levels to be 45 and below past 300 feet from the source. This letter should be moved from case file PU-06-300 to PU-06-349.

Enbridge should provide a copy of the Class III Investigation Report for the Commission's file. They should also provide information as to what architectural and historic sites were demolished at the Penn station site the week of March 26th, 2007 (Docket #54), and verification that the three architectural sites in the October 6, 2006 SHPO letter (Docket #26) were avoided by the project for completion of Order # 14.

On October 23, 2009 Enbridge submitted its first monitoring year report (Docket # 97). The planting site was monitored in the fall 2009. Approximately 90 percent of the plantings survived the first growing season and appear to be thriving. Enbridge will need to submit a 2nd year monitoring report (October 2010) and a 3rd year monitoring report (October 2011) for the Commission to have a final hearing on the completion of Order #19.

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

Preliminary Statement

Enbridge Pipelines (North Dakota) LLC (Enbridge) owns and operates an existing crude petroleum pipeline extending from near Alexander, North Dakota, to Clearbrook, Minnesota. On August 4, 2006 Enbridge Pipelines (North Dakota) LLC (Enbridge) filed a consolidated letter of intent and application for waiver or reduction of procedures and time schedules and for a corridor certificate and route permit. Enbridge proposed to construct four new pump stations near Blaisdell, Denbigh, Penn and Larimore on its existing crude petroleum pipeline.

At each station Enbridge proposed to install a main line sectionalizing valve, a pump/motor, a power variable frequency drive, and a control building. At each station the facilities will be tied into Enbridge's existing Supervisory Control and Data Acquisition System. In addition, at each station a 4,160 volt power service feed will be brought to the station sites, access roads will be constructed and each station will be fenced.



On August 9, 2006 the Commission acknowledged Enbridge's letter of intent, assessed a filing fee of \$84,978, waived the one-year waiting period between filing a letter of intent and an application, and issued a Notice of Filing and Notice of Hearing scheduling a public hearing for September 13, 2006 beginning at 1:30 p.m. CDT at the Devils Lake City Offices, Commission Chambers, 423 6th Street NE, Devils Lake, ND. The public hearing was held as scheduled.

Enbridge requested that the Commission (1) waive provisions of law and rule that require filing of separate applications, separate hearings and certain time schedules; (2) find that the proposed facilities are of such length, design, location and purpose that it will produce minimal adverse effects; and (3) designate the corridor and route as requested.

On September 20, 2006, the Commission issued its Findings of Fact, Conclusions of Law and Order in this case.

On October 6, 2006, Enbridge filed a Request for Variance from Permit Conditions requesting that the Commission modify Paragraph 5 of the Order to allow Enbridge to commence construction on any pumping station for which it has obtained all necessary licenses and permits.

On October 12, 2006, the Commission issued an Order granting Enbridge's Request for Variance from Permit Conditions.

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 addresses the Orders established by the NDPSC and issues established in case file No. PU-06-349.

The Commission orders:

1. Enbridge Pipelines (North Dakota) LLC's application for a waiver of procedures and time schedules is granted.

In the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts #19, The Commission found the proposed project was of such length, design, location, or purpose that it would produce minimal adverse effects so that procedures and time schedules may be waived.

In the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts #20, North Dakota Century Code Section 49-22-07.2 authorizes the Commission to waive procedures, time schedules, and public hearings otherwise required by the Siting Act, when the Commission finds that a proposed facility is of such length, design, location or purpose that it will produce minimal adverse affects.



In the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts #21, The Commission finds it appropriate to waive procedures and time schedules as requested in the application.

Enbridge Pipelines (North Dakota) LLC (“Enbridge”) notified the Commission of its request for a waiver or reduction of procedures and time schedules for a certificate of site compatibility (Docket #1). Enbridge then Amended the Consolidate Letter of Intent and Application of Enbridge Pipelines LLC for Waiver or Reduction of Procedures and Time Schedules and for a Corridor Certificate and Route Permit or Other Appropriate Certificates and /or Permits (Docket #3). In the Amended Letter to the Commission on 08-04-06 (Docket #3), Enbridge spelled out 7 request items. Enbridge requested: 1) Waive or reduce the time period required for separate filing of the Letter of Intent and the 1 year time period, 2) Waive ND Century Code for separate filings of such applications, hearings on such applications and certain time schedules as set forth in statues and rules, 3) determine that a corridor certificate is necessary, approve such corridor for non-linear facilities, 4) hold one expedited public hearing on the combined application, or (b) as Enbridge has in place agreements to purchase the land encompassing the four new pumping stations, not hold a public hearing on this application but publish a notice of opportunity for hearing as provided for therein, 5) find that the proposed facilities are such design, location and purpose that they will produce minimal adverse effects, 6) should a notice of opportunity for hearing be published, provide in the notice of opportunity for hearing that any request for a hearing be made in not more than 20 days 7) Designate and approve the requested facilities as identified in the application, issue the appropriate corridor certificate and route permit or such other certificate or permit as may be determined to be necessary by the Commission.

