



BORDER WINDS ENERGY PROJECT

WEEKLY PROJECT REPORT

Weekly report no:	44
Report for week period ending COB Friday:	05/29/2015
Calendar week no:	22

Executive Summary

This Week's Highlights

- Foundation excavation subgrade was successfully built at T4 and T34 with approval from RES engineer of record (EOR) and RRC, the third party materials testing technician; mud mats were successfully place at T4 and T34; Nelson began tying the bottom mat of rebar at T4 and plans to finish tying the top mat of rebar at T10;
- Civil crews completed the first crane pad at T23 and continue working on placing material at T25 and T3; Building and Earth (B&E), the third party material testing technicians continue to perform tests confirming that subgrade and final crane pads are acceptable;
- The septic system installation was complete at the O&M building on 5/29/2015; grading continued in support of rock placement which will be scheduled depending on the upcoming weather;
- The cable crew set three junction boxes and will have all three terminated by 05/30/2015;
- Cement treatment of county road 108th has been approved and will be scheduled once confirmation is received for application by the County Commissioner;
- Drilled pier installation continues at the substation; Rosendin has successfully drilled and placed concrete at twenty-seven (27) piers which include the piers for the control building, also known as the equipment enclosure area; the control building is scheduled to arrive on 06/15/2015.

This Week's Key Issues

- A incorrect drawing revision release by the subcontractor to the field resulted in the substation control building piers being placed at different dimensions than the current revision showed; Rosendin has informed RES that the EOR has accepted the location of piers, which will be noted on the red-lines and included in the as-built drawings; RES will perform a document control audit to verify that all drawings in the field are the current revision;



- The foundation at T11 remains inaccessible due to muddy conditions and the soft spot located on the access road; the civil crew continues to dig out the spot and replace with new material; water pumping was delayed as the landowner was not in favor of hoses running across his field; water pumping will continue once the Hydrovac truck can access the foundation;
- The crane pad subgrade at T24 did not pass the proof roll, the soft spot will be removed and material placed; crane pad will be rocked once B&E approves the proof roll;
- The cable crew continues to struggle with pulling MV collection system cable through the bores which were installed last fall; the crew determined that the bore that runs parallel to county road 52 and in front of the laydown yard is frozen; methods to address the frozen conditions are being determined;
- A meeting was held between RES and Xcel to discuss the landscaping plan for the north and west side of the O&M building; additional land will need to be purchased in order to provide enough room for tree planting and the operations crew to maneuver equipment to maintain this area; RES will provide additional layout drawings showing how much room is needed to meet this request.

Safety

Accident and incident statistics for this period and to date are:

Type	Lost Time Accident	Recordable Injury	Non Recordable Injury	Equipment/Property Damage	Near Miss	Safety Observation
Current Period	0	0	0	4	3	9
Project To Date	1	1	10	25	73	536

*Full description of week's Safety Report can be found in Exhibit 1

Previous Week's TRIR = 2.22 / Current Week's TRIR = 2.14

Total Recordable Incident Rate = 200,000 * (Lost Time Accidents + Recordable Injuries) / Total Man Hours

Total Recordable Incident Rate = 200,000 * (1 + 1) / (186,501)

Previous Week's RES Safety Index = 0.88 / Current Week's RES Safety Index = 0.875

((Lost Time Accident * 64) + (Recordable Injury * 16) + (Non Recordable Injury * 4) + (Equipment/Property Damage * 1) + Near Miss * 0.25) / Total Man Hours * 1000

((1 * 64) + (1 * 16) + (10 * 4) + (25 * 1) + (73*0.25)) / (186,501) * 1000

Weeks Highlights:

- In an effort to combat continuing reports of trash onsite, site safety held a game where eight (8) pieces of trash were spray painted and left in precarious locations around site; all personnel were informed that certain pieces of trash were worth a prize if found; all 8 pieces and additional trash were picked up and disposed of in the yard dumpsters



