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February 20, 2020

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
Docketing Division
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3797

Re: **Case No. 18-1607-EL-BGN -** In the Matter of the Application of Firelands Wind, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Wind-Powered Electric Generation Facility in Huron and Erie Counties, Ohio.

Supplemental Response to Seventh Data Request from Staff of the Ohio Power Siting Board

Dear Ms. Troupe:

Attached please find Firelands Wind, LLC's ("Applicant") supplemental response to the Seventh Data Request from the staff of the Ohio Power Siting Board ("OPSB Staff"). The Applicant provided this response to OPSB Staff on February 20, 2020.

We are available, at your convenience, to answer any questions you may have.

Respectfully submitted,

/s/ *Christine M.T. Pirik*
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Attorneys for Firelands Wind, LLC

Cc: Craig Butler
Jonathan Pawley

CERTIFICATE OF SERVICE

The Ohio Power Siting Board's e-filing system will electronically serve notice of the filing of this document on the parties referenced in the service list of the docket card who have electronically subscribed to these cases. In addition, the undersigned certifies that a copy of the foregoing document is also being served upon the persons below this 20th day of February, 2020.

/s/ Christine M.T. Pirik
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4810-4880-0181 v1 [59714-18]

BEFORE
THE OHIO POWER SITING BOARD

In the Matter of the Application of Firelands Wind, LLC for a Certificate of Environmental Compatibility and Public Need to Construct a Wind-Powered Electric Generation Facility in Huron and Erie Counties, Ohio.	)))))	Case No: 18-1607-EL-BGN

FIRELANDS WIND, LLC'S SUPPLEMENTAL RESPONSE TO THE SEVENTH DATA REQUEST FROM THE STAFF OF THE OHIO POWER SITING BOARD

On January 31, 2019, as supplemented on March 18, 2019, April 11, 2019, July 10, 2019, and September 12, 2019, as revised on October 4, 2019, Firelands Wind, LLC ("Applicant") filed an application ("Application") with the Ohio Power Siting Board ("OPSB") proposing to construct a wind-powered electric generation facility in Huron and Erie Counties, Ohio ("Project").

On February 4, 6, 10, 13, 2020, the Staff of the OPSB ("OPSB Staff") provided the Applicant with OPSB Staff's Seventh Data Request. On February 13, 2020, the Applicant submitted its response to the Seventh Data Request; however, at the time of submittal, the response to Question 1 was being finalized, thus, the Applicant noted that it would provide the response to OPSB Staff once it was completed. Now comes the Applicant providing the following supplemental response to the Seventh Data Request from the OPSB Staff, which addresses Question 1.

1. List of permits, approval, etc. listed in application. Update Status.

a. Final Designs and Detailed Construction Drawings (page 17)

Response: Current designs are considered Issued for Bid ("IFB"). These designs will be shared with general contractors through a Request for Proposal ("RFP") process to solicit bids to be the General Contractor ("GC"). The GC, when selected, will move the plans from the IFB stage to the Issued for Review ("IFR") stage, which typically will take 12 weeks. At that time, the Applicant will review the plans, and work with the GC on any comments/edits. The GC will then take those comments/edits and produce a final design and detailed construction drawing set after approximately 12 more weeks. The Applicant expects the final designs will

be ready to be issued in late 2020. Final designs are also reliant upon feedback from the OPSB and agencies involved in the permitting process.

b. Road Use Maintenance Agreement (page 39)

Response: The Applicant has shared template Road Use and Maintenance Agreements ("RUMAs") with both the Erie and Huron County Engineers and will be coordinating with the County Engineers to complete the RUMAs. The Applicant anticipates completing the negotiation process for the RUMAs in June 2020, depending on collaboration with the County Engineers. Ohio Revised Code ("R.C.") Section 5727.75, is currently not applicable in this case because, to date, neither county has opted for the PILOT program from that statute. The Applicant will continue to seek a RUMA in good faith with the counties, though no statutory requirement for a RUMA exists at this time.

c. Transportation Permits (page 44)

Response: Final transportation permits require the final transportation routing plan (see response below to Question 1.e). The permits outlined in the Application include:

- Oversized load permits: These permits are typically valid for 2-3 days and sought immediately prior to the truck hitting the road during construction. These permits are the responsibility of the turbine vendor and Balance of Plant ("BOP") GC.
- New access point permits: These permits will be covered by the RUMA or through the Ohio Department of Transportation ("ODOT"). The necessary permits will be determined during the IFR package between April and August.
- Roadway improvements: This is the first stage of construction, which will be covered through ODOT permits and the RUMA. These will be determined between April and August and work will likely start in October at the earliest.
- Highway crossings: These will be determined between April and August, and will be covered through ODOT permits and the RUMA.

d. ODOT Special Hauling Permits (page 45)

Response: Same as response to oversized load permits stated above in response to Question 1.c.

e. Final Transportation Routing Plan (page 44)

Response: A final transportation plan cannot be conducted until a final turbine type and final turbine locations are selected. Depending on blade length and tower section length, different transportation routes may be utilized. Depending on which turbine locations will be constructed, which will be determined based on the OPSB permitting process, different roads may be used throughout the project for access. This plan is, therefore, not able to be conducted and finalized until after the

permitting process is complete. Ninety days prior to start of turbine deliveries (May 2021 timeframe) a route study will be conducted from the manufacturing plant to project.

f. List of Required Permits to Install and Operate the Facility (page 50)

Response:

- The National Pollution Discharge Elimination System ("NPDES") construction storm water general permit is not available until after final designs, typically sought immediately prior to construction – the Applicant will then need to start construction within 12 months of receipt.
- The Nationwide permit ("404") is not available until after final designs, as the Application will need to know the final boring locations, final collection locations, etc. The Applicant notes that the 404 permit is not an actual permit - just a qualification. Qualification is met by demonstrating that the project will stay below the thresholds outlined in Section 404 through findings in the wetland delineation report and the Environmental Assessment updated with the final design. Qualification will require preconstruction notice to the United State Army Corps of Engineers ("USACE").
- The Water Quality Certification ("401") comes with the 404 permit; once the Applicant shows it can be authorized under the 404 permit, the Applicant can get the 401 permit.
- The Ohio Isolated Wetland Permit is not expected to have impacts based on the submitted design; however, the Applicant will reassess this prior to finalization of designs and will go through the permitting process if necessary.
- The Ohio permit to install ("PTI") on-site sewage treatment is sought prior to start of construction of the operations and maintenance building, which will likely be in early 2021.

g. Spill Prevention, Control, and Countermeasure (SPCC) Plan (page 52)

Response: The Spill Prevention, Control, and Countermeasure ("SPCC") Plan is drafted by the GC during the final design and detailed construction drawing process. See **Attachment 1** for an example SPCC Plan.

h. SWP3 (page 53)

Response: The Storm Water Pollution Prevention Plan (SWP3") is drafted during the final design and detailed construction drawing process in later 2020 as outlined above.

i. Fire Protection, Safety, and Medical Emergency Plans (page 63)

Response: Once the GC is selected, the GC will reach out to local EMS/fire/police/medical in order to create the final Health and Safety Plan ("HSP") (Exhibit O to the Application) and Emergency Action Plan ("EAP") (Exhibit P to

the Application); these final plans will cover the fire protection, safety, and medical emergency plans. These plans will be finalized just prior to start of construction, likely in August-December 2020. The Applicant will reach out to local EMS/fire/police/medical with a template, along with changes that were incorporated into the construction HSP/EAP. HSP/EAP are typically finalized at least one month prior to the commercial operation date. These plans are contingent on the final turbine type and locations. Consultation efforts to date were provided in response to Question 10 in the response to OPSB Staff's Sixth Data Request filed on February 11, 2020.

j. Preconstruction Background Sound Study (page 74)

Response: The preconstruction background study will be created and shared with OPSB after a final turbine type and turbine locations have been selected. Selection of a final turbine type is not expected until mid-2020, and final turbine locations cannot be selected until after the OPSB certificate has been issued as this selection is dependent on sites permitted by the OPSB.

k. Preconstruction shadow flicker analysis (page 96)

Response: The preconstruction shadow flicker analysis will be created and shared with OPSB after a final turbine type and turbine locations have been selected. Selection of a final turbine type is not expected until mid-2020, and final turbine locations cannot be selected until after the OPSB certificate has been issued as this selection is dependent on sites permitted by the OPSB.

l. Impact to Landmarks and Mitigation Plans (page 206)

Response: The Phase I archaeological surveys were initiated in October 2019 in accordance with the State Historic Preservation Office ("SHPO")-approved study plan and will continue in spring 2020. As of now, approximately 370 acres (23%) of high-probability areas where facilities are proposed have been surveyed. Architectural surveys were initiated in January 2020 in accordance with the SHPO-approved study plan. The Applicant met with SHPO to discuss the surveys plans on September 10, 2019, and have had various email exchanges and phone conversations with SHPO staff to discuss survey timelines and the development of a Programmatic Agreement ("PA"). The Applicant and SHPO are working to finalize the PA, and expect to have this agreement finalized by the end of February, 2020. Once the PA is final, the Applicant will provide it to OPSB Staff. SHPO concurrence is anticipated between July and September 2020.

m. Blasting Plan (page 230)

Response: As stated in response to Question 1.a., the GC will be selected after an RFP is issued. The GC will select the foundation engineer. The GC, in consultation with the foundation engineer, will be responsible for producing a blasting plan, if

one is deemed necessary. If deemed necessary, the plan will be developed and finalized prior to excavation and it will be approved by the foundation engineer.

n. Construction and Maintenance Access Plan (page 231)

Response: The GC is responsible for finalizing the construction and maintenance plan. Once the plan is completed, prior to commencement of construction, the Applicant will provide OPSB with the contractor's construction and maintenance access plan based on the facility's construction documents. The plan will include the items outlined on page 231 of the Application.

o. Vegetation Management Plan (page 231)

Response: The vegetation management plan is based on the final engineering designs. The GC is responsible for finalizing the vegetation management plan.

p. Herbicide Use (page 233)

Response: The Applicant aims to avoid herbicide use throughout the project area. Use of herbicide may be required on a case-by-case basis; however, it will be based on the final engineering design and specific conditions during operations. In the event that trimming is not applicable and a licensed arborist recommends herbicide use, herbicide will be used. If herbicide use is required, the Applicant will contact the applicable agencies.

q. Post Construction Site Restoration (page 233)

Response: Post-construction site restoration will be included in the Construction Documents (civil package) and will be referenced in the project SWP3. Disposal methods will be required to be included by the contractor with details of their means and methods.

r. Impact Avoidance Plan (page 236)

Response: See response to Question 1.l. above.

s. USFWS and ODNR Coordination (page 236)

Response: No new recommendations/actions from U.S. fish and Wildlife Service ("USFWS") or the Ohio Department of Natural Resources ("ODNR") have been received since the Application was filed in January 2019.

t. Post Construction Avian and Bat Monitoring Plan (page 237)

Response: The Applicant has developed a Technical Assistance Letter with the USFWS to avoid and minimize impacts to Endangered Species Act ("ESA")-listed bat species. The Applicant will continue to coordinate with the USFWS and ODNR

to ensure compliance with the ESA. Correspondence with the USFWS and ODNR regarding ESA compliance will be provided by the Applicant to OPSB Staff 60 days prior to turbine construction to confirm compliance with this condition. The Applicant will also promptly notify OPSB Staff of any actions taken to comply with the ESA, including, but not limited to, development and implementation of a Bird and Bat Conservation Strategy to avoid and minimize impacts to bat species in the project area. A final monitoring plan is specific to turbine type and final turbine locations and is developed closer to commercial operations to allow time to work with landowners on plot clearing, as well as with ODNR and USFWS.

u. Decommissioning Plan (page 240)

Response: The decommissioning plan requires final detailed design and construction drawings. A decommissioning plan will be provided to the OPSB at the preconstruction meeting.

v. Revised Decommissioning Plan (page 240)

Response: The revised decommissioning plan occurs during operation, every five years.

w. Bald Eagle Impact Minimization Plan (Exhibit U)

Response: The report that is being referenced here (Exhibit U) was from 2012 prior to issuance of the Eagle Conservation Plan Guidance ("ECPG") by USFWS in 2013. The ECPG is the industry standard to assess and manage potential risk to bald eagles, superseding any previous USFWS recommendations (e.g., Bald Eagle Impact Minimization Plan). The Applicant has been collecting eagle data in accordance with the ECPG and has been working with USFWS to determine risk to eagles and appropriate next steps for the project since 2013. The Applicant will continue to coordinate with the USFWS to ensure compliance with the Bald and Golden Eagle Protection Act ("BGEPA"). Correspondence with the USFWS regarding BGEPA compliance will be provided by the Applicant to OPSB Staff 60 days prior to turbine construction to confirm compliance. The Applicant will also promptly notify OPSB Staff of any actions taken to comply with the BGEPA, including, but not limited to, development and implementation of a Bird and Bat Conservation Strategy to avoid and minimize impacts to eagles in the project area.

x. Other updates

Response:

- Power Purchase Agreement ("PPA") (page 21): See **Attachment 2** for notice of PPA with AEP Ohio, Inc.

- National Telecommunications and Information Administration ("NTIA") (page 102): See **Attachment 3** the letter from the NTIA dated February 2, 2019. This information was provided to OPSB Staff in March 2019.