On August 9, 2006 the Commission acknowledged Enbridge Pipeline (ND) LLC letter of intent and waived the waiting period for a filing siting application (Docket # 9). The Commission granted waiver of all items with the issuing of the Certificate of Corridor Compatibility (Docket # 20) and the Route Permit (Docket # 19) on September 20, 2006. Order #1 is completed

- 2. Enbridge Pipelines (North Dakota) LLC is issued Certificate of Compatibility for a Transmission Facility Corridor No. 95 and Route Permit for Construction of a Transmission Facility No. 105 to construct new pump stations near Blaisdell in Mountrail County, Denbigh in McHenry County, Penn in Ramsey County, and Larimore in Grand Forks County for the construction and operation of new pump stations and associated facilities and pipeline interconnections on the existing Enbridge Pipelines (North Dakota) LLC crude petroleum pipeline from the Alexander Station in North Dakota to Clearbrook MN.**

On September 20, 2006 the Corridor Certificate and the Route Permit was issued (Docket # 19 and 20). The as-built drawings (Docket #89) followed the route as identified prior to construction. Order #2 is completed.



3. Enbridge shall obtain approval from the Commission or Commission Staff prior to any changes in the pipeline route.

In the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts # 9, the Blaisdell Station will be constructed within a 3-acre parcel. The Denbigh Station will be constructed within a 2-acre parcel. The Penn Station will be

constructed within a 4-acre parcel. The Larimore Station will be constructed within a 4 to 5-acre parcel. Enbridge's existing pipeline traverses the parcels. Station site plot plans of the four stations were filed as Exhibit 3 to show relative size or footprint of the facilities on the parcels, but Enbridge testified that the precise location of the facilities to be constructed within the parcels had not been finalized.

The application for the new pump station (Docket #2, 2 Location(s)) identified the Blaisdell Station being in the SE $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Section 21, Township 156 North, Range 88 West in Mountrail County, ND. Using Google Earth 2011 tool Earth Point- BLM Township, Range, and Section to verify the location, the site was verified to be correct. The station is located at latitude 48.322678° and longitude -101.991107°.

The application for the new pump station (Docket #2, 2 Location(s)) identified the Denbigh Station being in the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 21, Township 156 North, Range 77 West in McHenry County, ND. Using Google Earth 2011 tool Earth Point - BLM Township, Range, and Section to verify the location, the site was verified to be correct. The station is located at latitude 48.313118° and longitude -101.991107°.

The application for the new pump station (Docket #2, 2 Location(s)) identified the Penn Station being in the W $\frac{1}{2}$ of the NW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 25, Township 155 North, Range 66 West in Ramsey County, ND. Using Google Earth 2011 tool Earth Point- BLM Township, Range, and Section tool to verify the location, the site description was incorrect. The as built site description location is the W $\frac{1}{2}$ of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$ of Section 25, Township 155 North, Range 66 West in Ramsey County, ND. The station is located at latitude 48.218177° and longitude -99.091174°.

The application for the new pump station (Docket #2, 2 Location(s)) identified the Larimore Station being in the NW $\frac{1}{4}$ of the SE $\frac{1}{4}$ and the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25, Township 152 North, Range 55 West in Grand Forks County, ND. Using Google Earth 2011 tool Earth Point- BLM Township, Range, and Section to verify the location, the site description should be only the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25, Township 152 North, Range 55 West in Ramsey County, ND. The station is located at latitude 47.953681° and longitude -97.635366°.

The Blaisdell and Denbigh station were verified to have the same as built location as the proposed in the application. The proposed and as built location of the Penn station land descriptions is different. The proposed location for the Larimore station lists two land locations in the application. The station was constructed in the NE $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25. The Amended Findings of Fact, Conclusions of Law and Order stated that Enbridge testified that the precise



locations of the stations were not finalized prior to the Orders being issued. No record was found in the Commission's file stating the final land description locations of the pumping stations. The Commission should verify the final as built land descriptions with Enbridge before Order # 3 is complete.

- 4. The Certificate of Compatibility for a Transmission Facility Corridor No. 95 and Route Permit for Construction of a Transmission Facility No. 105 are effective for the life of the pipeline but are subject to modification by order of the Commission if deemed necessary to further protect the public or the environment.**

The original Corridor Certificate #95 and Route Permit #105 were issued on September 20, 2006. This order gives the Commission future ability to additional modification if deemed necessary to protect the public or the environment. Case file PU-06-349 does not contain any information that the Commission has deemed necessary to modify the Certificate of Corridor Compatibility (Number #95) and Route Permit (Number #105). Order # 4 is complete.

