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October 12, 2015

VIA E-MAIL/FILING

Mr. Darrell Nitschke
Executive Secretary
North Dakota Public Service Commission
600 E. Boulevard Ave., Dept. 408
Bismarck, ND 58505-0480

Re: ALLETE Clean Energy through Thunder Spirit Wind, LLC
Thunder Spirit Wind Project
Case No. PU-11-601

Please find attached in the above-referenced case, ALLETE Clean Energy's October 10, 2015 Underground Fiber Optic Cable Incident Report.

Please contact Dan McCourtney at 218.355.3515 or dmccourtney@allete.com with any questions.

Yours truly,

David R. Moeller

DRM:sr
Attachments
c: Jerry Lien - North Dakota Public Service Commission (jlein@nd.gov)
Dan McCourtney
Wells McGiffert
Frank Frederickson
John Hollingsworth

135 PU-11-601 Filed: 10/13/2015 Pages: 12
Underground fiber optic cable incident report

On October 10, 2015 at approximately 9:50 AM, the trenching crew cut through the 12 strand fiber optic cable located on the south side of 5th Ave where circuit 3s home run crosses the road. The trenching crew had moved to start circuit 3s homerun to turbine site 24. The crew had to cross under the buried fiber cable which had been pot holed using a vacuum truck several weeks prior. Prior to digging the operator and the spotter cleaned tumbleweeds out of the hole for the fiber cable prior, once the hole was cleared the operator then proceeded to dig the dirt away to open up the trench. The trench tape and fiber cable were visible at that time. A trench was opened up approximately 2 feet on the north side of where the pot holed fiber cable was located. As the operator was working his way back towards the fiber, with the spotter watching the right side of the trench, the spotter signaled to the operator to stop when he got close to the trench tape. As the operator pulled the excavator bucket away from the trench tape, the left tooth of the excavator bucket caught the fiber cable resulting in the cut fiber line. After seeing the cut fiber cable, the crew shut down immediately and the foreman contacted his supervisor. At around 10 AM Wanzek was notified of the incident and it was reported to ACE a few minutes later. Wanzek site safety arrived at site around 10:08 AM, asked for the dig permit which he was provided, took pictures of the damaged cable and the crew was instructed to barricade the location and return to the laydown yard to begin the investigation portion of the incident which was headed by CEI. Several attempts were made to contact known local Consolidated (public utility company) employees but contact was finally made at 11:35 AM and the incident reported. CEI received a call at approximately 12 PM from Consolidated stating that they were on their way. The fiber repair crew arrived on location at around 3 PM, repairs took 2 and a half hours to make and the fiber repair crew left site around 5:30 PM. All trenching activities were shut down until a corrective action plan is drafted and submitted to Wanzek.

Root Cause Analysis**Unsafe Acts**

- 1) Operator was too close to the fiber cable
- 2) Spotter should have been behind the fiber so he could see the hole trench opening
- 3) Work within close proximity to the utility was not done by hand
- 4) Deviation from proper procedures/ poor decisions were made

Management Deficiencies

- 1) Insufficient worker training – Spotter needed to know where and what to look for, operator should not have operated heavy equipment within close proximity to an existing public utility
- 2) Communication – operator should have communicated with the spotter for proximity updates, spotter should have relayed proximity
- 3) Foreman should have communicated the process better and ensured it was understood by all involved

Crew Analysis

- 1) Equipment operator was too close to the fiber
- 2) Better communication should have been utilized and need improvement by both the operator and spotter
- 3) Training for work activities near or around utilities both public and new during exaction activities along with advanced spotter training

Post Incident Actions:

- 1) Notification of the incident was made to CEI Supervision, Wanzek and ACE Management.
- 2) Incident location was barricaded and work activities shut down
- 3) Consolidated was notified of the incident and a repair team was sent to the incident location
- 4) Crew was stood down and an investigation started
- 5) Excavation at the location of the incident 30 feet both east and west of the strike location over the fiber line was made by CEI to assist Consolidated with the repair
- 6) The trenching crew reviewed CEI's policy on Trenching and Excavation
- 7) Repairs were completed by Consolidated and the area was barricaded until further notice
- 8) Accountability measures are currently being discussed for the operator and spotter and will be finalized after Monday's stand down with CEI
- 9) Wanzek has requested a corrective action plan from CEI prior to trench crew activities resuming

Preventative Measures:

- 1) Crew Training/ retraining on spotter procedures and working distance from known objects
- 2) Review of CEI trenching policies

Trenching and Excavation – Daily Excavation Checklist



(To be completed by a Competent Person)