- On 5/26/2015, as part of corrective actions for several damage incidents, site safety directed a 100% documented inspection of all vehicles and equipment on site by RES personnel; in addition to the inspection, team members were given trash bags and directed to clean out the beds of trucks and the cabs of trucks
- Ice machines arrived onsite and have been stocked with bags of ice; crew leads were directed to retrieve coolers from the connex and inform management if additional coolers are required
- Speed limit, Stop Ahead, and PPE notification signs were installed onsite; 5 MPH signs were mistakenly placed in front of residences; the signs will be removed and placed in the laydown yards as intended; reduced speed signs will be installed in front of residences in an effort to minimize dust
- Protective caps were installed on t-posts at miscellaneous spots where they were missing, including silt fence, goal post tethers, and porta potty tie downs
- T-post cap shipment was received and crews were asked to install them on all t-posts onsite lacking the protective cap
- A dog that had been abandoned on site and had been living in the laydown yard and running around vehicles and equipment was adopted by one of the site team members.

Weeks Issues:

- Four property damage incidents on site:
 - A gasoline fueled crew truck had diesel fuel pumped into the fuel tank
 - The back window of crew truck was shattered after material being loaded into the bed struck the glass
 - A window pane cracked but remained intact on a smooth drum roller
 - The back step of a bull dozer was damaged when hit by the trailer it was hauling
- Radio signal continues to hamper communication onsite; possible fixes will be discussed onsite
- Crews were informed that bee hives have been placed in fields onsite and were asked to disclose allergies voluntarily; confidential information will be kept in a secure location and will only be used in an emergency situation; personnel should keep medications updated and accessible
- Crews were informed that areas on county roads will need flashing lights if cones have been used to alert local traffic of a soft spot, as required by NDDOT

Project Work Hours:

- Weekly Man-hours: 6,665.50
- Total Project Man-hours: 186,501.70
- Hours Since Last Recordable Injury: 16,896.00



Environmental

Accident and incident statistics for this period and to date are:

Type	Major Incident	Minor Incident	Near Miss	Observation
Current Period	0	1	0	1
Project to Date	0	58	3	42

*Full description of week's Environmental Report can be found in Exhibit 2

Rolling Incident Score: Previous week: 1.07/ Current Week: 0.96

$((\text{Major Incident} * 16) + (\text{Minor Incident} * 4) + (\text{Near Miss} * 0.25) + (\text{Observation} * 0)) * 1000 / \text{Total Man Hours}$

Week's Highlights:

- Straw wattle installation continues on all culverts for inlet and outlet protection; rip rap will be used on the end of the culvert which will not be removed during reclamation.

Week's Issues:

- A small spill occurred on 5/27/2015 at T34; the tractor/trailer delivering Class 5 material experienced a hydraulic leak which resulted in 3-4 gallons of oil being released; truck was repaired and removed from site and the material was excavated and placed in the contaminated soil storage for proper disposal;
- Precipitation event on 5/28/2015 resulted in approximately .12" of rain; the BMP inspection identified areas of silt fence at the substation where rains have undercut the backfill; crews were informed of the issue however, additional effort is required to bring the fence back to satisfactory condition.



Quality

Type	RES Issued NCRs			RES Issued CPARs			Client Issued NCRs			Client Issued CPARs		
	Issued	Open	Closed	Issued	Open	Closed	Issued	Open	Closed	Issued	Open	Closed
Current Period	0	0	0	0	0	0	0	2	0	0	0	0
PTD	3	0	3	0	0	0	7	2	6	0	0	0

*Full description of week's Quality Report can be found in Exhibit 4

Week's Highlights:

- Building & Earth continue to check densities for MV collection system trench backfill, test Class 5 material gradations & process proctors; B&E continue to verify compaction of the conduit backfill at the substation as well as compaction during O&M grading where required
- RRC continues to testing soils at the substation and turbine site excavations; T4 and T34 were approved for mud mat placement; and pier drilling and concrete placement is ongoing at the substation
- Monitoring concrete placement at the substation for piers.
- Response to NCR-2015-016 is ongoing
- Results required to officially close out NCR 2014-038 will be sent; necessary testing has been completed on the ground grid at T-3
- Monitored mud mat placement at T4 & T34
- Response was received from RES EOR for TEF's 23053-033 through 23053-038; several responses are under review and information will be submitted to necessary parties once complete; RRC received the response to TEF 23053-037 and 23053-038 which detailed the subgrade construction at T4 and T34