- Sound Studies (Third Supplement to the Application page 3): See **Attachment 4** for an update of the Nordex N149 5.5 and 5.7 sound analyses. In the sound memorandum dated June 24, 2019 Attachment 3 to Third Supplement to the Application), the Applicant said it "will perform additional analysis of sound emissions from the Nordex N149 5.5 MW and 5.7 MW models when more comprehensive data is available." The June 24, 2019 memorandum indicated that while "(b)oth the 5.5 MW and 5.7 MW models currently have published overall sound power data, but do not have published 1/1 or 1/3 octave band spectral data. The overall sound power level of the 5.5 MW and 5.7 MW model is less than the overall sound power level of the 4.5 MW model, so we would expect the model results of the 5.5 MW and 5.7 MW models to be less than those reported for the 4.5 MW model in the RSG January 2019." Results in this February 17, 2020 memo, as anticipated in the sound memo dated June 24, 2019, show that all sound results for the Nordex N149 5.5 and 5.7 are less than the results reported for the Nordex N149 4.5/4.8 MW model. The Applicant notes that, as stated in Attachment 2 to the Third Supplement to the Application, sound studies for the N149 4.5 and 4.8 models show the same results; however, as stated in the Revised Fourth Supplement to the Application, the Applicant is no longer considering the N140 4.5 model.

- ODOT Office of Aviation: See **Attachment 5** for the Applicant's response to the ODOT Office of Aviation letter.

Respectfully submitted,

/s/ *Christine M.T. Pirik*

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Attorneys for Firelands Wind, LLC

Attachment 1

Example Spill Prevention, Control, and Countermeasure Plan

.

/s/ Christine M.T. Pirik
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(Counsel is willing to accept service via email.)

Spill Prevention, Control, and Countermeasure (SPCC) Plan

For construction activities at:
Neosho Ridge Wind Project
Neosho County
Thayer, Kansas, 66776

SPCC for

Neosho Ridge Wind Project

Prepared for:
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Thayer, Kansas, 66776
Indianapolis, IN 46278
812.264.5258 (Phone)

Prepared by:
Ulteig Engineers, Inc.
3350 38th Avenue South
Fargo, ND, 58104
701.280.8500

Preparation Date: 08/20/2019
Estimated Project Dates: August 2019 – December 2020

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SECTION 1: INTRODUCTION

This Spill Prevention, Control, and Countermeasure (SPCC) Plan establishes procedures and operating practices to prevent oil discharges from occurring and prepares the facility to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge from the project.

This plan is also designed to serve as a reference for oil storage information and testing records, as a tool to communicate to employees and contractors established practices for preventing and responding to discharges, as a guide for conducting facility inspections, and as a resource during emergency responses. This Plan has been prepared to meet the requirements of Title 40, Code of Federal Regulations, Part 112 (40 CFR part 112), and supersedes the earlier Plan developed to meet provisions in effect since 1974. In addition to fulfilling requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, and as a resource during emergency response.

It has been determined that Neosho Ridge Wind Project does not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in Appendix B of this Plan. Regulations require that this plan be kept on-site and accessible at all times during construction. A complete copy must also be maintained in the office of the Facility Manager upon commencement of operations.

1.1 Self-Certified / PE Certified Requirements

Amendments in 2006 to the 40 CFR part 112 limit the quantity of petroleum stored a project that may be "self-certified" to up to 10,000 gallons. The Neosho Ridge Wind Project will have an estimated 75,460 gallons of petroleum on the project during construction. Due to this quantity of petroleum, a "self-certified" SPCC is not permitted by the EPA on the Neosho Ridge Wind Project, and a Professional Engineer Certified plan is required. This plan is intended to be utilized as that document. The PE certification is found in Section 1.5 of this document.

1.2 Qualified Oil-Filled Operational Equipment

Wind turbines may be considered "Qualified Oil-Filled Operational Equipment," as described in 40 CRF section 112.7(k), due to adherence of the description below from the EPA's *SPCC Guidance for Regional Inspectors 2013 publication.*

- *"The 2006 final rule amended §112.7 to provide an alternative option for facilities with qualified oil-filled operational equipment. Oil-filled operational equipment includes equipment with an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device.*
- *"Qualified" oil-filled operational equipment are those that have had no discharges to navigable waters or adjoining shorelines in the three years prior to the SPCC Plan certification date (or since the facility became subject to 40 CFR part 112 if it has been in operation for less than three years), as described below*
- *A single discharge greater than 1,000 U.S. gallons, or*
- *Two discharges as each greater than 42 U.S. gallons within any 12-month period; "*

Due to the absence of secondary containment structures on all oil-filled operational equipment, the following additions/alterations must be part of a SPCC plan. These additions can be found in subsequent sections of this SPCC plan for the Neosho Ridge Wind Project Project.

- Facility owner or operators shall establish and document procedures for inspections and monitoring of all equipment for the presence of leaks and spills of oil from the equipment (Section 3.7 of this SPCC)
- Develop an oil spill contingency plan (Appendix E of this SPCC)
- Provide a written commitment of manpower, equipment, and materials necessary to control and remove any oil discharges that may be harmful in an expeditiously manner (Section 1.4 of this SPCC)

1.3 Scope of Plan

This Plan provides guidance on key actions that IEA Constructors, LLC must perform to comply with the SPCC rule:

- Complete monthly and annual site inspections as outlined in the Inspection, Tests, and Records section of this Plan (Section 3.7) using the inspection checklists included in Appendix C.
- Perform preventive maintenance of equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating conditions.
- Conduct employee training as outlined in the Personnel, Training, and Spill Prevention Procedures section of this Plan (Section 3.8) and document them on the log included in Appendix D.
- If any of the following occur submit the SPCC Plan to the EPA Region 7 Regional Administrator (RA) and the Kansas Department of Health and Environment (KDHE), along with other information as detailed in Section 5.4 of this Plan:
    - The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or
    - The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.
    - A change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE). Amend the SPCC Plan within six (6) months and submit.
    - Review the SPCC plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as personnel changes or revisions to contact information, such as phone numbers. Administrative changes must be documented in the SPCC plan review log of Section 1.7 of this plan, but do not have to be certified by a PE.

1.4 Management Approval, Commitment of Resources and Designated Person (40 CRF 112.7)

This facility is committed to preventing discharges of oil to navigable waters and the environment, and to maintain the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This Spill Prevention, Control, and Countermeasure Plan for Neosho Ridge Wind Project Neosho County, KS is fully supported by the management of IEA Constructors, LLC. IEA Constructors, LLC will implement this SPCC plan and amend it as needed as a result of expansions, modifications, and improvements at the Neosho Ridge Wind Project facility. In addition, the management of IEA Constructors, LLC commits the manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful and to respond to a discharge within an appropriate response time.

The SPCC Plan Coordinator is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this SPCC plan.

Name: Pat Ringler

Title: Project Manager

Signature: Pat Ringler

Date: August 20, 2019

1.5 Professional Engineer Certification (40 CRF 112.3(d))

I certify under penalty of law that this document and all attachments as well as the facility they pertain to were inspected and reviewed under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted.

Based on inquiry of the person or persons directly responsible for the gathering of information, the information submitted is, to the best of my knowledge and belief, true accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Through this certification, I hereby attest that (1) I am familiar with the requirements of 40 CFR 112; (2) my personnel has visited and examined the facility; (3) the SPCC Plan has been prepared in accordance with good engineering practices, including consideration of applicable industry standards, and with the requirements of the SPCC rule; (4) procedures for required inspections and testing have been established; and (5) the Plan is adequate for the facility.

Certifying Engineer: _____

State: _____

Registration Number: _____ Seal:

Signature: _____

Certification Date: _____

1.6 Location of SPCC Plan (40 CFR 112.3(e))

In accordance with 40 CRF 112.3(e), a complete copy of this SPCC will be maintained and kept in the IEA Constructors, LLC project office trailer. The location of the office trailer is located on State HWY KS-47 in Thayer, KS 66776 (the corner of Harper Road and KS-47, roughly 4 miles east of the intersection of US 169 & KS-47). Normal hours of operations are from 7 am to 5 pm Monday through Friday.

1.7 Plan Review/Amendments (40 CFR 112.3 and 112.5)

In accordance with 40 CFR 112.5 (a), IEA Constructors, LLC shall periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- commissioning of equipment;
- construction or demolition that might alter secondary containment structures; or
- changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures

Amendments to this SPCC plan due to these types of changes shall be referred to as technical amendments and must be certified by a Professional Engineer (PE).

Non-technical amendments do not need to be certified by a PE and can be done by the facility owner and/or operator. Nontechnical amendments include, but are not limited to, the following:

- Change in the name or contact information (e.g., telephone numbers) for individuals responsible for this SPCC Plan
- Changes in the name or contact information of spill response or cleanup contractors

Both technical and nontechnical amendments must be documented in the attached SPCC Review and Amendment Log, found below in Table 1.7. All amendments to this SPCC Plan shall be signed and certified by the owner/operator. Reviews must be recorded in the SPCC Review and Amendment Log even if no changes were made to the plan.

This SPCC Plan is to be amended within 6 months of any change and implemented within 6 months following preparation of the amendment.

Table 1.7: SPCC Review and Amendments Log

Reviews / Revisions Made		
Revision #	**Date**	**Amendments / Revisions Made**

1.7.1 Scheduled Reviews (40 CFR 112.5(b))

Requirements of 40 CRF 112.5(b) state that reviews of the SPCC plan must occur at least once every 5 years. Due to the short nature of the Neosho Ridge Wind Project, it is suggested that a review is completed at least once during the duration of project construction. Good engineering and construction practices would encourage at least one plan review after the SPCC has been certified by a Professional Engineer and after several inspections have occurred, to ensure the SPCC is applicable to the work being performed on-site.

1.8 Applicability / Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan meets the requirements of 40 Code of Federal Regulations (CFR) Part 112 ("SPCC rule"). A cross-reference of the Plan to applicable parts of 40 CFR Part 112 is provided in Table 1.8 below.

The SPCC rule covers oil of any kind and form, including crude and refined petroleum products, asphalt, gasoline, fuel oil, mineral oil, naphtha, waste oil and oil mixed with wastes/hazardous substances[1,1a]. The Neosho Ridge Wind Project is required to prepare and implement an SPCC Plan due to:

- Oil is stored in aboveground in bulk containers in total quantities in excess of 1,320 gallons; and
- The facility could reasonably be expected to discharge oil in harmful quantities into or upon the "navigable water" of the United States.

[1] The "List of Petroleum and Non-Petroleum Oils," compiled by the United States Coast Guard (USCG) may be useful in determining whether a substance is considered oil. The list is available on the USCG Web site at http://www.uscg.mil/vrp/faq/oil.shtml

[1.a] The "Table 116.4A - List of Hazardous Substances," compiled by the Unites States Environmental Protection Agency (U.S. EPA) shall be referred to when identifying all hazardous materials and wastes on site. This list is available at https://www.gpo.gov/fdsys/pkg/CFR-2015-title40-vol22/pdf/CFR-2015-title40-vol22-part116.pdf. A list of reportable quantities of hazardous materials can be found at https://www.gpo.gov/fdsys/pkg/CFR-2004-title40-vol26/pdf/CFR-2004-title40-vol26-sec302-4.pdf

Table 1.8: SPCC Cross-Reference Table

SPCC Cross-Reference		
Provision	**Plan Section**	**Page #**
§112.3(d)	Section 1.5: Professional Engineer Certification	8
§112.3(e)	Section 1: Location of SPCC Plan	6
§112.5	Section 1.7: Plan Review/Amendments	9 / Table 1.7
§112.7	Section 1.4: Management Approval	7
§112.7(a)(3)	Section 2: General Facility Information Appendix A: Site Plan, Existing Site Drainage, Laydown Yard Layout	12, Appendix A
§112.7(a)(2)	Section 3.2: Compliance with Applicable Requirements	15
§112.7(a)(4)	Section 5.4: Discharge Notification	26 - 28
§112.7(a)(5)	Section 5: Discharge Response	24 - 26
§112.7(b)	Section 3.4: Potential Discharge Volumes and Direction of Flow	17 – 19 / Table 3.4
§112.7(c)	Section 3.5: Containment and Diversionary Structures	20
§112.7(d)	Section 3.6: Practicability of Secondary Containment	20
§112.7(e)	Section 3.7: Inspections, Tests, and Records	20 - 21
§112.7(f)	Section 3.8: Personnel, Training and Discharge Prevention Procedures	22
§112.7(g)	Section 3.9: Security	22
§112.7(h)(1)	Section 3.1: Containment for contents of largest compartment	15
§112.7(j)	Section 1: Conformance with Applicable State and Local Requirements	6
§112.7(k)	Section 1.2: Qualified Oil-Filled Operational Equipment	6 - 7
§112.7(k)(2)(i)	Section 3.7, 3.7.1: Inspection procedures or monitoring program for oil-filled operational equipment	20 - 21
§112.7(k)(2)(ii)(A)	Section 1.2: Oil spill contingency plan per part 109	6, Appendix E
§112.7(k)(2)(ii)(B)	Section 1.4: Written commitment of resources	7
§112.8(b)	Section 4.1: Facility Drainage	23, Appendix A
§112.8(c)	Section 4.2: Bulk Storage Containers	23
§112.8(c)(1)	Section 4.2: Containers compatible with material and conditions of storage	23
§112.8(c)(2)	Section 3.5: Secondary Containment	20
§112.8(c)(3)	Section 4.1: Drainage of Diked Areas	23
§112.8(c)(8)	Section 3.5.1: Overfill Prevention System	20
§112.8(c)(10)	Section 3.7.2: Visible Discharges	21
§112.8(c)(11)	Section 3.5.1: Mobile and Portable Containers	20

* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

SECTION 2: GENERAL FACILITY INFORMATION

2.1 Project/Site Location and Activities

Table 2.1: Project Name and Description

Project Description	
Project Name:	Neosho Ridge Wind Project
State:	Kansas
County:	Neosho County
Nearest Town:	Thayer
Latitude:	37º 31' 47" N
Longitude:	-95º 23' 45" W

The Neosho Ridge Wind Project is located directly east of Thayer, Kansas in Neosho County. The project is owned by Neosho Ridge Wind, LLC and being constructed by IEA Constructors, LLC. The facility encompasses approximately 49,700 acres and, when fully operational, will be comprised of 139 wind turbine generators (WTGs) (115 Vestas V-120 / 24 Vestas V-110), access roads, underground collection system, an Operations and Maintenance (O&M) Building, and an electrical substation containing a power transformer, switch gear and other electrical equipment for collecting and distributing electricity generated on-site. The facility will generate up to 301 megawatts (MW) of electricity when fully operational. Refer to Appendix A of this plan for a more detailed description of the project location and layout.

