Bison 2 Wind Project Interim Construction Inspection Report

Allete, Inc.

PU-11-57

Prepared for:

NORTH DAKOTA PUBLIC SERVICE COMMISSION
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Wenck
Engineers • Scientists

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Executive Summary

The North Dakota Public Service Commission (PSC) retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Bison II Wind Project (Project) in Morton and Oliver counties, ND owned and operated by Minnesota Power (MP), an operating division of ALLETE, Inc (Allete). Construction for the Project began on 15 August 2011 and is scheduled to be completed before 1 January 2013. The purpose of the interim construction inspection was to ensure the Project was being constructed in compliance with the siting laws and rules and the applicable PSC Order for the Project. Prior to the inspection, Wenck reviewed all Project documents to identify those which required site verification.

The site was visually inspected on 1 May 2012 by Wenck, accompanied by Allete representatives. Overall, the project was well-maintained and in good condition. All construction activities, including access roads, structure bases, and erosion controls appeared in place and conformed to all applicable Order stipulations for the Project. *There is no action required by the PSC at this time*. The final construction inspection report will be submitted to the PSC upon Project completion.

1.0 Background

1.1 INTRODUCTION

Construction of the Bison II Wind Project (Project) began on 15 August 2011. The Project is operated by Minnesota Power (MP), an operating division of ALLETE, Inc. (Allete). The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order on Case No. PU-11-57 on 10 August 2011 granting a Certificate of Site Compatibility for Energy Conversion Facility No. 24.

1.1 PURPOSE AND SCOPE OF INSPECTION

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

The North Dakota PSC retained Wenck Associates, Inc. (Wenck) to complete a construction inspection of the Project. The construction inspection included a review of the Application for Corridor Compatibility and Route Permit, Order, and other applicable documents to determine Project-specific siting and construction requirements; a site visit and inspection of facilities; documentation of compliance; and a report summarizing findings. This report is the interm inspection, and includes, but is not limited to, documentation of site visit observations, documentation of compliance deficiencies, and a summary of issues that should be addressed before the project is completed.

2.0 Document Review

2.1 METHODS

Wenck reviewed North Dakota siting laws and rules, the Application for Certificate of Site Compatibility for Energy Conversion Facility (Application), and the Order for the Project to identify what Project-specific documentation was required for compliance. Wenck then reviewed Project documents in the PSC Online Case Search (ND PSC 2012) to identify those siting laws, rules, and Application and Order assertions that already had written verification, those that still required documentation, and those that required physical site verification.

2.2 FINDINGS

The following table includes a list of components of the Project that were asserted in the Application and Order that could be documented during construction to verify compliance with siting laws, rules and the Order for the Project via either written documentation or physical site verification (**Table 1**). The source of each component or assertion is found in the first column. If Wenck found written verification in the online PSC files for a particular Project component, this is marked in the third column. If physical site verification was possible, this was marked in the fourth column and that particular component was verified during the site inspection (Section 3.0). *Shaded boxes in the fourth column indicate the physical verification will be verified during final construction inspection.*

Several components of the Project were asserted in the Application or proposed construction but have no written documentation showing that they were indeed implemented or constructed as planned, and physical site verification is not applicable. *This includes all items listed in Table 1 that have shaded boxes in the third column,* indicating written verification is appropriate, but is

lacking from current files. When construction for the Project is complete, written verification of these items should be submitted to the PSC.