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

According to the application (Docket #1) Enbridge contacted the following state and federal agencies: North Dakota State Historic Preservation Office; United States Department of Agriculture, Natural Resources Conservation Office; United States Fish and Wildlife Service (USFWS); North Dakota Department of Health; North Dakota State Water Commission; North Dakota Parks and Recreation Department; and North Dakota Game and Fish Department. Appendix G of the application had copies of the responses from these agencies.

On October 6, 2006 (Docket # 26) The North Dakota State Historic Preservation Office issued a review letter of the Class III Cultural Resource Inventory for the pump stations in Grand Forks, McHenry, Mountrail, and Ramsey Counties in North Dakota. SHPO found the report acceptable. They concurred with a "No Historic Properties Affected" determination with provisions. More details of the provisions and additional discussion are found in Order # 14.

The Natural Resources Conservation Service (NRCS) reviewed the information about the four pumping stations in Enbridge's letter of June 30th, 2006 to them. 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 four pumping stations. NRCS determined that there would be no significant impact on existing soil and water conservation practices in the area.



The US Fish and Wildlife Service (USFWS) reviewed the proposed pumping station projects. They offered comments under the authority of and in accordance with the Migratory Bird Treaty Act and the Endangered Species Act. The Service required that all wetlands under its jurisdiction be avoided during the project construction when possible. No wetlands were part of the construction sites so the wetlands were avoided. The Service also requested to minimize disturbance to fish and wildlife resources in the project area, they provided the following recommendations with a discussion of the post construction findings following:

- Make no stream channel alterations or changes in drainage patterns. All four pump stations were located some distance from any stream channel. The sites were graded so the flow of runoff was in one direction or relatively flat. No drainage routes were changed due to the new construction.
- Defer the timing of construction to late summer (after July 15) or fall so as not to disrupt waterfowl or other wildlife during the nesting season and to avoid high water conditions. Construction started on October 16th, 2006 at the Larimore station. Construction began on the week of March 26, 2007 at Penn station with the demolition of buildings. Construction of the Blaisdell station started the week of May 9, 2007. Construction of Denbigh started the week of September 1st, 2007. The Blaisdell and Larimore stations were complete the week of November 7, 2007. Penn and Denbigh stations were completed in the spring of 2007. The Denbigh and Penn stations were located between a highway and a railroad tracks and are not a likely nesting place for wildlife due to noise and normal activity. Larimore station is in a rural setting and site construction grading occurred in November. Construction was suspended in January due to weather. Start up commenced again in April. The Larimore station is located by irrigated cropland with few trees in the area. With the site grading being completed in November and irrigated cropland next to the site, nesting would not likely occur in this area. Blaisdell station site work occurred during the February 1st through the July 15th nesting season. The land in the site area was grassland that is cut for hay. A wetland/heavy grass area exists directly south of the site location. If nesting was to occur, it would likely be in this habitat area and not in the station site area. Construction occurred in small areas of 2 acres or less. Some construction did occur during nesting season.
- Locate construction to avoid placement of fill in wetlands. The site locations were not located in wetland areas. Wetlands were avoided.
- Replace unavoidable loss of wetland habitat with functionally equivalent wetlands and trees/shrubs at a ratio of two planted for each one removed. No wetlands were disturbed. The approved Tree and Shrub Restoration Plan (Docket # 93) reported sixty six trees were removed and 87 trees were planted. Four shrubs were removed with 88 planted. No tree could be planted within the station properties due to the pumping stations industrial use.
- Install and maintain appropriate erosion control measures to reduce sedimentation transport to adjacent wetland and stream channels. Station sites and land around the stations were flat except for the Blaisdell station. The Penn and Denbigh stations had delayed construction due to wet weather conditions and poor drainage. Precipitation runoff could not occur due to the flat topography. Larimore station grading has runoff occurring from east to west with a 1 foot elevation change. This slope is not enough to cause significant sedimentation transport to occur and no wetlands were relatively close. In viewing the Larimore station pictures in the November 13, 2006 weekly progress



report (Docket #41), the top soil was used as a berm around the site to prevent runoff from the site. Blaisdell station is located and graded with a 10 feet elevation change from north to south with a wetland to the south. This elevation change requires a silt fence to be installed on the south side of the station. Silt fences should have been installed at all station sites to prevent sedimentation transport. Not enough information in the Commission's file was available to make a determination that fencing was installed. Based on photos from the Larimore station, the top soil was probably used to berm runoff at each station. Looking at Google Earth 2011 images of the sites and the 2011 PSC field inspection, no sedimentation runoff could be seen.

- Reseed disturbed areas with a mixture of native grass and forb species. Disturbed areas were Class 5 graveled and fenced. No reseeding was required. The 2011 PSC field inspection verified the disturbed areas were graveled and fenced.

The USFWS and Rural Utilities Service also recommended new or updated overhead power line be constructed in accordance with the current guidelines for preventing raptor electrocutions to minimize the electrocution hazard to birds. The guidelines are found in "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996". The four pumping stations had underground facilities installed within the fence so following of the guidelines were not necessary.