This SPCC is intended to be used during the construction of the Neosho Ridge Wind Project. Construction is scheduled to begin in August 2019 and be completed by December 2020. Construction of the Neosho Ridge Wind Project will consist of the following phases:

- Phase 1
  - Construction of Access Roads
  - Excavation and construction of WTG foundations
  - Backfill and compaction of WTG foundations
  - Construction of Underground Collection Syste
  - Construction of Substation and O&M Building
- Phase 2
  - Delivery of WTG components
  - Erection of WTGs
- Phase 3
  - MCC of WTGs/Commencement of Electricity Generation
  - Reclamation of project site

2.2 Oil Storage and Handling

Table 2.2: Quantity of Oil Stored in Oil Storage Containers and Oil-Filled Operational Equipment

Oil Capacities - Equipment				
Unit Description	**Location**	**Total No. of Units**	**Unit Capacity (gallons)**	**Total Capacity (gallons)**
Blade Bearings	WTG	417 (3 / WTG)	2.2	917.4
Rotor Locking Bolts	WTG	139	0.05	7.0
Main Bearings	WTG	139	10.5	1459.5
Gearbox	WTG	139	107	14,873
Yaw Drive Gearbox	WTG	139	1.54	214.1
Generator	WTG	139	0.54	75.7
Hydraulic Unit	WTG	139	83.3	11,579
Transformer	WTG	139		
Switch Gear	WTG	139		
Transformer	Substation	1	65	65
Station Service Transformer	Substations	2	18,231	36,462
Mobile Generator	Site Wide	5	55	275
On-Site Construction Vehicles (See Table 3.4 for specific details on oil capacities)	Site Wide	N/A	N/A	18,610.5
Oil Storage Containers				
Died Diesel Fuel Tank	Laydown Yard	1	1,000	1,000
Clear Diesel Fuel Tank	Laydown Yard	1	1,000	1,000
Gasoline Fuel Tank	Laydown Yard	1	500	500

2.2.1 During Construction

During the construction of the Neosho Ridge Wind Project, petroleum and oil-filled operational equipment will be transported, stored, and delivered throughout the site. Below is a list of areas where oil/oil-filled operational equipment will be stored and transported.

- Laydown yard:
  - Fuel storage tanks (Diesel, Gasoline) for refueling of equipment and vehicles
  - Storage of oil-filled operational equipment (WTG components, heavy machinery, vehicles)
  - Fuel delivery trucks will refill storage tanks on an “as needed” basis. Fuel delivery trucks will be owned and operated by local vendor and will not be stored on-site.
  - Refer to Appendix A for the Laydown Yard Layout Drawing
- Wind Turbine Generators (WTGs):
  - WTGs will be stored in a materials storage yard or adjacent to the planned erection site. Ground cover in the storage areas consist of native subgrade, compacted soil and gravel.
  - Nacelles of WTGs will house transformers, gears box, and other oil-filled equipment.
  - Refer to the project specific Installation Manual for detailed drawing of Nacelles and inner components.
- Substation:

    - Power transformers will be temporarily stored in a gravel covered area in or near the substation before being installed in permanent secondary containment structures.
    - Station Service Transformer will be temporarily stored in a gravel covered area in or near the substation before being installed in permanent location.
    - Refer to Appendix A for the Substation Layout Drawing and equipment drawings.
- Site Wide (Refer to Appendix A for the Site Layout Drawing):
    - Vehicles will be traveling around site daily.
    - Heavy equipment will be in use throughout site daily.
    - Fuel delivery trucks will be used site wide to refuel heavy equipment on-site. Fuel delivery trucks will fuel equipment on an "as needed" basis. Fuel delivery trucks will be owned and operated by local vendor and will not be stored on-site.
    - Mobile generators will be in use throughout site on a daily basis.

2.3 Evaluation of Discharge Potential

2.3.1 Drainage and Distance to Navigable Waters

Drainage on-site will consist of surface runoff and ground infiltration. The site is located in the Middle Neosho Watershed (HUC8 11070205), Middle Verdigris Watershed (HUC8 11070103), and Upper Verdigris Watershed (HUC8 11070101) with sub-watersheds consisting of Lake Parsons-Labette Creek watershed (HUC12 110702050401), Thayer City Lake-Chetopa Creek watershed (HUC12 110701010503), Ogeese Creek-Neosho River watershed (HUC12 110702050109), Fourmile Creek-Neosho River watershed (HUC12 110702050104), Little Labette Creek watershed (HUC12 110702020402), Elk River-Neosho River watershed (HUC12 110702050101), Upper Big Hill Creek watershed (HUC12 110701030106) and Tolen Creek-Labette Creek watershed (HUC12 120602010807). Major waterways on the site include Elk River, Labette Creek, Neosho River, Rock Creek, and Parsons Lake. All other drainage channels and creeks on-site are dry except during rain events.

General site drainage and layout is shown in Appendix A.

2.4 Discharge History

All discharges on the project must be documented immediately. In the event of a discharge the information listed below shall be documented in Appendix F – Discharge History Summary.

- Cause of the spill;
- Type and amount of substance spilled;
- Location, date and time of spill;
- Waterbody, soil, or groundwater affected; and
- Action(s) taken to prevent reoccurrence

SECTION 3: DISCHARGE PREVENTION – GENERAL SPCC PROVISIONS

The sections below describe the project layout and areas of oil storage, along with measures to be implemented to prevent oil discharge during handling, use, or transfer of oil products on the Neosho Ridge Wind Project.

3.1 Description of Oil Storage Containers and Storage Areas (40 CFR 112.7(a)(3))

The main area of oil storage will be located at the project's laydown yard. Fuel tanks and material storage will be located within the laydown yard, where all applicable regulations will be met to properly contain all oil products. Oil-filled operational equipment will be stored at their place of installation (WTG / Substation). Appendix A contains the overall project layout, laydown yard layout and fuel tank capacities, and existing site drainage.

3.2 Compliance with Applicable Requirements (40 CFR 112.7(a)(2))

Applicable secondary containment requirements will be met on all fuel storage and oil-filled operational equipment throughout the site. In the laydown yard, secondary containment will be used on all fuel tanks. Secondary containment will consist of earthen berms with impermeable liners and/or prefabricated containers/tubs to surround the fuel tanks. All secondary containers shall have enough freeboard height to allow for heavy rain events without the danger of overflowing and discharging oil to the surrounding areas.

Due to the impracticality of secondary containment on all oil-filled operational equipment on-site, the facility will rely on routine inspections to ensure no discharge events occur. Inspection reports must be kept with this plan and documented throughout construction. An inspection from can be found Appendix C of this SPCC plan.

3.3 Spill Reporting (40 CFR 112.7(a)(4))

Spills shall be reported to the proper authorities as soon as possible. Table 3.3 below shows what classifies as reportable quantities in the state of Kansas.

Table 3.3: Reportable Spilled Quantities

Pollutant	Location of Discharge	Reportable Spill Quantities
Petroleum Product	Land	25 Gallons
Petroleum Product	Water	Enough to create a sheen on water

It is the responsibility of the Facility Manager to ensure that the proper authority's numbers are listed on-site in the event that a spill or discharge of a reportable quantity has occurred**. In the event of a reportable incident, contact the State of Kansas Spill-Reporting Hotline and the SERC at 785.291.3333 and the National Response Center within 24 hours of the spill at 1.800.424.8802.** For additional information on spill response and reportable quantities, reference http://www.kdheks.gov/spill/.

In the event of a spill, the notification form found in Appendix G shall be completed. The following steps shown in Figure 3.3 below shall be implemented immediately in the event of an oil spill on-site to reduce the risk of harm done.

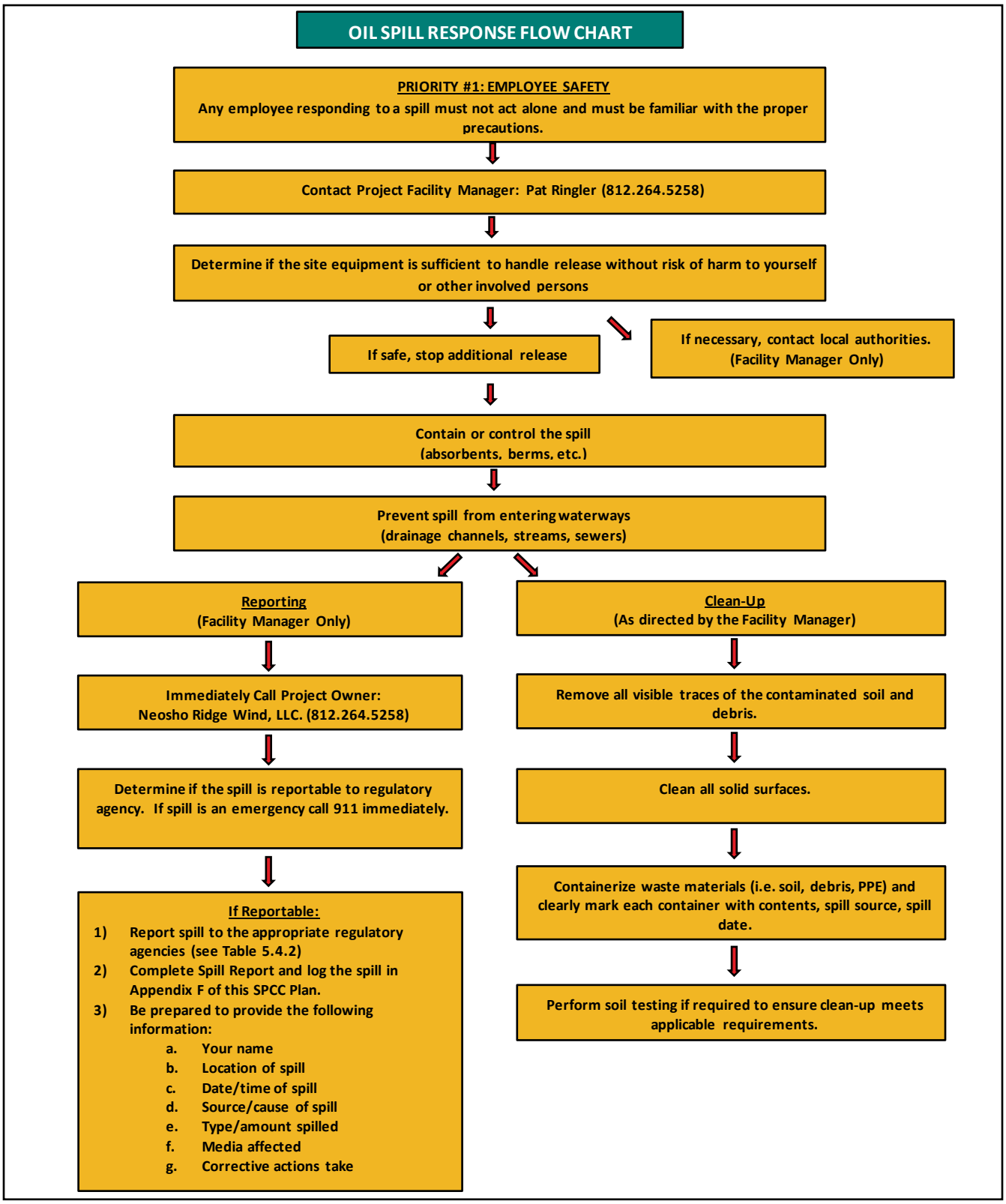


Figure 3.3: Oil Spill Response Flow Chart

3.4 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Table 3.4 below quantifies expected volume, discharge rate, general direction of flow in the event of equipment failure and means of secondary containment for different parts of the facility where oil is stored, used, and handled.