Table 1. Bision II Wind Project Document Review Summary

Source of Project Component/ Assertion	Description of Project Component/Assertion	Written Verification in PSC Files*	Site Verification
	PRECONSTRUCTION		
CROP** ¶2	Preconstruction conference	X	
CROP ¶4	Permits from other agencies	X	
CROP ¶5	Intent to start construction	X	
CROP ¶7	Records of compliance with Certificate of Site Compatibility		
CROP ¶8	Construct and operate in accordance with Application		
Conc. of Law ¶3	Compliance with Chapter 49-22 of ND Century Code	X	
Fin. Of Fact ¶21	Compliance with Chapter 69-06-08 of ND Admin. Code	X	
CROP ¶19	Compliance with National Electric Safety Code		
CROP ¶31	Procedure for handling complaints		
CROP ¶32, Pre. Cons. Conf.	Engineering design drawings of surveyed structure and substation location prior to construction		
CROP ¶33	Inform PSC of plans to modify facility		
	ENGINEERING/CONSTRUCTION/DESIGN & SOILS		
Fin. Of Fact ¶34	471ft. from existing transmission lines, public roads, railroads, non-participant property boundaries	X	
Fin. Of Fact ¶35	1,400ft. from occupied residence	X	
CROP ¶5	Weekly construction reports	X	
CROP ¶12	Graded road crossings bored		
CROP ¶13	Roads restored equal to or better than previous condition		X
CROP ¶14	Construction suspended during adverse weather conditions		X
CROP ¶15	Topsoil segregated and replaced		
Fin. Of Fact ¶39	Feeder lines buried to 42in.		
CROP ¶22	Damaged drainage tile replaced		
CROP ¶23	Mitigation of any TV or Radio interference		
CROP ¶25	Waste removed		
CROP ¶26	Restoration of area to previous conditions after construction		
CROP ¶27	Educational material to landowners	By Request	
CROP ¶28	Safety measures for traffic control/restrict public access		X
CROP ¶29	Extraordinary events (injury, turbine failure, etc.) reported to PSC		
CROP ¶30	Large amounts of dead birds or bats reported w/in 5 days		
CROP ¶34	As builts GIS files submitted within 3 months of completion		
Fin. Of Fact ¶27	Erosion control BMP's implemented successfully		X
Pre Conf. ¶35	Decommission plan prior to project placed in-service		
NDDH (3/28/11)	NDHD requests: minimize fugitive dust, degradation of waterways, storm water management, noise		X
	NATURAL AND CULTURAL RESOURCES		
CROP ¶9	Report presence of T+E species, bald or golden eagles		
CROP ¶11	Report presence of cultural, archeological, historic sites		
CROP ¶17	Reclamation, fertilization, and reseeding according to NRCS		
CROP ¶20	Compliance with "Tree and Shrub Mitigation Specifications"		
USFWS (4/20/2011)	Recommendations: APP or APBPP, avoid construction Feb 1-July 15, bury new electric lines or mark lines near wetlands, avoid native prairie and wetland habitat		
NDPR (3/24/2011)	Avoid Yellow bullhead (*Ameriurus natalis*) habitat		X

*Note: White boxes indicate that verification cannot be completed for this inspection.

**CROP: Certification Relating to Order Provisions.

3.0 Site Inspection

3.1 METHODS

Kevin Magstadt and Luke Toso of Wenck visited the Project site on 1 May 2012. Matthew Freudenrich, Project Engineer, and Daniel McCourtney, Environmental Compliance Specialist for the Project, accompanied Wenck staff during the site visit and assisted with navigation, pointed out problem areas, and answered any questions.

The Project was visually inspected by accessing as many points as feasible where road access was available and areas where construction activities were not ongoing. Digital photographs (Canon Power Shot SD1300 IS, 12.1 megapixels) were taken showing typical Project infrastructure and documenting problem areas (**Appendix B**). Geographic coordinates were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Garmin eTrex Legend H; <10m accuracy; WGS 84 datum) (**Appendix A I-III; Appendix C**)

3.2 OBSERVATIONS & FINDINGS

Observations during the interim inspection found that the Project was being construction in accordance with the PSC Order. At the time of the inspection, no towers had been constructed, but all bases were poured and access roads were in place. Therefore, Wenck personnel inspected the Project areas that were completed, and discussed construction plans with Project staff.

3.2.1 Roads

At the time of the inspection, all county and access roads were well maintained (**Appendix B, Photos 3, 6-8**). In particular, one intersection had been improved significantly to increase

transportation safety (**Appendix B, Photo 3**). All access roads that had been constructed had appropriate culverts in place to facilitate natural surface water flow. In addition, all access roads had appropriate signage (e.g. stop signs at intersections on section lines). There was one low area that needed to be repaired at the time of the inspection (**Appendix B, Photo 6**). However, this area was fixed after Project inspection.

3.2.2 Structure Bases

Structure bases appeared to have been constructed in accordance with the Application and all necessary PSC requirements. Silt fences had been installed surrounding each structure base, preventing erosion to the surrounding area (**Appendix B, Photos 2, 4, 5**). Topsoil had been segregated and mounded with necessary erosion controls in place (**Appendix B, Photos 4**).