SITE LOCATION: <u>Hudson Spirit</u>	
DATE: <u>10/10/15</u>	TIME: <u>7 AM</u>
COMPETENT PERSON: <u>Robert Baker</u>	
SOIL CLASSIFICATION: Stable Rock <input type="checkbox"/> Type A <input type="checkbox"/> Type B <input type="checkbox"/> Type C <input checked="" type="checkbox"/>	
TYPE OF SOIL TEST:	EXCAVATION DEPTH: <u>4 FT</u> EXCAVATION WIDTH: <u>2 FT</u>
TYPE OF PROTECTIVE SYSTEM USED: <u>NA</u>	
Indicate for each item: YES - NO - or N/A for not applicable	
1. General Inspection of Jobsite:	
A. Surface encumbrances removed or supported	Y
B. Employees protected from loose rock or soil that could pose a hazard by falling or rolling into the excavation	Y
C. Spoils, materials, and equipment set back at least two feet from the edge of the excavation	Y
D. Location of the excavation marked by flagging, tape or barricades.	Y
E. Walkways and bridges over excavations four feet or more in depth are equipped with standard guardrails, toeboards and/or netting to prevent object from falling below	NA
F. Warning vests or other highly visible clothing provided and worn by all employees exposed to public vehicular traffic	Y
G. Warning system established and utilized when mobile equipment is operating near the edge of the excavation	NA
H. Employees prohibited from working on the faces of slopes or benched excavations above other employees	Y
3. Means of Access and Egress:	
A. Lateral travel to means of egress no greater than 25 feet in excavations four feet or more in depth	Y
B. Ladders used in excavations secured and extended three feet above the edge of the trench	Y
C. Structural ramps used by employees designed or approved? by a competent person	NA
D. Structural ramps used for equipment designed by a registered professional engineer (RPE)	NA
E. Ramps constructed of materials of uniform thickness, cleated together on the bottom, equipped with non-slip surface	NA
4. Wet Conditions:	
A. Precautions taken to protect employees from the accumulation of water	Y
B. Water removal equipment monitored	NA
C. Surface water or runoff diverted or controlled to prevent accumulation in the excavation	NA
D. Inspections made after every rainstorm or other hazard-increasing occurrence	Y
6. Support Systems:	
A. Materials and/or equipment for support systems selected based on soil analysis, trench depth, and expected loads	NA
B. Materials and equipment used for protective systems inspected and in good condition	NA
C. Materials and equipment not in good condition have been removed from service	NA
D. Protective systems installed to prevent worker exposure to cave-ins, collapses, or threat of being struck by materials or equipment	NA
E. Members of support system securely fastened to prevent failure	NA
F. Support systems provided to ensure stability of adjacent structures, buildings, roadways, sidewalks, walls, etc.	NA
G. Excavations below footings or foundations supported, as approved by an RPE	NA
H. Shield system placed to prevent lateral movement	NA
COMPETENT PERSON: <u>Robert Baker</u>	Signature: <u>Robert Baker</u>

Excavation & Trenching Permit

To be completed prior to any excavation or trenching work. This is an initial review of required procedures.

Project:	Thunder Spirit	Date:	10/10/15
Competent Person:	Robert Baker	Time:	7 AM
Excavation Depth/Width:	4 FT / 2 FT	Soil Type:	C
Protective System:	NA		