Table 3.4: Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Potential Discharge Volumes and Direction of Flow				
Potential Event		**Maximum Volume Released (gallons) / Discharge Rate**	**Direction of Flow**	**Secondary Containment / Spill Control Measures**
Wind Turbine Generator (WTG)	Leakage of gear box oil	107 gallons each / gradual to instantaneous	• Surface surrounding WTG (i.e. compacted gravel/soil graded 2% away from WTG pedestal. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• WTG's engineered to contain spills within Nacelle and tower. • Graveled beauty ring sloped at 2% will limit flow of discharge until cleanup activities can be initiated. • Equipment/area routinely inspected.
	Leakage of other gear or hydraulic oil	83.3 gallons each / gradual to instantaneous	• Surface surrounding WTG (i.e. compacted gravel/soil graded 2% away from WTG pedestal. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• WTG's engineered to contain spills within Nacelle and tower. • Graveled beauty ring sloped at 2% will limit flow of discharge until cleanup activities can be initiated. • Equipment/area routinely inspected.
	Leakage from high-voltage transformer (housed inside the rear end of the nacelle)	gallons each / gradual to instantaneous	• Surface surrounding WTG (i.e. compacted gravel/soil graded 2% away from WTG pedestal. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• WTG's engineered to contain spills within Nacelle and tower. • Graveled beauty ring sloped at 2% will limit flow of discharge until cleanup activities can be initiated. • Equipment/area routinely inspected.
	Leakage from switch gear (located at bottom of WTG tower)	gallons each / gradual to instantaneous	• Surface surrounding WTG (i.e. compacted gravel/soil graded 2% away from WTG pedestal. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• WTG's engineered to contain spills within Nacelle and tower. • Graveled beauty ring sloped at 2% will limit flow of discharge until cleanup activities can be initiated. • Equipment/area routinely inspected.
Substation	Leakage of Main Power Transformer	18,231 gallons each / gradual to instantaneous	Pre-installation: • Surface surrounding transformer until installed in secondary containment • Elk River, Labette Creek, Neosho River,	• Storage time between delivery and installation in secondary containment will be minimized • Each secondary containment structure has 20,263 gallons of storage capacity • Area and equipment routinely inspected

			Rock Creek, Parsons Lake Post-installation: • Secondary containment	
	Leakage of Station Service Transformer	65 gallons / gradual to instantaneous	Pre-installation: • Surface surrounding transformer until installed in secondary containment • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake Post-installation: • Secondary containment	• Storage time between delivery and installation in secondary containment will be minimized • Area and equipment routinely inspected
	Leakage of Capacitor Bank	67.2 gallons / gradual to instantaneous	Pre-installation: • Surface surrounding transformer until installed in secondary containment • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake Post-installation: • Secondary containment	• Storage time between delivery and installation in secondary containment will be minimized • Area and equipment routinely inspected
Site Wide	Leakage of Mobile Generators	55 gallons of diesel / gradual to instantaneous	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Mobile Crane	• Manitowoc MLC-300 – 255 gallons diesel, 145 gallons hydraulic fluid • Liebherr 11000 – 396 gallons diesel, 120 gallons hydraulic fluid • Liebherr LR-1220 – 185 gallons diesel, 169 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Excavator	• CAT 320 Excavator – 86.6 gallons diesel, 4.0 gallons engine oil, 2.6 gallons Swing/Final Drive fluid, 61.8 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment

		• CAT 349 Excavator – 190 gallons diesel, 150.6 gallons hydraulic fluid • CAT 305E Excavator – 16.6 gallons diesel, 20.6 gallons hydraulic fluid		
	Leakage of Bulldozer	• CAT D6 Dozer – 90.0 gallons diesel, 11.6 gallons winch oil, 45.6 gallons engine oil, 20.3 gallons hydraulic fluid, 45 gallons roller frame oil	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Grader	• 160M CAT Grader – 104.0 gallons diesel, 24.6 gallons hydraulic fluid, 7.9 gallons engine oil, 18.5 gallons transmission fluid, 22.9 tandem housing oil, 1.8 gallons circle drive housing oil	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Water Truck	• 4k Gallon Water Truck – 100 gallons diesel	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Roller	• CAT CS56B Roller – 64.0 gallons diesel, 3.1 engine oil, 6.9 gallons eccentric weight housing oil, 4.8 gallons axel and final drive oil, 13.2 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Skidsteers	• CAT 299D skidsteers – 32.2 gallons diesel, 14.5 gallons hydraulic fluid, 3.5 gallons engine oil	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Concrete Truck	• TB-130 Telebets – 80 gallons diesel, 130 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River,	• Routine inspection of equipment • Spill kits available in all equipment

			Rock Creek, Parsons Lake	
	Leakage of Backhoe	• CAT 420 backhoe – 42.0 gallons diesel, 25.1 gallons hydraulic fluid, 2.3 gallons engine oil, 2.9 gallons front axle oil, 4.4 gallons rear axle oil, 5.0 gallons transmission fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Forklift	• JLG 12k forklifts – 38.3 gallons diesel, 49.9 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Loader	• CAT 944 Loader – 910.0 gallons diesel, 440 gallons final drive oil, 76.0 gallons engine oil, 370 gallons hydraulic fluid, 110 gallons transmission fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Semi-tractor with trailer	• Semi tractors with trailers – 75 gal diesel	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Trencher	• Tesmec 1075 trenchers – 216.0 gallons diesel, 108.0 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
	Leakage of Manlift	• JLG 45' Manlifts – 16 gallons diesel, 36 gallons hydraulic fluid	• Direction of graded area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Routine inspection of equipment • Spill kits available in all equipment
Laydown Yard	Leakage of diesel fuel tank	• 1000 gallons died diesel • 1000 gallons clear diesel	• Into secondary containment	• Areas routinely inspected • Containers stored in or equipped with secondary containment • Spill kit located in each service vehicle and in storage areas
	Leakage of gasoline fuel tank	• 500 gallons clear diesel	• Into secondary containment	• Areas routinely inspected

				• Containers stored in or equipped with secondary containment • Spill kit located in each service vehicle and in storage areas
	Spill in oil handling and transfer area	• 1000 gallons died diesel • 1000 gallons clear diesel	• Direction of graded/graveled area where equipment is placed. • Elk River, Labette Creek, Neosho River, Rock Creek, Parsons Lake	• Utilize appropriate fuel transfer equipment • Areas routinely inspected • Containers stored in or equipped with secondary containment • Spill kit located in each service vehicle and in storage areas
Batch Plant	Leakage of admixture storage tanks	• MRWR (KB 1200) – 3500 gallons • HRWR (PC 441) – 4500 gallons • Air Entrainment (SA-50) – 600 gallons	• Into secondary containment	• Routine inspection of equipment • Spill kits available

3.5 Containment and Diversionary Structures (40 CFR 112.7(c))

Methods of secondary containment on the Neosho Ridge Wind Project include a combination of structures (e.g., berms, separate enclosed secondary structures, built-in secondary containment), impermeable liners, and land-based spill response (e.g., sorbents) to prevent oil from reaching navigable. The following sections explain the containment and diversionary structures that will be used during the construction of the Neosho Ridge Wind Project.

3.5.1 During Construction Activities

- Fuel Tank Secondary Containment Structures:
    - Fuel tanks will be placed in either large metal or plastic containers, or within berms with impermeable liners to act as secondary containment structures. These structures will be sized to ensure enough free board height is available to prevent overflowing during heavy rain events. All secondary containment structures should also be sized and positioned to completely contain both storage tanks and any pumps or piping connected to the tanks. Fuel storage tanks must also be equipped with a capacity gauge to ensure overfilling does not occur.
- Laydown Yard Grading:
    - The laydown yard will be graded in a manor to reduce the chance of discharge to nearby waterways.
- Spill Kits
    - Spill kits will be located in all project vehicles and equipment for use in the case of a discharge.
- Oil-filled Operational Equipment:
    - The plan provides an oil spill contingency plan (Appendix E) and a written commitment (Section 1.4) of manpower, equipment, and materials to quickly control and remove discharged oil and petroleum products.

3.6 Practicability of Secondary Containment (40 CFR 112.7(d))

It has been determined that secondary containment is practicable on the Neosho Ridge Wind Project due to the nature of work and accessibility to secondary containment systems.

3.7 Inspections, Tests, and Records (40 CFR 112.7(e))

Table 3.7 below, summarizes the various types of inspections that will be performed on the Neosho Ridge Wind Project. All problems regarding equipment, containers, containment, or response equipment shall be immediately reported to the Site (Construction) or Facility (Operations) Manager. Visible oil leaks shall be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters. Pooled oil shall be removed immediately upon discovery.

Table 3.7: Inspection Program

Inspection Program			
	Facility Component	**Action**	**Frequency / Circumstances**
During Construction	Wind Turbine Generator Equipment	Inspect supports and foundations, inspect outside of containers for signs of deterioration and discharges, inspect oil-fill equipment inside WTG	Monthly/ Visually using inspection checklist
	Transformers (Substation)	Inspect outside of transformer for signs of deterioration and discharges.	
	Capacitor Banks (Substation)	Inspect outside of capacitor banks for signs of deterioration and discharges.	
	Mobile Generators (Site Wide)	Inspect the fuel tank and engine for fuel/oil leaks and corrosion.	
	Bulk Storage Containers (Laydown Yard)	Inspect the exterior of containers and equipment for signs of deterioration, leaks or corrosion. Verify the integrity of containment system	
	Emergency Response Equipment	Check the inventory of discharge response equipment and restock as needed	

3.7.1 Daily/Continuous Observation

Continuous visual observations shall be completed during working hours on the Neosho Ridge Wind Project. These observations do not require documentation; however, all crew members should have knowledge of what to look for to identify issues with equipment and storage tanks, and what actions to take in the event of a spill.

Special attention shall be given to the oil-filled operational equipment on-site, as secondary containment is not installed on all equipment. Attention shall be given during delivery off-load and installation of each WTG component that petroleum leakage is not occurring.

3.7.2 Monthly Inspections

A visual inspection of oil storage containers and oil-filled equipment shall be conducted monthly. The inspections will cover the following key elements:

- Inspect exterior of containers and equipment for signs of deterioration, leaks or corrosion
- Verify the integrity of containment systems
- Check inventory of discharge response equipment and restock as needed

Inspections should be documented using the inspection checklist found in Appendix C of this document.

3.7.3 Record Keeping

Written records of inspections signed by the appropriate supervisor or inspector must be kept on-site with this SPCC plan for a minimum of three years upon completion of the construction phase of the project.

3.8 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7(f))

The Site/Facility Manager is responsible for oil discharge prevention, control, and response preparedness activities at this facility. All trainings and briefings shall be documented in Appendix D of this SPCC plan.

3.8.1 Personnel Training

Oil-handling personnel shall be instructed in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan. Any new facility personnel with oil-handling responsibilities shall complete training prior to being involved in any oil handling operations.

3.8.2 Discharge Prevention Briefings

Discharge prevention briefings shall be conducted annually. The briefings shall be aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in this SPCC Plan. The briefings shall also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best management practices. Facility personnel shall be given the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

All training shall be documented and maintained on file at the site. The documentation shall include an overview of what was covered, who conducted the training, date(s) and names of participants.

3.9 Security (40 CFR 112.7(g))

One security officer will be stationed in the laydown yard from 6:00 PM to 6:00 AM Monday through Saturday, and all-day on Sundays and Holidays. Construction and full-time personnel are typically present on the site during normally operating hours. Security personnel will be in direct contact with local authorities in case of any security concerns that arise on-site.

Along with hired security personnel, the following security measures will be implemented at this facility to prevent unauthorized access to oil-filled operational equipment at the WTG sites and to oil handling, processing, and storage areas.

- Each WTG tower will be locked each night before crews leave
- Oil-storage conex containers located in the Laydown Yard will be kept locked except when transferring materials to and from the area
- The substation will be surrounded by a wire fence and locked gate
- O&M Building and substation will be equipped with outdoor security lights
- Laydown yard will be equipped with security lights that will stay lit throughout the night

SECTION 4: FACILITY PLAN REQUIRMENTS

4.1 Facility Drainage (40 CFR 112.8(b))

Overall site drainage can be found in Appendix A and should be considered when placing and transporting oil storage containers.

Substation

- Drainage from the concrete dikes surrounding equipment in the substation will not be equipped with discharge pipes or valves. These diked areas will require manual emptying by manually activated pumps inserted into the diked areas as needed.
- The condition of any accumulation liquids shall be inspected prior to activating a pump to ensure no oil will be discharged.
- Diked waters shall not be allowed to flow to stormwater drains or surrounding bodies of water. Water must be contained and manually pumped and treated off-site.

Laydown Yard / Site-Wide

- No oil storage containers or oil-filled equipment may be located near any streams, ponds, lagoons or catchment basins or in areas subject to periodic flooding.
- Diked waters shall not be allowed to flow to stormwater drains or surrounding bodies of water. Water must be contained and manually pumped and treated off-site.

4.2 Bulk Tank Storage (40 CFR 112.8(c))

Oil may only be stored in containers that are made of a material and constructed so that they are compatible with the material stored and conditions of storage such as pressure and temperature.

- A secondary means of containment shall be provided for all bulk storage containers capable of holding the entire capacity of the largest single container and, if exposed, sufficient freeboard to contain precipitation.
- Drainage of rainwater from diked areas shall not be allowed unless the retained rainwater is inspected for the presence of oil. Any accumulations of oil in diked areas shall be promptly removed.
- Visible discharges which result in a loss of oil from the container shall be promptly corrected, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts.
- Adequate records of discharge events shall be maintained.

SECTION 5: Discharge Response

All efforts shall be made to prevent oil from reaching water. Spill response activities will be prioritized based upon the proximity of the spill to waterways that contain flowing water, or that are likely to contain flowing water (e.g., from a rain event) before the spill can be contained.

An oil spill response flow chart is provided in Figure 3.3 of this SPCC plan. This plan should be used in the event of a discharge. A current list of names and telephone numbers of the persons and organizations to be notified when an oil discharge is discovered is listed below in Tables 5 and 5.4.2. Notification of authorities shall follow requirements outlined in Appendix H and Table 5.4.2 of this SPCC Plan.