The North Dakota Department of Health believed that the environmental impacts from the proposed construction would be minor and could be controlled with proper construction methods. The ND Department of Health issued the following comments and Keitu post construction discussion follows each comment as necessary:

- All necessary measures will be taken to minimize fugitive dust emissions during the construction process by wetting the project area or by other means. In reviewing the weekly progress reports, all sites had problems with wet weather conditions. Usually dust control would be done by watering the construction area. Due to the wet weather conditions watering was not necessary.
- Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. The four pumping stations did not have construction activity near any water. There was a wetland area located about 100 feet south of the Blaisdell station. Disturbed areas were fenced and graveled. Top soil was bermed along the edges of the sites to prevent erosion and spills of oil and grease from reaching waterways.
- Individual pumping station projects disturbing five or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the Department's website or by calling the Division of Water Quality (701-328-5210). Also, cities may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with the local officials to be sure any local storm water management considerations are



addressed. Each of the station disturbed less than 5 acres and therefore a permit to discharge storm water runoff was not required. Larimore station was the station proposed to disturb four to five acres of land. Only 2.01 acres at Larimore station was disturbed. The Penn station is the only pump station on the edge of a town (Penn, ND). No storm drain system was in the area of the Penn station.

- Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours. Viewing the pictures from the weekly progress report of November 13, 2006 (Docket #41), newer equipment was used so noise from construction activities is minimal. The Denbigh station and Penn station were built between a highway and a railroad track. The highway noise is in the range of 70 dBA and a railroad train is over 100 dBA within a distance of 3 feet. Equipment noise such as a tractor is in the range 90 dBA at a 3 feet distance from the source. A dBA level of 85 three feet from a source drops below to 45 dBA at 300 feet from the source (PU-06-300, Docket #29). The closest residence is over 430 feet away from any of the pumping stations. The 2011 PSC field inspection found that Enbridge enclosed the main pumps/motors in a building at the Denbigh station to reduce the noise to a future bed and breakfast located to the northwest of the station. Power variable frequency drives are installed in the control buildings with reduce their noise. Enbridge worked with residents of the areas on noise issues. Noise is not a problem at these stations.

The North Dakota State Water Commission staff reviewed the pumping stations plans for environmental impacts. They had the following comments and Keitu post construction follow if there is a concern:

- The property is not located in an identified floodplain and it is believed the project will not affect an identified floodplain.
- All waste material associated with the project must be disposed of properly and not placed in identified floodway areas. No record was found in the Commission's file of where the demolition (Docket #54) at the Penn station site debris was hauled away to. Debris is usually hauled away to the local landfill. Enbridge should provide a letter to the Commission of where the Penn station demolition materials were disposed.
- No sole-source aquifers have been designated in ND.

There were no other concerns associated with this project that affect the State Water Commission or State Engineer regulatory responsibilities.

No record was found of the North Dakota Parks & Recreation reviewing the project proposal. Their agency scope of authority and expertise covers recreation and biological resources (in particular rare species and ecological communities. They normally issue a letter of comment on a proposed project stating that the project does not affect state park lands that we they manage or

Land and Water Conservation Fund recreation projects that they coordinate. Part of their letter recommends that any impacted areas be revegetated with species native to the project area. Enbridge noted in their application that they did send them a proposal. Being that the four



pumping stations are on private land, the North Dakota Parks and Recreation correspondence is not required.

No water or wetland crossings were required on this project. The COE usually has involvement when a water crossing or wetlands are involved in a station. COE correspondence is not required.

None of these agencies had any objection to the pumping stations.

The USFWS recommended deferral of construction during nesting season. Some construction and demolition occurred at some of the stations during nesting season. As part of Order # 5, the North Dakota State Water Commission commented that all waste material associated with the project must be disposed of properly and not placed in identified floodway areas. No record was found in the Commission's file of where the demolition at the Penn station site debris was hauled away to. Enbridge should provide a letter and any documentation to the Commission of where the Penn station demolition materials were disposed in for completion of Order #5.

- 6. Enbridge shall conduct a preconstruction conference to be held prior to the commencement of any construction. The conference must 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 # 38) 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 with the 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 # 6 is completed.

- 7. Enbridge shall inform the Commission of the start date of construction just prior to the commencement of construction; report to the Commission on the date construction is started; and, once construction has started, shall keep the Commission updated on construction activities on a weekly basis.**

On October 13th, 2006, Ed Kelly (Rooney Engineering, Inc. – Project Manager) informed Pat Fahn with the Commission by phone and follow up with an email (Docket #35) that Enbridge would commence construction activities October 16th, 2006 by relocating electrical line facilities starting at the Larimore station.



Weekly Construction Progress Reports (Docket # 36-39, # 41-46, # 48, # 52-88) were provided to the Commission on a regular weekly basis. The last weekly construction progress report was filed on December 17, 2007. This last report noted that cleanup and painting was set for spring at the Penn station and Denbigh station. No construction reports were filed in the spring that this work was completed. 2008 weekly progress reports for the spring painting and cleanup or a letter that it occurred should be provided from Enbridge to complete Order #7 of the Commission's file.