Excavation, adjacent areas, and protective systems inspected by a designated competent person daily prior to start of work or as hazards warrant.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competent person has the authority to remove employees from the excavation immediately and stop work.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surface encumbrances removed or supported.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees protected from loose rock/soil that could pose a hazard by falling or rolling into the excavation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spills, materials, and equipment set back as least 2' from the edge of the excavation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Barriers provided at all remotely located excavations, wells, pits, shafts, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walkways and bridges over excavations 6' or more in depth are equipped with standard guardrails and toeboards.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Warning vests or other highly visible clothing provided and worn by all employees exposed to vehicular traffic.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees required to stand away from vehicles/equipment being loaded or unloaded.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are prohibited from going or working under suspended loads.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees prohibited from working on the faces of sloped or benched excavations above other employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Utility company contacted and/or utilities located. Locate Ref No.-	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15178366 15176013			
Locations of utilities marked.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Underground installations protected, supported or removed when excavation is open.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical and hazardous utilities will be potholed at minimum ever 25' horizontally.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At least a 24" radius should be hand dug around each utility to expose it.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Atmosphere within the excavation tested where there is a reasonable possibility of an oxygen deficiency, combustible, or other harmful contaminant posing a hazard.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Adequate precautions taken to protect employees from exposure to an atmosphere containing less than 19.5 % or more than 23.5% oxygen and/or other hazardous atmosphere.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ventilation provided to prevent employee exposure to an atmosphere containing flammable gas in excess of 10% of the lower explosive limit of the gas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Testing conducted often to ensure that the atmosphere remains safe.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Emergency equipment, such as breathing apparatus, safety harness and lifeline and/or basket stretcher readily available where hazardous atmospheres could or do exist.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Employee trained to use PPE and rescue equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Safety harness and lifeline used and individually attended when entering bell bottom or other deep confined excavations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<i>Means of Access & Egress</i>	Yes	No	N/A
Unobstructed lateral travel to means of egress no greater than 25' in excavations 4' or more in depth.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ladders used in excavations secured and extended 3' above the edge of the trench.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Structural ramps used by employees designed by a competent person.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Structural ramps used for equipment designed by a registered professional engineer.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ramps constructed of materials of uniform thickness, cleated together on the bottom and equipped with a no-slip surface.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Employees protected from cave-ins when entering or exiting excavations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Wet Conditions</i>	Yes	No	N/A
Precautions taken to protect employees from the accumulation of water.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water removal equipment monitored by a competent person.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surface wear or runoff diverted or controlled to prevent accumulation in the excavation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Inspections made after every rainstorm or other hazard increasing occurrence.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<i>Support Systems</i>	Yes	No	N/A
Materials and/or equipment for support systems selected based on soil analysis, depth, width and expected loads.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Materials and equipment used for protective systems inspected and in good condition.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Materials and equipment not in good condition have been tagged and removed from service.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Damaged materials and equipment used for protective systems inspected by a registered professional engineer after repairs and before being placed back into service.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Protective systems installed without exposing employees to the hazards of cave-ins, collapse or threat of being struck by materials or equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Members of support system securely fastened to prevent failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Support systems provided to ensure stability of adjacent structures, buildings, roadways, sidewalks, walls, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavations below the level of the base or footing supported and approved by a registered professional engineer.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Removal of support systems progresses from the bottom and members are released slowly as to note any indication of possible failure.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Backfilling progresses with removal of the support system.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavate material to a level no greater than 2' below the bottom of the support system and only if the system is designed to support the loads calculated for the full depth.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shield system placed to prevent lateral movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Employees are prohibited from remaining in shield system during vertical movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments



Competent Person

Signature of Site Superintendent

Art Wiltgen

From: nd@occinc.com
Sent: Tuesday, September 29, 2015 12:47 PM
To: awiltgen@cei-online.com
Subject: Ticket: 15178366

NORTH DAKOTA ONE-CALL

You can check that the ticket information and mapping location are correct, and that no work will take place outside the area indicated on the map, by [clicking on the TicketLINK](#). Should any changes be needed, you can use the 'Update' or 'Correct' Ticket functions on ITIC.

The map is ONLY used to determine which facility operators may have facilities in your dig area. The Utilities do NOT receive a copy of this map. The precise excavation area and scope of work MUST be described in the extent of work field on the ticket.

The [TicketLINK](#) may also be used to view utility status, request a 'Relocate' or 'Cancel' a request. If you have any questions, call 563-884-7762.

Ticket Summary

Request # 15178366 **LORQ ROUTINE**
Work to Begin Date : 10/01/15 1:45 PM CT **Original Call Date:** 9/29/15 1:42 PM CT
Type of Work: INSTALL UNDERGROUND CABLE
County: ADAMS **Place:** DUCK CREEK TWP
Address: 0 5TH AVE NE
Nearest Intersection: 4TH ST NE
Township: **Rng:** **Sect-Qtr:**
Caller Lat: **Lon:** **Zone:** **Nad:**
Depth: 4FT **Explosives:** N **Tunneling/Boring:** N
Location of Work:
SECTION 20 WEST HALF SECTION 5 TH AVE TO 6TH AVE. TOWER 29 IN SECTION 29 TO T-21.
Remarks:

Caller Information

Company: CEI ELECTRICAL CONTR. **Fax:**
Contact Name: ART WILTGEN **Phone:** (406)740-4409
Address: 6131 HOMESTEAD BLVD.
COLSTRIP, MT 59323
Alt. Contact: BOB BAKER **Phone:** 405-531-8402
Contact Email: awiltgen@cei-online.com
Work Being Done For: THUNDER SPIRIT WF

Members Notified:

CTC01 - CONSOLIDATED TELEP (701)483-4444
SLOPE01 - SLOPE ELECTRIC COO (701)579-4191

If there are any private underground facility operators in the excavation area, you should notify them directly.