Table 5.0 – Emergency Response Contacts

Emergency Response Contacts		
Title	**Name/Organization**	**Contact Number**
SPCC Plan Coordinator	Pat Ringler	812.264.5258
Alternate SPCC Plan Coordinator	Vincent Hahn	812.264.5258
National Response Center (NRC)	U.S. Environmental Protection Agency	1.800.424.8802
State Emergency Response	Kansas Spill-Reporting Hotline	785.291.3333
Spill Response Contractor	Clean Harbors Environmental	1.800.645.8265
Police Department	Thayer Police Department	911
	Non-Emergency	417.264.3819
Fire Department	Thayer Volunteer Fire Department	911
	Non-Emergency	417.264.3221
Hospital	Labette Health	911
	Non-Emergency	620.421.4881
Ambulance Service	Labette County Ambulance Services	911
	Non-Emergency	620.421.2453

5.1 Definition of Responsibilities and Duties

5.1.1 Site/Facility Manager

The Site/Facility Manager or designated alternate shall have the following responsibilities:

- Mobilize and organize employees as necessary to assist with spill response.
- Investigate the discharge to assess the actual or potential threat to human health or the environment:
    - Location of the discharge relative to receiving water bodies;
    - Quantity of spilled material;

    - Ambient conditions (temperature, rain);
    - Other contributing factors such as fire or explosion hazards; and
    - Sensitive receptors downstream
- Request outside assistance from local emergency responders, as needed.
- Evaluate the need to evacuate facility and evacuate employees, as needed.
- Notify:
    - Local emergency responders
    - State authorities
    - National Response Center
    - Response contractor(s)
    - Local emergency planning committee
- Communicate with neighboring property owners regarding the discharge and actions taken to mitigate the damage.
- If the oil reaches (or threatens to reach) a navigable waterway, notify the National Response Center (1-800-424-8802) and the local fire/police departments to limit access to the waterway by local residents until the oil has been contained and recovered.
- Notify downstream water users of the spill and of actions that will be taken to protect these downstream receptors.

5.1.2 Employee and Contractor Responsibilities

All employees on-site shall be trained and available to respond to an oil discharge. They may be assisted by pre-designated technicians who are employed by on-site contractors.

On-site personnel shall have the following responsibilities in the event of a spill or leak:

- If unsafe conditions exist (e.g. fire, explosion or other threat to life), the employee should evacuate the area and call 911.
- For small spills (less than 25 gallons) that have not reached a water source, attempt to contain and control the spill, if safe to do so.
- Immediately notify the Site/Facility Manager or designated alternate upon discovery of all spills.
- After initial response measures have been taken, or if the spill is beyond the individual's ability to contain it, make note of the time the spill occurred, the type of material spilled, and the approximate quantity of the spilled material. These items will be needed if subsequent reporting is required.

5.2 Emergency Procedures

The field office trailer of IEA Constructors, LLC shall be used as the oil discharge response operation center during the construction of the Neosho Ridge Wind Project.

5.2.1 Response to Minor Discharges

A "minor" discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 25 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and

- There is little risk of fire or explosion.

Minor discharges will usually be cleaned up by facility personnel. In general, the following steps are taken if possible and safe to do so:

- Immediately turn off ignition sources near the spill.
- Identify and shut down source of the discharge to stop the flow.
- Contain the discharge to the smallest area with sorbents, berms, fences, trenches, sandbags, or other material.
- Take immediate action to prevent the discharge from reaching off-site or surface water.
- Contact the Site/Facility Manager or his/her alternate.

5.2.2 Response to Major Discharges

A "major" discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, all workers will immediately evacuate the discharge site and notify the Site/Facility Manager. If the Site/Facility Manager is not present at the facility, the senior on-site person notifies the Site/Facility Manager of the discharge and has authority to initiate notification and response actions.

The Site/Facility Manager (or senior on-site person) shall:

- Obtain medical assistance if workers are injured;
- Notify the Fire Department or Police Department;
- Coordinate cleanup and obtain assistance from a cleanup contractor or other response organization as necessary; and
- Ensure wastes are containerized and characterized for proper disposal by a licensed waste hauler or cleanup contractor.

5.3 Waste Disposal

Wastes resulting from a minor discharge response will be containerized in impervious bags, drums, or buckets. The facility manager will characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks.

Wastes resulting from a major discharge response will be removed and disposed of by a cleanup contractor.

5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

Only the Site/Facility Manager (or senior on-site person) has authority to initiate notification activities.

5.4.1 Internal Notifications

Spill information will be entered into the incident reporting system. The report will include the following informati on:

- Responsible organization (division/site name);
- Location information (state)
- General information (date of release, date reported, immediate action taken, ground conditions, external emergency services contacted, regulatory agencies notified);
- Severity: Critical, High, Medium, and Low
- Loss control costs;
- Material release information (type, specific location, quantity, duration, secondary containment breached, media impacted, cleanup action, weather conditions);
- Action items (including responsible party, priority, and target and actual completion dates);
- Cause(s) of release;

5.4.2 External Notifications

Table 5.4.2 contains the release reporting requirements in Kansas.

Table 5.4.2 – Release Reporting Requirements

Release Reporting Requirements		
Type of Release	**When to Report**	**To Whom to Report**
Any release to land or water	-Immediately after knowledge of discharge -Complete Incident Report within five (5) days	Kansas Department of Health and Environment (785.291.3333)
-To navigable waters that could violate water quality standards -Causes a sheen or discoloration -Causes a sludge or emulsion	-Immediately after knowledge of discharge	National Response Center (1.800.424.8802)
-Greater than 25 gallons on land or water -Causes a sheen or discoloration on water	-As soon as possible (within 24 hours) after knowledge of discharge -Written notification to the Department must follow within thirty (30) days	Kansas Department of Health and Environment (785.291.3333)
-Spill creates an imminent health threat	Immediately after knowledge of discharge	Local Emergency Response Officials (Police, Fire Department) 911 / 417.264.3819, 417.264.3221
-Greater than 25 gallons on land or water -Causes a sheen or discoloration on water	As soon as possible, but no later than two weeks after discovery of the spill or discharge	Owner (if identifiable) or occupant of the property upon which the discharge or spill occurred
-More than 1,000 gal. in a single discharge to navigable waters -More than 42 gal. in each of two discharges to navigable waters within any 12-month period	Within 60 days from occurrence	U.S. EPA Regional Administrator, Region 7 (913.551.7050)

The Site/Facility Manager (or senior on-site person) shall be responsible for providing the appropriate notifications.

In general, the notification shall include the following information:

- The exact address or location and phone number of the facility;
- Date and time of the discharge;
- Type of material discharged;
- Estimate of the total quantity discharged;
- Estimate of the total quantity discharged to navigable waters;
- Source of discharge;
- Description of all affected media;
- Cause of the discharge;
- Any damages or injuries caused by the discharge
- Actions being used to stop, remove, and mitigate the effects of the discharge;
- Whether an evacuation may be needed; and
- Names of individuals and/or organizations who have also been contacted.

Information shall also be submitted to the U.S. EPA Regional Administrator (RA) within 60 days from the occurrence of one of the following discharge events:

1. A single discharge of more than 1,000 U.S. gallons of oil to navigable waters or adjoining shorelines
2. Two discharges to navigable waters or adjoining shorelines each more than 42 U.S. gallons of oil occurring within any twelve-month period

The following information will be submitted:

- Name of the facility;
- Individuals name;
- Location of the facility;
- Maximum storage or handling capacity of the facility and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- An adequate description of the facility, including maps, flow diagrams, and topographical maps as necessary;
- The cause of the reportable discharge, including a failure analysis of the system or subsystem in which the failure occurred; and
- Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence.

5.5 Spill Response Resources

Spill kits containing absorbent materials and other cleanup materials will be located in the construction laydown yard and in the storage area. Spill kits will also be located in each service vehicle and piece of equipment on-site.

SWP3 APPENDICES

Appendix A – Project Layout / Existing Site Drainage

Appendix B – Certification of the Applicability of Substantial Harm Criteria

Appendix C – Monthly Inspection Form

Appendix D – SPCC Training Log

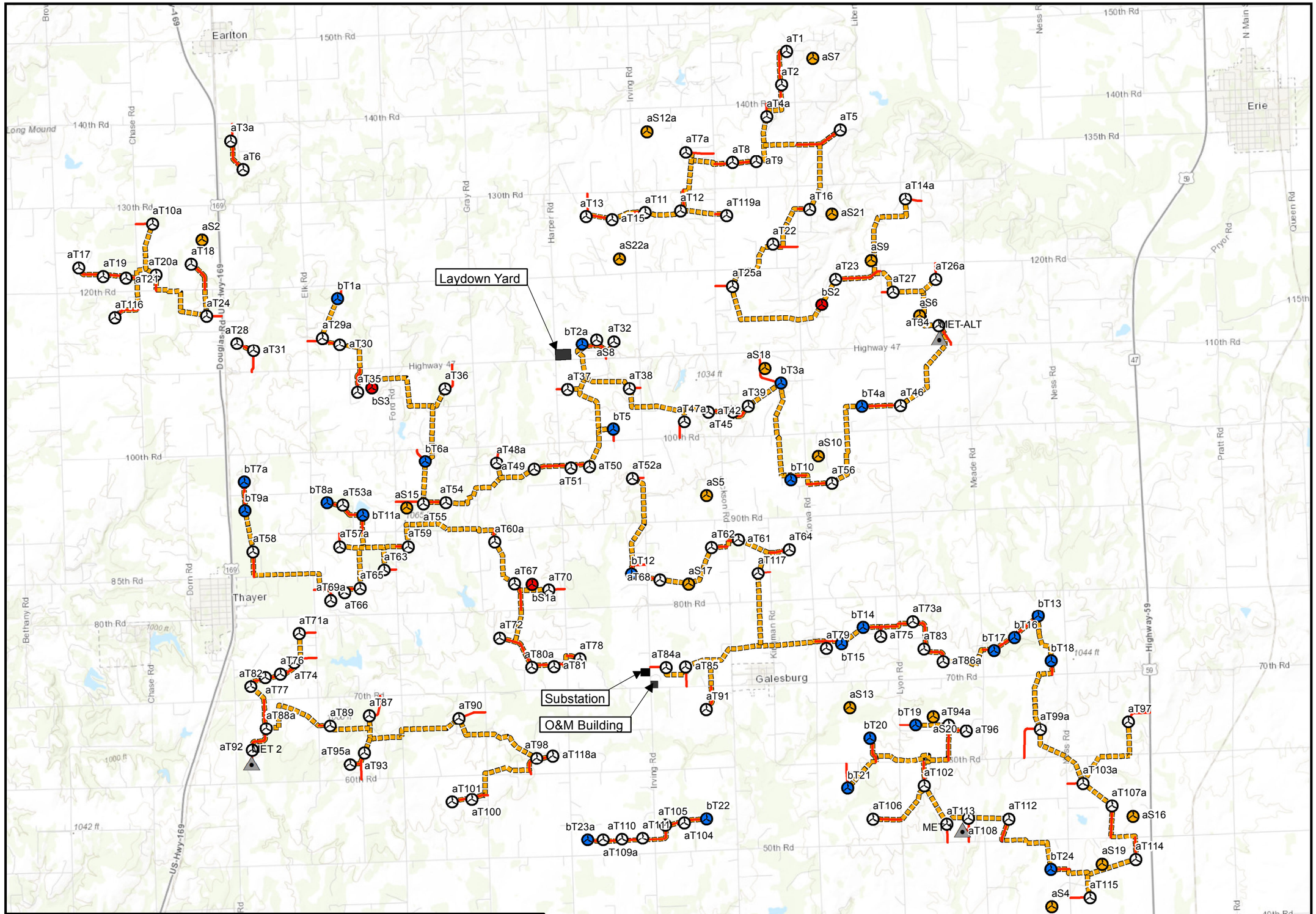
Appendix E – Oil Spill Contingency Plan

Appendix F – Discharge History Summary

Appendix G – Discharge Notification Form

Appendix H – EPA Oil Discharge Reporting Requirements

Appendix A – Project Layout / Substation Layout / Existing Site Drainage



NOTES:
1. CONTRACTOR SHALL PLACE VEHICLE WASHING STATION WITHIN LAYDOWN YARD

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	OVERALL SITE PLAN	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG V120 (115)
- WTG V120 - ALT (17)
- WTG V110 (24)
- WTG V110 - ALT (3)
- MET (3)
- Access Road
- Crane Path

N

0 0.5 1 Miles

NAD 1983 State Plane Kansas South FIPS 1502 (US Feet)

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Fax:888.858.3440
www.ulteig.com

Design By:	P. PEBLER
Drawn By:	P.PEBLER
Approved By:	C. SMAALADEN
Project Number:	18.01123