8. Enbridge shall construct and operate the pipeline in the manner described in the application and at the hearing and in late filed exhibits and supplemental materials, 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.

Initial Design information was identified in the application (Docket #1), weekly progress reports (Docket # 36-39, # 41-46, # 48, # 52-88), and as built drawings (Docket #89) gave information to assist in the evaluation of order #8. Enbridge received a variance from permit conditions to commence construction on any station which it has obtained all necessary licenses and permits due to good cause.

Construction started on October 16th, 2006 at the Larimore station. Construction began on the week of March 26, 2007 at Penn station with the demolition of buildings. Construction of the Blaisdell station started the week of May 9, 2007. Construction of Denbigh started the week of September 1st, 2007. The Blaisdell and Larimore stations were complete the week of November 7, 2007. Penn and Denbigh stations were completed in the spring of 2007.

At each station Enbridge installed an access road, fencing, a main line sectionalizing valve, a pump/motor, a power variable frequency drive, and a control building. Each station's facilities were tied to Enbridge's existing Supervisory Control and Data Acquisition System. Each station received power service from a 4,160 volt feed and was graveled with Class 5 material.

On September 16th, 2006 (PU-06-300, Docket #29) Enbridge addressed potential noise levels. Enbridge calculated dBA levels to be 45 and below past 300 feet from the source. Enbridge

expected no concerns with noise near the neighboring buildings near the stations. This letter should be moved from Commission file PU-06-300 to PU-06-349.

The stations piping were connected to the cathodic protection system of the existing pipeline. Station as built drawings identified materials to be used that were rated for the proposed maximum operating pressure. No record of a test 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. Enbridge should provide a written record of station pressure tests to complete Order #8. 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 at each station are filed in the case file, Order # 8 is complete.

- 9. The pipeline must be buried to a minimum depth from the ground surface to the top of the pipe of 48 inches in rangeland, 48 inches for cultivated land, 48 inches at the bottom of the ditch for road crossings, and 72 inches across undeveloped section lines.**

The four pumping station have station piping that turns 90° 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. Minimal depths were found acceptable during the PSC post-construction field inspection. Order # 9 is completed.

- 10. All crossings of graded roads must be bored unless the responsible governing agency specifically permits Enbridge to open cut the road.**

The new construction occurred on four separate parcels of land that was owned by Enbridge. The four pumping stations at Blaisdell, Denbigh, Penn and Larimore, ND did not require any road crossings. Therefore, no boring or trenching of roads occurred. Order # 10 was followed.

- 11. The width of the clear cuts through any wooded areas and shelterbelts must be kept at a maximum of 50 feet where possible.**

Trees had to be removed on sites due to the industrial use of the land. The Denbigh and Larimore sites did not require any trees or shrubs to be removed. The Blaisdell station site required 2 green ash trees to be removed and no shrubs. The Penn station site required 64 trees and 4 shrubs to be removed. No wooded areas or shelterbelts existed in the four station site locations that width of clear cuts applied. Order # 11 was complied with.

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

Mountrail County has had occurrences of the Interior Least Tern, Whooping Crane, Pallid Sturgeon, Gray Wolf, Bald Eagle, and the Piping Plover based on the information in the County Occurrence of Endangered, Threatened and Candidate Species and Designated Critical Habitat in



PU-06-349 Post-Construction Report
Enbridge Pipeline (North Dakota) LLC
Blaisdell, Denbigh, Penn, Larimore
New Pump Stations June 13, 2011

North Dakota, March 2006, Mountrail County. In addition, Piping Plover habitat within Mountrail County has been designated Critical Habitat. The station environmental review (Docket # 1 Appendix A) performed by Kadrmas, Lee and Jackson, Inc. (KLJ) determine construction of the new Blaisdell Station may affect, but is not likely to adversely affect the above listed species. The construction is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat.

McHenry County has had occurrences of the Whooping Crane, Gray Wolf, Bald Eagle, Piping Plover, and Dakota Skipper based on the information in the County Occurrence of Endangered, Threatened and Candidate Species and Designated Critical Habitat in North Dakota, March 2006, McHenry County. In addition, Piping Plover habitat within McHenry County has been designated Critical Habitat. The station environmental review (Docket # 1 Appendix B) performed by Kadrmas, Lee and Jackson, Inc. (KLJ) determine construction of the new Denbigh Station may affect, but is not likely to adversely affect the above listed species. The construction is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat. USFWS (Docket #1 page 51) noted that a Dakota Skipper habitat exists within 2 miles of the Denbigh Station. Dakota skipper was listed as a candidate species under the Endangered Species Act (ESA). No legal requirement exists to protect candidate species; however, it is within the spirit of the Endangered Species Act to consider this species as having significant value and worthy of protection.