Art Wiltgen

From: nd@occinc.com
Sent: Friday, September 25, 2015 1:27 PM
To: awiltgen@cei-online.com
Subject: Ticket: 15176013

NORTH DAKOTA ONE-CALL

You can check that the ticket information and mapping location are correct, and that no work will take place outside the area indicated on the map, by [clicking on the TicketLINK](#). Should any changes be needed, you can use the 'Update' or 'Correct' Ticket functions on ITIC.

The map is ONLY used to determine which facility operators may have facilities in your dig area. The Utilities do NOT receive a copy of this map. The precise excavation area and scope of work MUST be described in the extent of work field on the ticket.

The [TicketLINK](#) may also be used to view utility status, request a 'Relocate' or 'Cancel' a request. If you have any questions, call 563-884-7762.

Ticket Summary

Request #	15176013	LORQ ROUTINE			
Work to Begin Date :	9/29/15 2:30 PM CT	Original Call Date:	9/25/15 2:24 PM CT		
Type of Work:	INSTALL UNDERGROUND CABLE				
County:	ADAMS	Place:	DUCK CREEK TWP		
Address:	0 5TH AVE NE				
Nearest Intersection:	4TH ST NE				
Township:		Rng:		Sect-Qtr:	
Caller Lat:		Lon:		Zone:	Nad:
Depth:	4FT	Explosives:	N	Tunneling/Boring:	N

Location of Work:

SECTION 29 NORTH WEST 1/4 SECTION. ROAD CROSSING TO SECTION 20. KNOWN FIBER CROSSING.

Remarks:

Caller Information

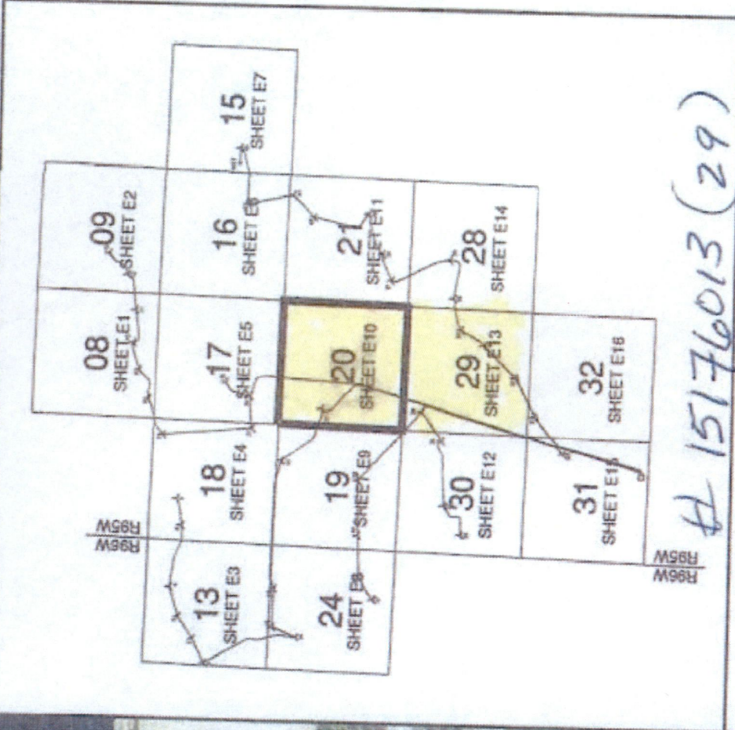
Company:	CEI ELECTRICAL CONTR.	Fax:	
Contact Name:	ART WILTGEN	Phone:	(406)740-4409
Address:	6131 HOMESTEAD BLVD. COLSTRIP, MT 59323		
Alt. Contact:	BOB BAKER	Phone:	405-531-8402
Contact Email:	awiltgen@cei-online.com		
Work Being Done For:	THUNDER SPIRIT WF		

Members Notified:

CTC01	- CONSOLIDATED TELEP	(701)483-4444
SLOPE01	- SLOPE ELECTRIC COO	(701)579-4191

If there are any private underground facility operators in the excavation area, you should notify them directly.

15178366(20)



15176013(29)

- NOTES:
1. CALL FOR LOCATES PRIOR TO CONSTRUCTION.
 2. DO NOT PLACE JUNCTION BOXES IN LOW AREAS THAT MAY FLOOD OR COLLECT WATER. COORDINATE JUNCTION BOX LOCATIONS WITH OWNER.

THUNDER SPIRIT WIND PROJECT

Rev.	Date	Description	By
A	05/04/2015	80% SUBMITTAL	BAG
B	06/11/2015	ISSUED FOR CONSTRUCTION BAG	



ISSUED FOR CONSTRUCTION