3.2.3 Laydown Area

The laydown area used for the project was observed, and it appeared to be very well maintained, organized, and in good condition (**Appendix B, Photos 9, 10**). Particularly of note was a diesel tank that had been surrounded by gravel to prevent any possible contamination by accidental spills. This attention to detail was apparent in all aspects of the current Project's implementation.

3.2.4 Other Observations

Several other aspects of project implementation were noted, including:

- Suspension of construction during adverse weather conditions
- Fugitive dust controlled with magnesium chloride and water near residences
- Fences and cattle guards (rated to 80 tons) installed to prevent cattle from entering the construction area
- Litter and waste picked up concurrently with constriction.
- Permanent and temporary fences installed were well maintained.

4.0 Issues to Resolve and Recommendations

4.1 WRITTEN VERIFICTION OF PROJECT IMPLEMENTATION

As noted in Section 2.0, several components of the Project were asserted in the plans or proposed during construction, but have not been documented by the PSC. At this time, most of these components are only required upon project competition. However, one (1) component, engineering design drawings of surveyed structure and substation prior to construction, is required prior to construction and was not found in the online PSC case search. The PSC may be able to verify this item from other records it has available. Otherwise, Wenck recommends that the PSC request this item from Allete to verify that the Project was implemented as planned.

5.0 Conclusions

Overall, the Project appeared was being constructed as designed with minimal impacts to the surrounding natural and human environment. The Project site was under construction, but appeared in good condition and well maintained. Wenck observed several issues that needed to be resolved before the Project is completely constructed and in service. *However, there is no action required by the PSC at this time.* It should be noted that the Allete representatives were easy to work with during the construction inspection process. They were fully transparent and answered any questions during and after the site visit.