OVERALL SITE PLAN

REVISION: 0A

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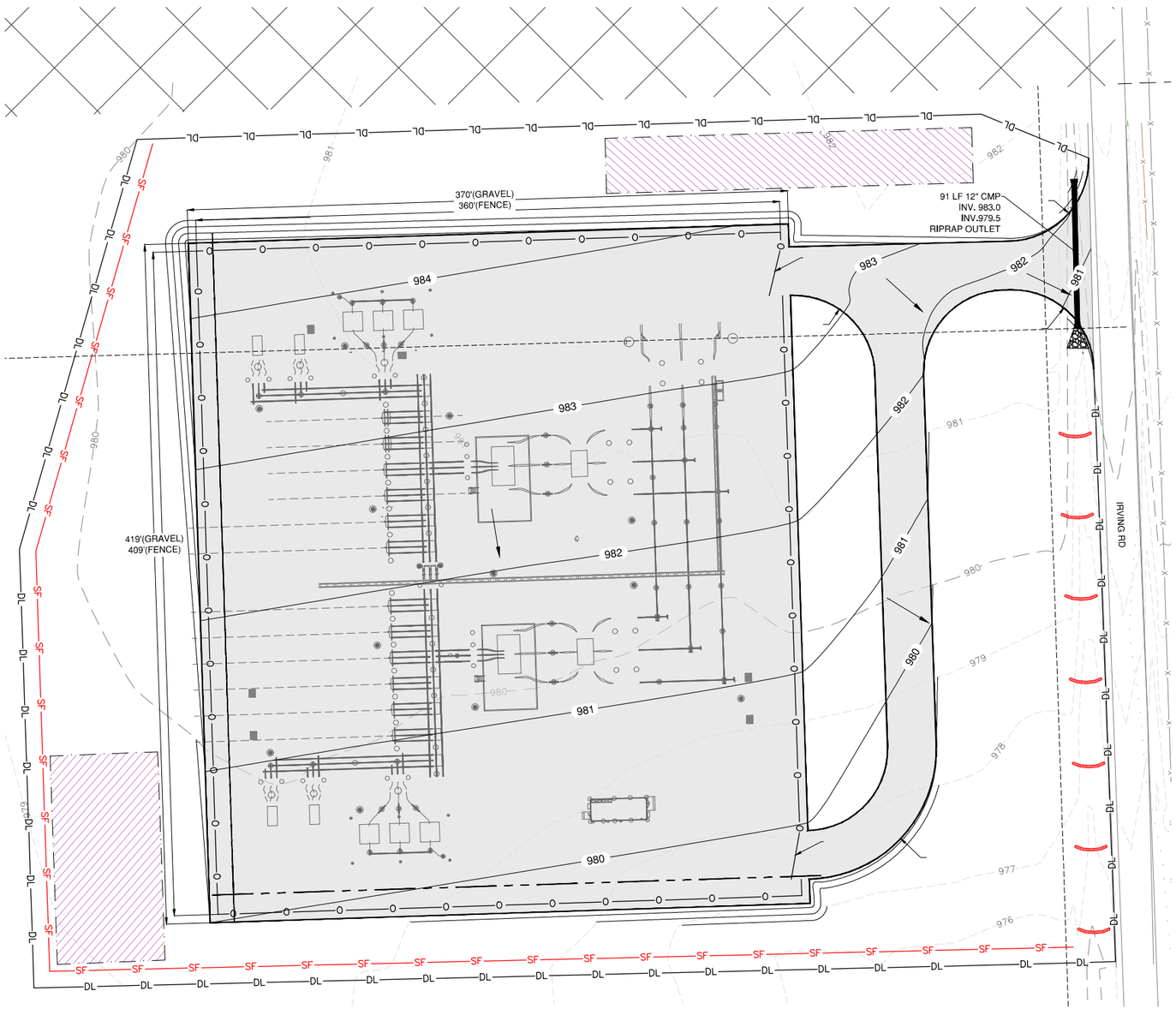


985' EXISTING COUNTOUR
X EXISTING FENCE

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0	08/02/19	ISSUED FOR CONSTRUCTION	UEI

Liberty Utilities
EMPIRE DISTRICT

6325 DIGITAL WAY
SUITE 460
INDIANAPOLIS, IN 46278

IEA CONSTRUCTORS

W

NAD83 KANSAS STATE PLANE
SOUTH ZONE, US FOOT

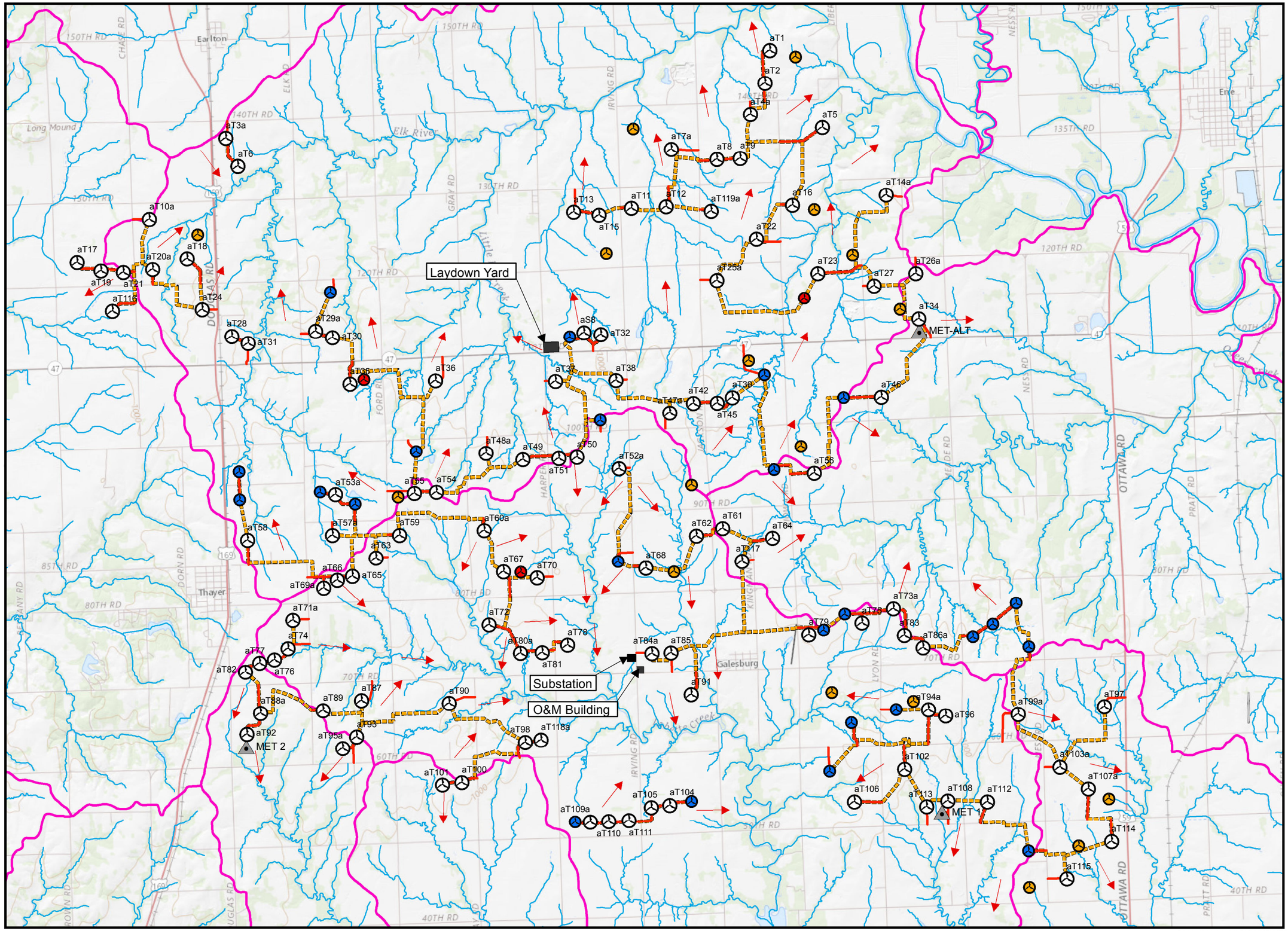
Ulteig Engineers, Inc.
3350 38th Avenue South
Fargo, North Dakota 58104
Phone: 701.280.8500 Fax: 701.237.3191
www.ulteig.com
"Who Knows, Who Knows."
Bismarck – Denver – Detroit Lakes – Fargo – Sioux Falls – St. Paul

Design By: P. PEBLER
Drawn By: T. DEJONG
Approved By: C. SMAALADEN
Project Number: 18.01123

DWG #:

REVISION:

2019.08.20



NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	EXISTING SITE DRAINAGE	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG - V120 (115)
- WTG V120 - ALT (17)
- WTG V110 (24)
- WTG V110 - ALT (3)
- MET (3)
- Access Road
- Crane Path
- Existing Site Drainage
- NHD Flowline
- HUC12 Watersheds Bndry

N

0 0.5 1 Miles

NAD 1983 State Plane Kansas South FIPS 1502 (US Feet)

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www.ulteig.com

Design By:	P. PEBLER
Drawn By:	P.PEBLER
Approved By:	C. SMAALADEN
Project Number:	18.01123

EXISTING SITE DRAINAGE

REVISION: 0A

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Appendix *B – Certification of the Applicability of Substantial Harm Criteria*

Determination of Regulatory Compliance

Certification of the Applicability of Substantial Harm Criteria

Facility Name: _____

Facility Address: _____

I. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons? Yes ☐ No ☒

II. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area? Yes ☐ No ☒

III. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? Yes ☐ No ☒

IV. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake? Yes ☐ No ☒

V. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons within the last five years? Yes ☐ No ☒

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

_____
Signature

_____
Name (please print or type)

_____
Title

_____
Date

Appendix C – *Monthly Inspection Form*

Monthly Inspection Checklist

(FOR USE DURING CONSTRUCTION PHASE)

Inspection Date: _____

Inspector's Name: _____

Equipment / Area Inspected	Location	Unsatisfactory Conditions	None Observed
Power Transformer	Substation	☐ Damaged/rusted/deteriorated surfaces present? ☐ Soil staining/leaks present? ☐ Pooled oil present? ☐ Poor storage practices in use?	☐
Power Transformer Containment	Substation	☐ Damaged/rusted/deteriorated surfaces present? ☐ Spilled oil present? Sheen on water? ☐ Standing water in basin? (Accumulated water in basin must be removed and logged on log sheet.)	☐
Uninstalled WTG Components	Laydown Yard / Turbine Pads	☐ Damaged/rusted/deteriorated surfaces present? ☐ Soil staining/leaks present? ☐ Pooled oil present? ☐ Poor storage practices in use?	☐
Uninstalled Pad-Mounted Transformers	Material Storage Areas / Turbine Pads	☐ Damaged/rusted/deteriorated surfaces present? ☐ Soil staining/leaks present? ☐ Pooled oil present? ☐ Poor storage practices in use?	☐
Heavy Equipment	Entire Site	☐ Damaged/rusted/deteriorated surfaces present? ☐ Soil staining/leaks present? ☐ Pooled oil present? ☐ Poor maintenance practices in use?	☐
Fuel Storage	Laydown Yard	☐ Damaged/rusted/deteriorated surfaces present? ☐ Soil staining/leaks present? ☐ Pooled oil present? ☐ Secondary containment in good working order? ☐ Poor storage practices in use?	☐

Describe Unsatisfactory Conditions	Describe Corrective Actions	Date Completed

Emergency Response Spill Kits

Location	Kit Complete?	List Missing Items	Kit Restocked?
Job Site Vehicles	☐		☐
Heavy Equipment	☐		☐
Vehicle Maintenance Area	☐		☐
Supply Storage Container	☐		☐
Other (please list):	☐		☐
Other (please list):	☐		☐
Other (please list):	☐		☐
Other (please list):	☐		☐

Signature: _____ **Date:**_____

Appendix D –*SPCC Training Log*

SPCC Training Log

Project Name:
Project Location:
Instructor's Name(s):
Instructor's Title(s):

Course Location: _____ Date: _____

Course Length (hours): _____

SPCC Training Topic: *(check as appropriate)*

❑	**SPCC Understanding**	❑	**Emergency Procedures**
❑	**Spill Kit Use**	❑	**Inspections/Corrective Actions**
❑	**Pollution Prevention Measures**		

Specific Training Objective:_____

_____

_____

No.	Name of Attendee	Company
1		
2		
3		
4		
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7		
8		
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25		

Appendix E – Oils Spill Contingency Plan

Oil Spill Contingency Plan

For construction activities at:
Neosho Ridge Wind Project
Neosho County
Thayer, Kansas, 66776

Oil Spill Contingency Plan for

Neosho Ridge Wind Project

Prepared for:
IEA Constructors, LLC
392 County Rd. 50, Avon, MN, 56310
Indianapolis, IN 46278
812.264.5258 (Phone)

Prepared by:
Ulteig Engineers, Inc.
3350 38th Avenue South
Fargo, ND, 58104
701.280.8500

Preparation Date: 08/20/2019
Estimated Project Dates: August 2019 – December 2020

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SECTION 1: INTRODUCTION

1.1 Purpose and Scope

This Oil Spill Contingency Plan is prepared in accordance with 40 CFR 112.7(d) to address areas of the facility where secondary containment is impracticable, as documented in the facility Spill Prevention, Control, and Countermeasure (SPCC) Plan. These areas on the Neosho Ridge Wind Project consist of oil-filled operational equipment.

The purpose of this Oil Spill Contingency Plan ("Contingency Plan") is to define procedures and tactics for responding to discharges of oil into navigable waters, originating more specifically from oil-filled operational equipment at the Neosho Ridge Wind Project. The Contingency Plan is implemented whenever a discharge of oil has reached, or threatens, navigable waters.

The objective of procedures described in this Contingency Plan is to protect the public, Neosho Ridge Wind Project personnel, and other responders during oil discharges. In addition, the Plan is intended to minimize damage to the environment, natural resources, and facility installations from a discharge of oil. This Oil Spill Contingency Plan complements the prevention and control measures presented in the facility's SPCC Plan by addressing areas of the facility that have inadequate secondary containment and impacts that may result from a discharge from these areas. The facility implements a detailed and stringent flowline maintenance program to prevent leaks from the primary system. Areas lacking adequate containment at the Neosho Ridge Wind Project include the Wind Turbine Generators (WTGs).

This Oil Spill Contingency Plan follows the content and organization of 40 CFR part 109 and describes the distribution of responsibilities and basic procedures for responding to an oil discharge and performing cleanup operations.