Ramsey County has had occurrences of the Gray Wolf and Bald Eagle based on the information in the County Occurrence of Endangered, Threatened and Candidate Species and Designated Critical Habitat in North Dakota, March 2006, Ramsey County. The station environmental review (Docket # 1 Appendix C) performed by Kadrmas, Lee and Jackson, Inc. (KLJ) determine construction of the new Penn Station may affect, but is not likely to adversely affect the above listed species. The construction is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat.

Grand Forks County has had occurrences of the Gray Wolf and Bald Eagle based on the information in the County Occurrence of Endangered, Threatened and Candidate Species and Designated Critical Habitat in North Dakota, March 2006, Grand Forks County. The station environmental review (Docket # 1 Appendix D) performed by Kadrmas, Lee and Jackson, Inc. (KLJ) determine construction of the new Larimore Station may affect, but is not likely to adversely affect the above listed species. The proposed construction is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat.

Potential effects on threatened and endangered species were researched in County Occurrence of Endangered, Threatened and Candidate Species and Designated Critical Habitat in North Dakota, March 2006. Based on the site visits and range/habitat descriptions found in technical literature, construction of the proposed sites may affect, but are not likely to adversely affect any listed species potentially located in the project areas. Construction of the proposed sites is not likely to jeopardize the continued existence of these species and is not likely to destroy or adversely modify critical habitat (Docket #1 4.8.2).



According to the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts #11; Enbridge states that minimal environmental impacts were anticipated as a result of the construction of the new sites. Construction of the proposed sites may affect, but were not likely to jeopardize the continued existence of any listed endangered species and is not likely to destroy or adversely modify critical habitat. The project was to have no significant impact on fish and wildlife resources, and no endangered or threatened plant or animal species were known to occupy the proposed station sites. With respect to the Larimore Station, the North Dakota Parks and Recreation Department recommended that any impacted areas be revegetated with species native to the project area.

At the pre-construction conference on October 2, 2006 with the Commission's staff (Docket # 25), Enbridge understood and agreed that it shall promptly report to the Commission the presence in the permit area of any critical habitat of threatened or endangered species, or of bald or golden eagles that Enbridge becomes aware of during construction. A review of the weekly construction progress reports (Docket #'s 36-39, 41-46, 48, 52-88) 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-06-349. Therefore, Order 12 is completed.

13. Construction must be suspended when weather conditions are such that construction activities will cause irreparable damage, unless adequate protection measures approved by the Commission are taken.

Enbridge started construction the week of October 20, 2006 (Docket # 36) completing construction on December 17, 2007. Weekly construction reports (Docket # 36-39, # 41-46, # 48, # 52-88) identified bad weather conditions at various times. One example of this was all construction was suspended from January 29, 2007 until March 26, 2007. The Denbigh station construction start was delayed due to wet weather until August 29, 2007. Poor weather conditions caused delays at all four pumping station construction sites. Final cleanup at the Penn and Denbigh station was delayed until the spring of 2008 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. A written record of the pressure test 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. A Maximum Operating Pressure record should be provided by Enbridge before Order # 13 is completed.

14. All cultural resource mitigation plans must be submitted to the North Dakota State Historic Preservation Office (SHPO) and approved by the SHPO prior to the start of any fieldwork or construction activity. If any cultural resource, paleontological resource, archeological resource, historical resource, or gravesite is discovered during construction of the facility, earth disturbing activities in the immediate vicinity of the discovery must be halted. The resource must be marked, preserved and protected from any further disturbance until a professional examination can be made in consultation with the SHPO. A report of such examination must be filed with the SHPO and the Commission. Clearance to proceed must be given by the SHPO and the Commission.

Earthworks, Inc. completed a Class III Cultural Resource Inventory within the areas of potential effects, as defined through consultation with the ND SHPO (North Dakota State Historic Preservation Officer).

- Blaisdell Station: The inventory recorded one new cultural resource site. Earthworks, Inc recommended a finding of No Historic Properties Affected.
- Denbigh Station: The inventory recorded one new cultural resource site. Earthworks, Inc recommended a finding of No Historic Properties Affected.
- Penn Station: The inventory recorded six new cultural resource sites. Five of the six sites are not recommended for NRHP. The grain elevator near the project area is unevaluated and assumed to be potentially eligible for inclusion on NRHP. Earthworks, Inc. recommended that the site be avoided by development of the pump station (Docket 1 Appendix C). In the application (Docket #1 Appendix C) Enbridge determined the site would be avoided with the proposed project. Earthworks, Inc also recommended a finding of No Historic Properties Affected.
- Larimore Station: The inventory recorded no new cultural resource sites. Earthworks, Inc recommends a finding of No Historic Properties Affected.