Week's Issues:

- Bits of topsoil were identified in a drilled pier at the substation; RRC materials testing technician inspected the hole and spoil pile and determined that while topsoil was present, the amount was not enough to cause concern and the pier was approved for concrete placement on 5/30/2015



SCHEDULE STATUS

Project duration	68
No. of weeks into contract	46
Contract time passed (%)	67%

Key Activities (Construction)	Weighted %	Percent Complete		
		Contract Schedule	Construction Schedule	Actual
Design Engineering	2.5%	100%	100%	100%
Roads	14%	100%	87%	85%
Crane Pads	6%	6%	6%	5%
Foundations	20%	100%	96%	95%
Collection System	20%	50%	45%	45%
Substation	10%	57%	41%	31%
WTG Delivery, Erection, MCC	20%	0%	0%	0%
O&M Building	5%	100%	68%	60%
Completion	2.5%	0%	0%	0%
Overall Actual Percent Complete				48%

PROGRESS REPORT

PERMIT STATUS

Permit Type / Description	County / State	Responsible Group	Date Needed By	Status
O&M Well Permit	ND State	AB Systems	-	No permit required Awaiting documentation
Hwy Intersection for deliveries	ND State	RES Americas	5/18/2015	Approved and received 5/29/2015

CONSTRUCTION STATUS

Certificates	Total	Submitted	Signed
Foundation Completion Certificate	75	71	71
Mechanical Completion Certificate	75	0	0
Electrical Works Completion Certificate	1	0	0
Project Mechanical Completion Certificate	1	0	0
Project Substantial Completion Certificate	1	0	0
Project Final Completion	1	0	0



Roads & Crane Pads					
Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Roads	70%	Roads			69.7%
Clear and Grub	20%	152,837	152,837	-	100.0%
Subgrade	25%	152,837	141,346	11,491	92.0%
Place and Compact Road Base	30%	207,469	185,555	21,914	89.0%
Shoulders	15%	152,837	0	152,837	0.0%
Ditches	10%	152,837	0	152,837	0.0%
Crane Pads	30%	Crane Pads			1.3%
Cut & Subgrade Compacted	60%	75	1	74	1.3%
Material Placed & Compacted	40%	75	1	74	1.3%
Roads & Crane Pads Progress					49%

Comments:

- One crane pad was completed with road base;
- To date, twelve crane pads subgrade have been built, although only T23 has had a proof roll conducted and was approved for road base installation;
- Maintenance continues on county roads 52nd Avenue, 108th and 109th Street; road conditions are continually improving as the temperatures increase; magnesium chloride will be applied in specific areas to mitigate dust and cement treatment will be installed to stabilize 108th Street;
- Site access road into T9, T10 and T11 is ongoing; several soft spots require removal and material will be installed to stabilize the subgrade;
- NDDOT permits to construction turning radius modifications at HWY 30/108th, HWY 30/107th, HWY 30/106th, and US 281/52nd were approved and construction will be scheduled in support of WTG component deliveries which will begin on 6/15/2015.

Foundations					
Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Excavations	10%	75	74	1	98.7%
Mud Mats	5%	75	74	1	98.7%
Bases	45%	75	71	4	94.7%
Pedestals	20%	75	71	4	94.7%
Earthing Kit	5%	75	71	4	94.7%
Backfill	15%	75	71	4	94.7%
Foundation Progress					95.3%



Comments:

- Subgrade was successfully built at T4 and T34 according to RRC RES EOR recommendations; proof rolls were conducted and passed which released the excavations for mud mat placement;
- Two mud mats placed; T11 mud mat will be removed and replaced once the standing water has been pumped;
- Nelson completed tying the top mat of rebar at T10 and continues to tie the bottom mat of rebar at T4.