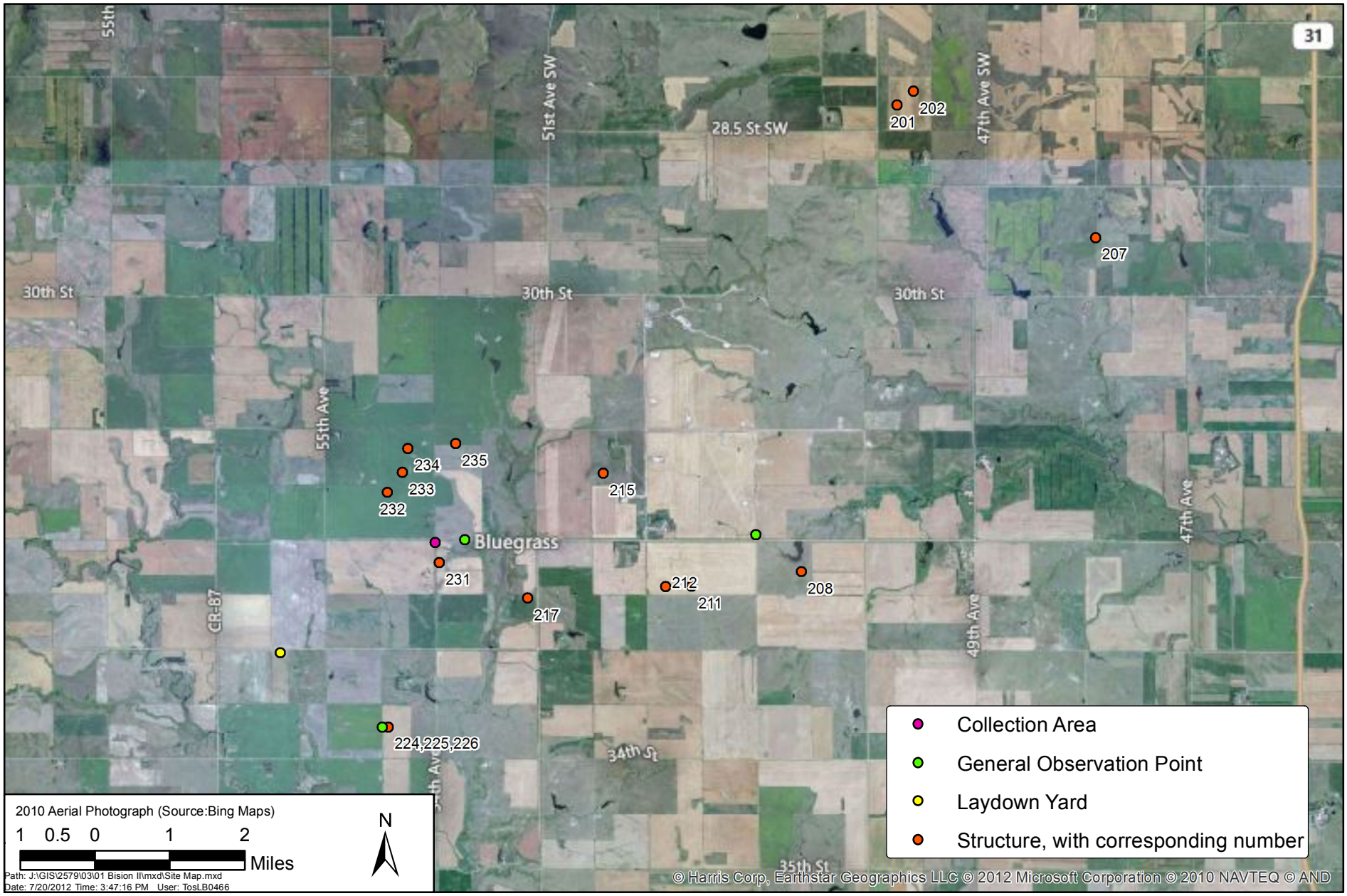
6.0 References

Matthew Freudenrich, P.E., 2012. Civil Engineer. Personal Communication: discussion during site visit.

Daniel McCourtney. 2012. Environmental Compliance Specialist. Personal Communication: discussion during site visit.

North Dakota Public Service Commission (ND PSC). 2012. Online Case Search. Available from: http://www.psc.nd.gov/database/company_list.php. Accessed 10 May 2012.

Appendix A



NORTH DAKOTA PUBLIC SERVICE COMMISSION

Bision II Site Map

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Appendix A

Appendix B

Photo 1. Direction: Southwest. The base of Structure 215.

Photo 2. Direction: Northwest. Slope that had been reseeded with erosion control fencing nearby Structure 215. Erosion control surrounded the entire structure footprint.

Photo 3. Direction: South. Intersection that had been improved, with appropriate stop signs at section lines.

Photo 4. Direction: South. Example segregated topsoil pile at Structure 212. All topsoil was mounded on site, with appropriate erosion controls at all structure locations.

Photo 5. Direction: Northwest. Example silt fence at preventing erosion to nearby wetland at Structure 208.

Photo 6. Direction: West. Transformer with appropriate safety bollards in place. The access road in this photo had a slight low area, which was reportedly repaired after the inspection.

Photo 7. Direction: South. Access road to Structures 224 and 225. Note mesh netting and rocks at base of culvert for erosion control.

Photo 8. Direction: Southwest. Access road for Structure 202. Note silt fence and rocks at base of culvert for erosion control.

Photo 9. Direction: Southwest. This diesel tank, located in the laydown yard, had been surrounded by gravel to prevent spills

Photo 10. Direction: South. Project laydown yard, which was organized and well maintained.

Appendix C

Appendix C. Field Observation Points (GPS Coordinates)

Point	Feature	Latitude	Longitude
141	Structure 215	46.95784	-101.56372
142	General Observation Point	46.94975	-101.53416
143	Structure 212	46.94289	-101.55163
144	Structure 211	46.94292	-101.54657
145	Structure 208	46.94489	-101.52543
146	Structure 217	46.94135	-101.57829
147	Structure 224-226	46.92438	-101.60522
148	General Observation Point	46.92437	-101.60634
149	Laydown Yard	46.93419	-101.62611
150	Structure 231	46.94608	-101.59539
151	Collection Area	46.94871	-101.59616
152	Structure 232	46.95530	-101.60542
153	Structure 233	46.95796	-101.60246
154	Structure 234	46.96111	-101.60140
155	Structure 235	46.96173	-101.59222
156	General Observation Point	46.94907	-101.59044
157	Structure 201	47.00633	-101.50689
158	Structure 202	47.00813	-101.50379
159	Structure 207	46.98894	-101.46855

*Latitude and Longitude are in WGS 1984 Cooridnate system