On October 6, 2006 (Docket # 26) The North Dakota State Historic Preservation Office issued a review letter of the Class III Cultural Resource Inventory for the pump stations in Grand Forks, McHenry, Mountrail, and Ramsey Counties in North Dakota. SHPO found the report acceptable. They concurred with a “No Historic Properties Affected” determination, provided that the projects nature specified and that they take place in the legal descriptions outlined and mapped in the report and the following stipulations:

- That any borrow fill material, such as dirt, rock or gravel come from an approved source, which is a source evaluated by a qualified Archaeologist and found to contain no significant cultural resources.
- That three architectural sites, including their landscape features, be avoided by the project, 32RY465, 32RY361 grain elevator, and 32RY362. These sites should be evaluated by a qualified Architectural Historian before any work is done to the buildings or to their landscape features. In lieu of evaluation by a qualified Architectural Historian before destruction, site 32RY465 can be photographed in a more complete manner, with historical documentation to follow.

According to the Amended Findings of Fact, Conclusions of Law and Order (Docket #32) of October 12, 2006 under Findings of Facts #10, Enbridge completed a Class III Cultural Resource Inventory as defined through consultation with the North Dakota State Historic Preservation



Officer (SHPO). The areas covered by the studies included the full extent of the parcels. Finding of Facts #12 stated that Enbridge had committed to avoid the elevator site as it is not contained within the project area.

The October 6, 2006 SHPO review letter stipulated that any borrow/fill material which is a source should be evaluated by a qualified Archaeologist. Access roads to each pumping station were constructed. Not enough information was found in the case file to make a determination that the materials used for the access roads and/or that any additional borrow/fill materials were used on the site.

The October 6, 2006 SHPO letter also stipulated that three architectural sites, including their landscape features, be avoided by the project. No Class III Cultural Investigation Report was found in the case file. Order # 14 required that Enbridge supply a copy of the report to the Commission. Enbridge should provide a copy of the Class III Investigation Report for the case file. The March 26, 2007 weekly construction progress report (Docket # 54) stated that demolition was complete at the Penn Station site with the exception of hauling off debris. The case file is insufficient without the Class III Cultural Report to determine which if any architectural and historic sites were demolished at the future Penn station site the week of March 26th. Viewing Google Earth 2011 image of the site area on September 20th, 1997 and comparing it to a current image; it looks as if an elevator, a pole barn, and an additional building still exists north of the pumping station site. Additional grain bins have been installed to the west of the elevator. It appears that a farmstead and its out buildings were demolished. The 2011 post construction field inspection verified the Google Earth 2011 site area review.

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 case file.

Enbridge should provide a copy of the Class III Investigation Report for the case file. They should also provide information as to what architectural and historic sites were demolished at the Penn station site the week of March 26th, 2007 (Docket #54), and verification that the three architectural sites in the October 6, 2006 SHPO letter (Docket #26) were avoided by the project. These items would complete Order #14.

- 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 pump station, and must be placed over areas containing topsoil.**

Site Development (Docket # 1, 1.3.) was part of the design identified at each site location. Top soil was removed off the site area. Top soil was removed in this area because the site was graveled with Class 5 material and fenced. By removing the top soil permanently, it helps reduce



vegetation growing in the graveled area in the future. Site development pictures (Docket #41) verifies that the top soil was stripped back and segregated from subsoil. The 2011 PSC post construction inspection verified the topsoil was not placed back within the footprint of the pump station. Order #15 is completed.

16. Reclamation and clean-up along the right-of-way must be continuous and coordinated with ongoing construction.

The project had four site locations where pump stations were constructed. Each site location is owned by Enbridge and required a separate clean up at each site location. Construction began October 20, 2006 at the Larimore station with 50 % of the cleanup occurring the week of July 15, 2007 and the remaining 50 % clean up occurring on November 28, 2007 based on weekly construction reports (Docket #36, #72, #85). Final clean up at the Larimore station occurred over a two week interval. Construction began on May 9, 2006 at the Blaisdell station with 100 % clean up occurring over a two week period from September 26 through October 3, 2007 based on weekly construction reports (Docket 59, # 78, #79). In the March 26, 2007 weekly progress report (Docket # 54), at the Penn station site, demolition was complete of old buildings with the exception of hauling off of the debris. No record was found in the Commission's file that the debris was removed or when. The last weekly construction progress report was filed on December 12, 2007 (Docket # 88). This report identified that the Penn and Denbigh stations cleanup and painting would occur in the spring of 2008. No record was found in the Commission's file that clean up occurred then. In using Google Earth 2011 image of the Penn station site and the PSC post construction, the debris had been hauled off the site.

Clean up at the Blaisdell and Larimore stations were completed in a continuous and coordinated manner. Not enough information was found in the case file to verify that clean up was continuous and coordinated for the Penn and Denbigh stations. Google Earth 2011 aerial inspection and a PSC post construction field visit verified the debris at Penn station was removed and clean up did occur at the Penn and Denbigh stations.