1.2 Resources at Risk (40 CFR 109.5(b)(1))

The Neosho Ridge Wind Project is located approximately 1 mile west of Galesburg, Kansas in Neosho County. The waterways closest to the facility are Elk River, Labette Creek, Neosho River, Rock Creek, and Parsons Lake. The project layout included in Appendix A indicates the location of the WTGs on the project. Ground cover at the project consists of agricultural land, row crops, and pasture land. The natural topography of the land is graded in an east direction towards Neosho River.

Residences are located throughout the project. IEA Constructors, LLC will coordinate with the Thayer fire and/or police departments and with its residential neighbors to provide the appropriate warnings in the event of a discharge that could affect public health and safety.

1.3 Risk Assessment (40 CFR 109.5(c)(2))

The facility is comprised of 139 Wind Turbine Generators (WTGs). Inside each WTG exist oil-filled operational equipment. Not all equipment is equipped with secondary containment, and it would be impracticable to build such structures around the entire WTGs. However, all equipment will be housed within the WTG, which will act as a partial secondary containment structure. The WTG tower and Nacelle cannot be considered secondary structures as they are not impervious structures and oil could leak out of them in the event of a spill.

The total amount of petroleum products found on site is roughly 75,460 gallons. The risk of a substantial amount of oil reaching navigable waters is low since all WTGs will be inspected during the construction phase of the

project. During storage of the WTG equipment at each turbine pad before erection, inventory will be taken and inspections done, ensuring no active leaks or spills are present.

1.4 Response Strategy

Crews and contractors on the Neosho Ridge Wind Project are equipped and trained to respond to certain "minor discharges" confined within the facility. Minor discharges can generally be described as those where the quantity of product discharged is small, the discharged material can be easily stopped and controlled, the discharge is localized, and the product is not likely to seep into groundwater or reach surface water or adjoining shorelines. Procedures for responding to these minor discharges are covered in Section 5 of the SPCC Plan for the Neosho Ridge Wind Project. Procedures for responding to major discharges are also covered in Section 5, but will be explained in-depth in this Contingency Plan.

This Contingency Plan addresses all discharge incidents, including those that affect navigable waters or during which the oil cannot be safely controlled by facility personnel and confined within the boundaries of the facility. Response to such incidents may necessitate the assistance of outside contractors or other responders to prevent imminent impact to navigable waters. Refer to Section 5 of the SPCC Plan for the Neosho Ridge Wind Project for the names and contact information of outside contractors that will be used in the event of a major discharge.

SECTION 2: SPILL DISCOVERY AND RESPONSE

2.1 Distribution of Responsibilities (40 CRF 109.5(a), (b)(2), (d)(2))

IEA Constructors, LLC has the primary responsibility for providing the initial response to oil discharge incidents originating from the Neosho Ridge Wind Project. To accomplish this, IEA Constructors, LLC has designated the Facility Manager, Pat Ringler, as the qualified oil discharge Response Coordinator (RC) in the event of an oil discharge.

The RC holds the primary responsibility to enact the processes and steps for spill response shown in Figure 1: Oil Spill Response Flow Chart, below. The RC has the authority to commit the necessary services and equipment to respond to the discharge and to request assistance from local authorities, contractors, or other responders, as appropriate.

The RC will direct notifications and initial response actions in accordance with training and capabilities. In the event of a fire or emergency situation that threatens the health and safety of those present at the site, the RC will direct evacuations and contact the fire and police departments. Contact information for local and regional authorities is listed in Table 1 below.

In the event of an emergency involving outside response agencies, the RC's primary responsibility is to provide information regarding the characteristics of the materials and equipment involved and to provide access to Neosho Ridge Wind Project resources as requested. Information most commonly provided in these situations is the following:

- Material / Quantity spilled
- Location of spill
- Direction of flow
- Description of imminent danger posed to crews and local community.

The RC shall also take necessary measures to control the flow of people, emergency equipment, and supplies and obtain the support of the local authorities needed to maintain control of the site. These controls may be necessary to minimize injuries and confusion.

Finally, the RC serves as the coordinator for radio communications by acquiring all essential information and ensuring clear communication of information to emergency response personnel. The RC has access to reference material at the field office either as printed material or on computer files that can further assist the response activities.

The RC will also contact the project owner, Lincoln Clean Energy, LLC, as soon as possible. The primary responsibility of the RC is employee and community safety, therefore it may not be practicable to immediately contact the project owner. Contact will be done once all imminent danger posed to employees and the local community has been resolved.

In the event that the Facility Manager is not available, the responsibility and authority for initiating a response to a discharge rests with the most senior IEA Constructors, LLC employee on site at the time the discharge is discovered (Crew Lead) or with the contractor Field Supervisor (or next person in command) if contractor personnel are the only personnel on site.

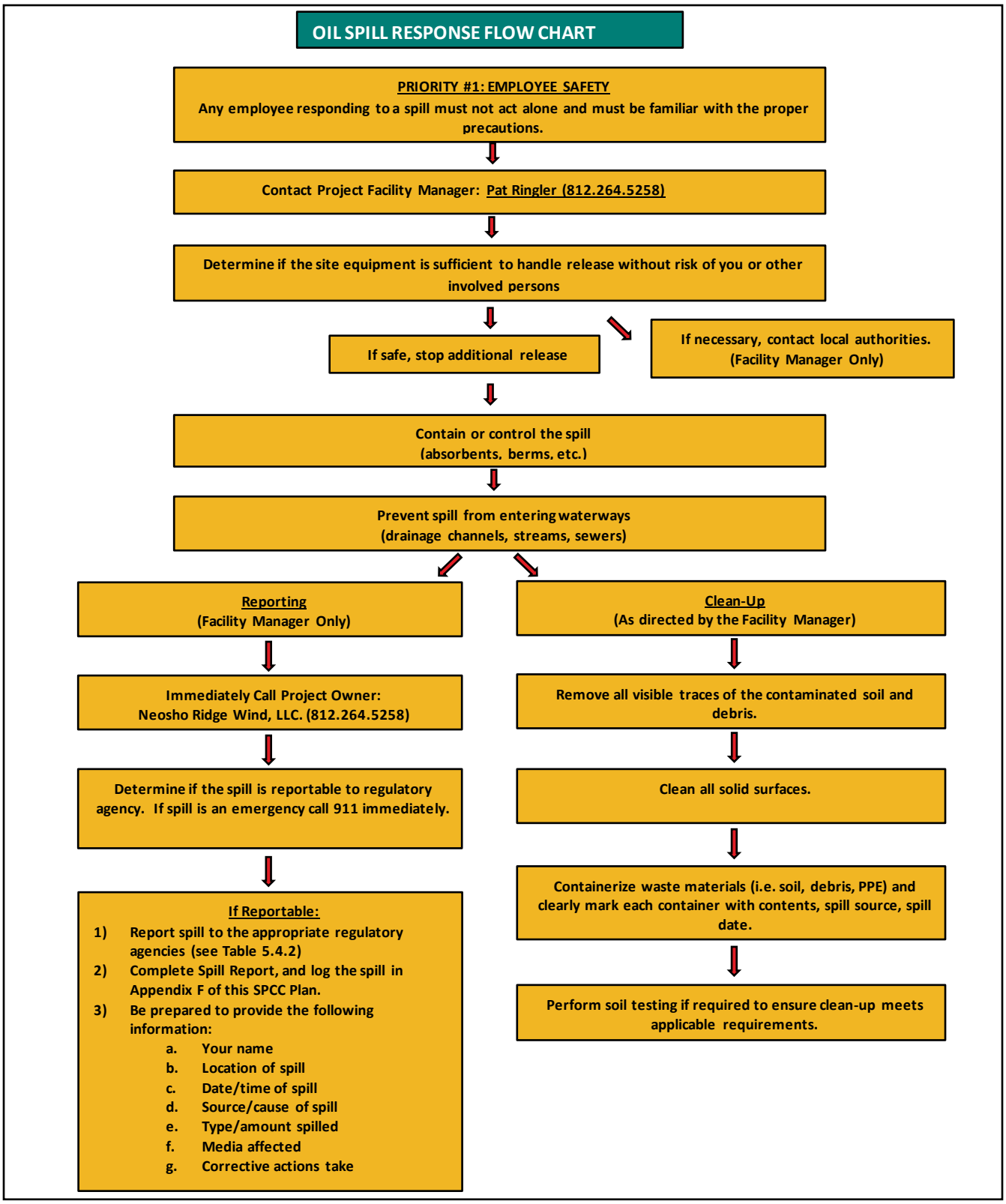


Figure 1: Oil Spill Response Flow Chart

Table 1 – Emergency Response Contacts

Emergency Response Contacts		
Title	**Name/Organization**	**Contact Number**
SPCC Plan Coordinator	Pat Ringler	812.264.5258
Alternate SPCC Plan Coordinator	Vincent Hahn	812.264.5258
National Response Center (NRC)	U.S. Environmental Protection Agency	1.800.424.8802
State Emergency Response	Kansas Spill-Reporting Hotline	785.291.3333
Spill Response Contractor	Clean Harbors Environmental	1.800.645.8265
Police Department	Thayer Police Department	911
	Non-Emergency	417.264.3819
Fire Department	Thayer Volunteer Fire Department	911
	Non-Emergency	417.264.3221
Hospital	Labette Health	911
	Non-Emergency	620.421.4881
Ambulance Service	Labette County Ambulance Services	911
	Non-Emergency	620.421.2453

2.2 Response Activities (40 CRF 109.5(d),(e))

In the event of a discharge, the first priority is to stop the product flow and to shut off all ignition sources, followed by the containment, control, and mitigation of the discharge. This Contingency Plan breaks actions to be performed to respond to an oil discharge into different phases, described in greater detail in the subsections below.

2.2.1 Discharge Discovery and Source Control – Minor Discharge

A "minor" discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 25 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges will usually be cleaned up by facility personnel. In general, the following steps are taken if possible and safe to do so:

- Immediately turn off ignition sources near the spill;
- Identify and shut down source of the discharge to stop the flow;
- Contain the discharge to the smallest area with sorbents, berms, fences, trenches, sandbags, or other material;
- Take immediate action to prevent the discharge from reaching off-site or surface water; and
- Contact the Site/Facility Manager or his/her alternate.

2.2.2 Discharge Discovery and Source Control – Major Discharge

A "major" discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, all workers will immediately evacuate the discharge site and notify the Facility Manager. If the Facility Manager is not present at the facility, the senior on-site person notifies the Facility Manager of the discharge and has authority to initiate notification and response actions.

The Facility Manager (or senior on-site person) shall:

- Immediately turn off ignition sources near the spill;
- Obtain medical assistance if workers are injured;
- Notify the Fire Department and/or Police Department;
- Notify National Response Center (1.800.424.8802) immediately for all reportable spills;
- Notify local neighboring property owners regarding the discharge and actions taken to mitigate the damage;
- Coordinate cleanup and obtain assistance from a cleanup contractor or other response organization as necessary; and
- Ensure wastes are containerized and characterized for proper disposal by a licensed waste hauler or cleanup contractor.

2.2.3 Control and Recovery

The Facility Manager directs the initial control of the oil spill on the Neosho Ridge Wind Project, and other contractor personnel. The actions taken will depend on whether the oil has reached water or is still on land. All effort will be made to prevent oil from reaching water.

<u>If oil has not reached water:</u>

- Deploy sand bags and absorbent socks downgradient from the oil, or erect temporary barriers such as trenches or mounds to prevent the oil from flowing towards water bodies.
- Implement land based response actions (countermeasure) such as digging temporary containment pits, ponds, or curbs to prevent the flow of oil into the water bodies.
- Deploy absorbent sock and sorbent material along the shoreline to prevent oil from entering waters.

<u>If oil has reached water:</u>

- Contact cleanup contractor(s).
- Contact National Response Center (1.800.424.8802) immediately.
- Control oil flow on the ground by placing absorbent socks and other sorbent material or physical barriers (e.g., "kitty litter," sandbags, earthen berm, trenches) across the oil flow path.
- Notify neighboring/downstream properties of the incident and actions being taken to resolve the issue.

2.2.4 Disposal of Recovered Product and Contaminated Response Material

The Facility Manager shall ensure that all contaminated materials classified as hazardous waste are disposed of in accordance with all applicable solid and hazardous waste regulations.

- Collect all debris in properly labeled waste containers (impervious bags, drums, or buckets).
- Dispose of contaminated material in accordance with all applicable solid and hazardous waste regulations using a licensed waste hauler and disposal facility, after appropriately characterizing the material for collection and disposal.
- Dispose of all contaminated response material within 2 weeks of the discharge.

2.2.5 Termination

The Facility Manager shall ensure that all cleanup activities have been completed and contaminated areas have been treated according to all applicable state and federal regulations. The Facility Manager shall also work with local and federal authorities to evaluate damages, evaluate response procedures taken, and make and necessary changes to the SPCC plan and contingency plan.

The following list of actions shall be accomplished in the termination process of an oil discharge:

- Review circumstances that led to the discharge and take all necessary precautions to prevent a recurrence.
- Evaluate the effectiveness of the response activities and make adjustments as necessary to response procedures and personnel training.
- Carry out personnel and contractor debriefings as necessary to emphasize prevention measures or to communicate changes in operations or response procedures.
- Submit any required follow-up reports to the authorities.
    - In the case where the discharge (as defined in 40 CFR 112.1(b)) was greater than 1,000 gallons or was the second discharge (as defined in 40 CFR 112.1(b)) of 42 gallons or more within any 12-month period, the Facility Manager is responsible for submitting the required information within 60 days to the EPA Regional Administrator following the procedures outlined in Appendix B.
    - Within 30 days of the discharge, the Facility Manager shall convene an incident critique including all appropriate persons that responded to the spill. The goal of the incident critique is to discuss lessons learned, the efficacy of the Contingency Plan and its implementation, and coordination of the plan/Facility Manager and other state and local plans.
    - Within 60 days of the critique, the Contingency Plan will be updated (as needed) to incorporate the results, findings, and suggestions developed during the critique.