Collection System					
Item	Weighted %	Budget	Total Received	Total Remaining	Percent Complete
Deliveries	30.0%	Deliveries			100.0%
MV Cable	50.0%	901,972	907,916	-5,944	100.7%
Fiber	40.0%	335,107	343,177	-8,070	102.4%
Junction Boxes	10.0%	28	28	0	100.0%
Installations	50.0%	Installations			37.4%
Trench	40.0%	278,230	110,191	168,039	39.6%
MV & Fiber/Ground Cable	50.0%	297,841	122,194	175,647	41.0%
Junction Boxes	10.0%	28	3	25	10.7%
Terminations	20.0%	Terminations			2.1%
MV Cable at WTG switch gear	60.0%	75	0	75	0.0%
Junction Boxes	30.0%	28	2	26	7.1%
Grounding Transformers	10.0%	6	0	0	0.0%
Collection System Progress:					49.1%

Comments:

- Cable crew trenched 12,883 feet and installed 14,844 feet of cable
- Westwood mobilized back to site and completed Circuit 1 and Circuit 6 shots for the As-builts; the crew also completed staking Circuit 2 and Circuit 3
- Began VLF Testing collection system cables for verification.
- EPS completed ground grid testing
- The use of grounding transformer box pads have been approved by Xcel and were procured
- The quote was received for the bore pipe grout work; the hydrovac truck is onsite and available to support the work



O&M BUILDING

Activity Description	Required	Unit	Remains	% Comp.
Earthworks	100	%	1	99%
Foundation	100	%	3	97%
Deliver Building	100	%	0	100%
Building Enclosed	100	%	0	100%
Building Interior Framing	100	%	0	100%
Building Electrical	100	%	16	84%
Building HVAC	100	%	25	75%
Plumbing	100	%	7	93%
Building Interior Trim & Finishing	100	%	25	80%
Septic System	100	%	0	100%
Water Well	100	%	100	0%
Fence and Yard Rock	100	%	100	0%

O&M Building Progress: 78%

Comments:

- Grading inside the fence was completed last week; however, some rework is required due to the rain
- RES and Xcel held a meeting to discuss the grading outside the fence, and agreed that this issue is targeted to be closed within a week; RES is working on providing a revised grading plan as per the discussion in the meeting
- The utility company started plowing in the power line to the building, and is expected to be complete by 6/6/2015
- The electrical subcontractor continued installing light fixtures, power outlets, pulling wire and terminating to the panel
- Crews finished the work on the framing, taping, painting, VCT, ceramic tile, and ceiling installation
- HVAC and plumbing installations are ongoing
- Septic system installation has been successfully completed



Substation					
Item	Weighted %	Budget	Total Completed	Total Remaining	Percent Complete
Design	20%	Design			100%
Design Drawings	100.00%	100	100	0	100.00%
Deliveries	35%	Deliveries			24%
Structural Steel	15.00%	100	90	10	90.00%
Main Transformer	30.00%	1	0	1	0.00%
Control House	15.00%	1	0	0	0.00%
Relay Panel	15.00%	100	0	100	0.00%
Arrestors	5.00%	100	0	100	0.00%
Switches	10.00%	100	0	100	0.00%
Breakers	10.00%	100	100	0	100.00%
Construction	80%	Construction			17%
Grading & Site Preparation	5.00%	100%	75%	25%	75.00%
Foundation Piers	10.00%	77	36	41	46.75%
Foundation Slabs	10.00%	18	14	4	77.78%
Conduit/Ground Grid	10.00%	100%	4%	96%	4.00%
Steel Framing/Buswork	10.00%	100%	0%	100%	0.00%
Equipment Install/Wiring	15.00%	100%	0%	100%	0.00%
Control Building/Wiring	10.00%	100%	0%	100%	0.00%
Transformer Dress Out	10.00%	100%	0%	100%	0.00%
Electrical Test/Commission	10.00%	100%	0%	100%	0.00%
Fence, Gravel, & Clean Up	10.00%	100%	0%	100%	0.00%
Substation Progress					41.51%

Comments:

- Drilling for pier foundations is ongoing;
- Concrete has been placed at twenty-eight (28) pier foundations this week, including the control building;
- Conduit installation is ongoing;
- Trenwa installation is scheduled to begin on 5/30/2015.

Exhibit 1 – Site Photographs