Enbridge should provide 2008 weekly progress reports for spring cleanup at Penn and Denbigh stations or a letter that it occurred to complete Order #16.

17. All pre-existing roads and lanes used during construction must be restored to a condition that will accommodate their previous use, and areas used as temporary roads during construction must be restored to their original condition.

Enbridge used existing public roads and constructed new access roads to the construction sites. The new access roads were constructed to be permanent roads to access each pump station throughout their life. Existing roads that were paved or graveled did not require modification. Original roads looked the same as prior to construction using Google Earth aerial images. Order # 17 is completed.



- 18. Reclamation, fertilization and reseeding must be done by Enbridge according to the Natural Resource 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 case file. The property used for the four sites was purchased by Enbridge. The station sites where construction occurred were Class 5 graveled and fenced. The PSC 2011 post construction inspection verified graveling and fencing. Therefore, no reclamation, fertilization and reseeding was required. Access roads and fencing of these sites were part of the project. Order #18 is complete.

- 19. Trees or other woody vegetation must be replaced with saplings that are two or more years old at a rate of two for every one removed. Landowners must be given the option of having replacement trees/shrubs planted off the right-of-way on the landowner's property or waiving that requirement in writing and allowing Enbridge to plant the replacement trees/shrubs elsewhere. All effected trees and shrubs must be quantified before construction activity. Enbridge shall record, and file with the Commission, the number and variety of replacement tree and shrub plantings, the specific planting area(s) and the dates of the plantings. Enbridge shall inspect tree replacements once a year for three years, on the anniversary of the plantings, and send a report on or shortly before October 1 of each year to the Commission documenting work completion and condition of woodlands planting. The Commission may order additional plantings if survival rates are less than 75%.**

No wooded draw was located within the four site locations. The approved Tree and Shrub Restoration Plan (Docket # 93) reported sixty six trees were removed and 87 trees were planted. Four shrubs were removed with 88 planted. No tree could be planted within the station properties due to the pumping stations industrial use. The Denbigh and Larimore sites did not require any trees or shrubs to be removed. The Blaisdell station site required 2 green ash trees to be removed and no shrubs. The remaining trees and shrubs were removed at the Penn station. Enbridge worked with the Williams County Soil Conservation District (WCSCD) for replanting.

On October 23, 2009 Enbridge submitted its first monitoring year report (Docket # 97). The WCSCD monitored the planting site in fall 2009. Approximately 90 percent of the plantings survived the first growing season and appear to be thriving. Enbridge will need to submit a 2nd year monitoring report (October 2010) and a 3rd year monitoring report (October 2011) for the Commission to have a final hearing on the completion of Order #19.

- 20. Enbridge shall repair or replace all fences and gates removed or damaged during all phases of construction and operation of the proposed transmission facility.**

Site locations were located such that no existing fence or gates were removed or damaged during construction. Penn station was the only site that demolition of existing buildings occurred. Each pumping station was fenced as part of the project. Usually fencing of a site started the 5th week at



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a site and was completed within 2 weeks. On November 13, 2006 the first fence was started at the Larimore station and was completed the week of November 28th, 2006 according to the weekly construction reports (Docket #41, #43). An access road into the Larimore station was completed the week of November 20th according to the November 20, 2006 weekly progress report (Docket # 42). Necessary access roads started about the third week at a site location with completion occurring within 3 weeks. The PSC 2011 post construction field inspection on June 9 verified the fences and gates and found them satisfactory. Order #20 is completed.

- 21. Enbridge shall provide the Commission with a copy of the design specifications for construction of the pump stations showing the location of the facilities and associated facilities as built, and shall provide this information within 3 months of the completion of the construction.**

In the original filing notice of hearing (Docket #8) a location map of the four Enbridge new pumping stations was provided. On March 13, 2008 Troy Pierantoni, Rooney Engineering, Inc., on behalf of Enbridge sent as-built drawings (docket # 89) of the pumping station. As built were for the Blaisdell station (Mountrail County), Denbigh station (McHenry County), Penn station (Ramsey County), and Larimore station (Grand Forks County) in North Dakota. The final pumping station constructed was the Denbigh station which was completed the week of December 17, 2007 (December 21) according to the weekly construction progress reports. The pipeline as built information was provided within 3 months of the completion of construction. Order # 21 is complete.

- 22. Enbridge's obligation for reclamation and maintenance of the pump station sites shall continue throughout the life of the pipeline.**

The site development for the four stations required the facilities to be fenced and graveled. The site is graded such that runoff should occur off the site. The reclamation and maintenance

required at these pump stations sites would be annual weed control. The PSC 2011 post construction inspection on June 9th verified excellent weed control. Also viewing Google Earth

2011 images of the sites (8/31/09 for Blaisdell, Penn, and Larimore and 6/22/09 Denbigh), proper weed maintenance occurs at this facility. Reclamation and maintenance has occurred at pumping station sites. Compliance of Order #22 has occurred.