2.3 Discharge Notification (40 CRF 109.5(b)(2))

Instructions and phone numbers for reporting a discharge to the National Response Center and other federal, state, and local authorities are provided in Appendix B of this Plan. Any discharge to water must be reported

immediately to the National Response Center. The Response Coordinator must ensure that details of the discharge are recorded on the Discharge Notification Form provided in Appendix C.

SECTION 3: RESPONSE RESOURCES AND PREPAREDNESS ACTIVITIES

3.1 Equipment, Supplies, Services, and Manpower (40 CRF 109.5(c)(1),(c)(2))

Spill kits will be available in all vehicle and equipment on-site. Additional spill clean-up materials, including gloves, buckets, and sorbents, will be stored in a supply trailer located in the laydown yard. These available materials are meant to be sufficient for clean-up minor discharges and contain a major discharge until additional services have reached the site. The Facility Manager shall ensure an accurate and sufficient inventory is kept throughout the project duration of all clean-up materials.

All employees on-site will be trained in accordance to the SPCC plan developed for the Neosho Ridge Wind Project. Training requirements can be referenced in Section 3 of the SPCC plan. IEA Constructors, LLC has also committed to the necessary manpower and equipment to handle discharges on-site. This agreement can be reference in Section 1.4 of the SPCC plan.

In the event of a major discharge, IEA Constructors, LLC will employ the services of Clean Harbors Environmental (1.800.645.8265), located in Wichita, KS.

3.2 Access to Receiving Waterbody (40 CRF 109.5(d)(5))

Four HUC 12 watersheds encompass the entire Neosho Ridge Wind Project, two of which are closed basins. The list below in Table 2 lists each watershed and location of access points to the largest water bodies that could be effected in the event of a major oil discharge on-site.

Table 2 – Receiving Waterbody Access Points

Receiving Waterbodies		
Watershed	**Largest Receiving Waterbody**	**Access Point(s)**
Elk River-Neosho River	Neosho River	N/A
Ogeese Creek-Neosho River	Neosho River	N/A
Fourmile Creek-Neosho River	Neosho River	N/A
Lake Parsons-Labette Creek	Lake Parsons	N/A
Little Labette Creek	Little Labette Creek	N/A
Thayer City Lake-Chetopa Creek	Tributary to Chetopa Creek	N/A
Tolen Creek-Labette Creek	Labette Creek	N/A
Upper Big Hill Creek	Tributary to Big Hill Creek	N/A

3.3 Communications and Control (40 CRF 109.5(b)(3),(d)(3))

All communications and response coordination will be completed at the field office of IEA Constructors, LLC, located at the projects Laydown Yard.

Communications equipment to be used includes:

- **Portable Hand-held Radios**
  - All crews on-site will be equipped with hand held radios.
  - In the event of a major discharge, the Facility Manager will manage all activities on a designated radio channel.
  - The response radio frequency that will be used during an incident shall be communicated to local emergency responders.
- **Cell Phones**
  - It is assumed that all employees on-site will have access to cell phones.
  - Cell phones shall only be used in an emergency when radio contact is not working.
  - All reporting and response activities shall be communicated over the radio, not by cell phone.

The Facility Manager is responsible for communicating the status of the response operations and for sharing relevant information with involved parties, including local, state, and federal authorities.

3.4 Training Exercises and Updating Procedures (40 CRF 109.5(b)(1))

Refer to Section 3 of the SPCC plan for employee training on spill prevention and response.

Following a response to an oil discharge, the Facility Manager shall evaluate the actions taken and identify procedural areas where improvements are needed. The Facility Manager shall conduct a briefing with field personnel, contractors, and local emergency responders to discuss lessons learned and will integrate the outcome of the discussion in subsequent SPCC briefings and employee training seminars. As necessary, the Facility Manager will amend this Contingency Plan or the SPCC Plan to reflect changes made to the facility equipment and procedures. A Professional Engineer shall certify any technical amendment to the SPCC Plan.

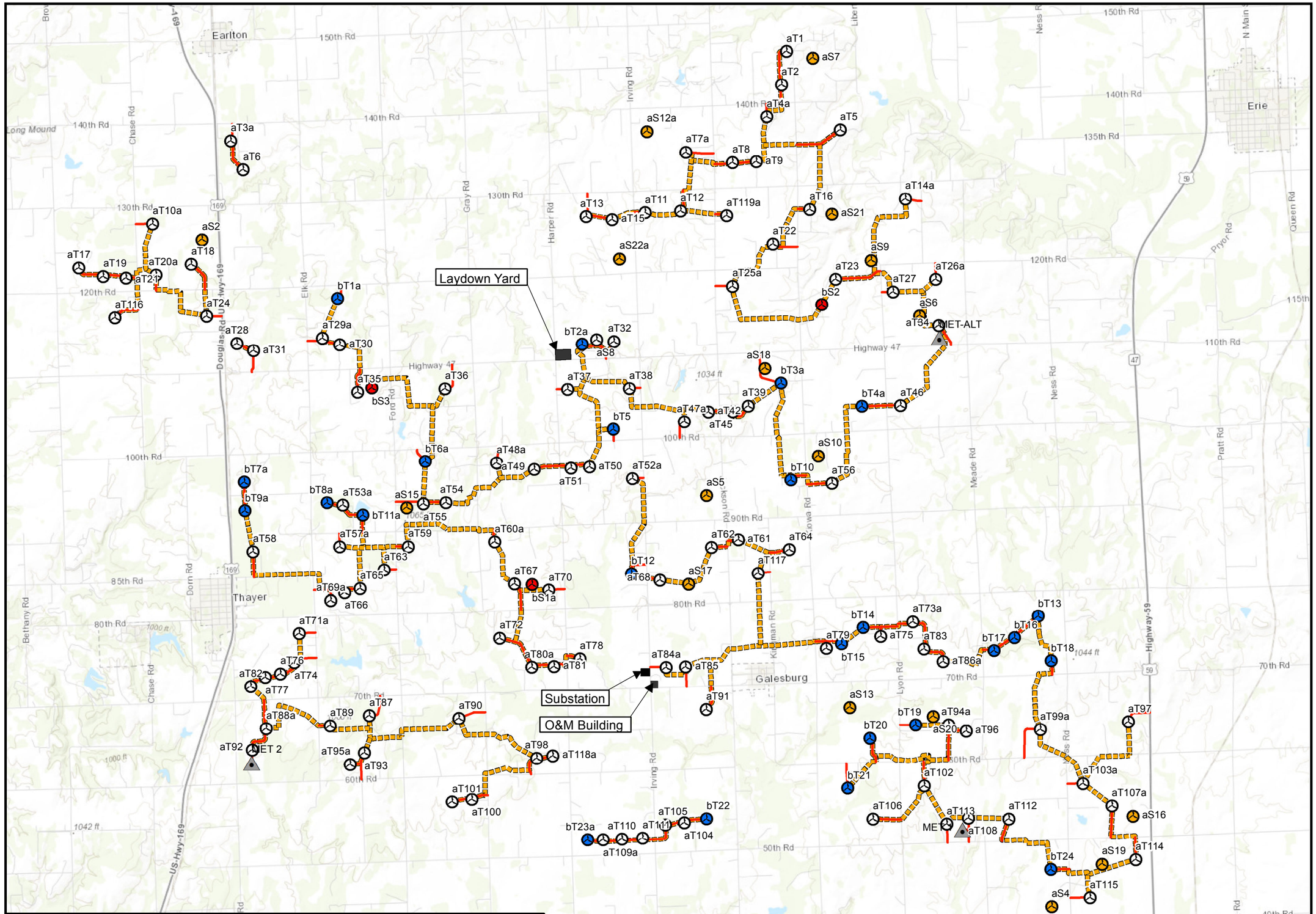
CONTINGENCY PLAN APPENDICES

Appendix A – Site Maps

Appendix B: Discharge Notification Procedure

Appendix C: Discharge Notification Form

Appendix A – Site Maps



NOTES:
1. CONTRACTOR SHALL PLACE VEHICLE WASHING STATION WITHIN LAYDOWN YARD

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	OVERALL SITE PLAN	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG V120 (115)
- WTG V120 - ALT (17)
- WTG V110 (24)
- WTG V110 - ALT (3)
- MET (3)
- Access Road
- Crane Path

N

0 0.5 1 Miles

NAD 1983 State Plane Kansas South FIPS 1502 (US Feet)

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St. Paul, Minnesota, 55126
Phone: 651.415.3800
Fax:888.858.3440
www.ulteig.com

Design By:	P. PEBLER
Drawn By:	P.PEBLER
Approved By:	C. SMAALADEN
Project Number:	18.01123

OVERALL SITE PLAN

REVISION: 0A

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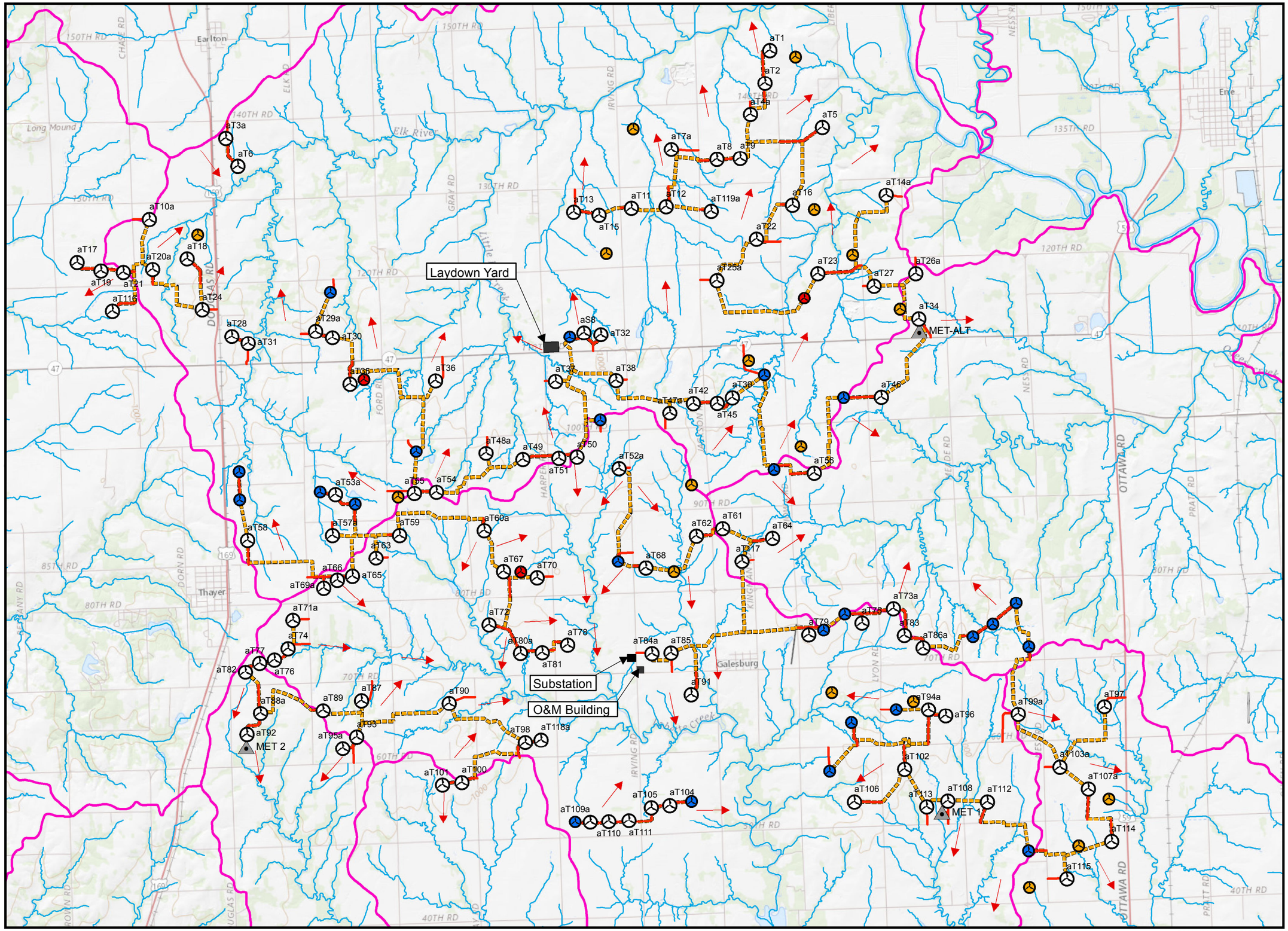

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	EXISTING SITE DRAINAGE	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG - V120 (115)
- WTG V120 - ALT (17)
- WTG V110 (24)
- WTG V110 - ALT (3)
- MET (3)
- Access Road
- Crane Path
- Existing Site Drainage
- NHD Flowline
- HUC12 Watersheds Bndry

N

0 0.5 1 Miles

NAD 1983 State Plane Kansas South FIPS 1502 (US Feet)

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Drawn By:	P.PEBLER
Approved By:	C. SMAALADEN
Project Number:	18.01123

EXISTING SITE DRAINAGE

REVISION: 0A

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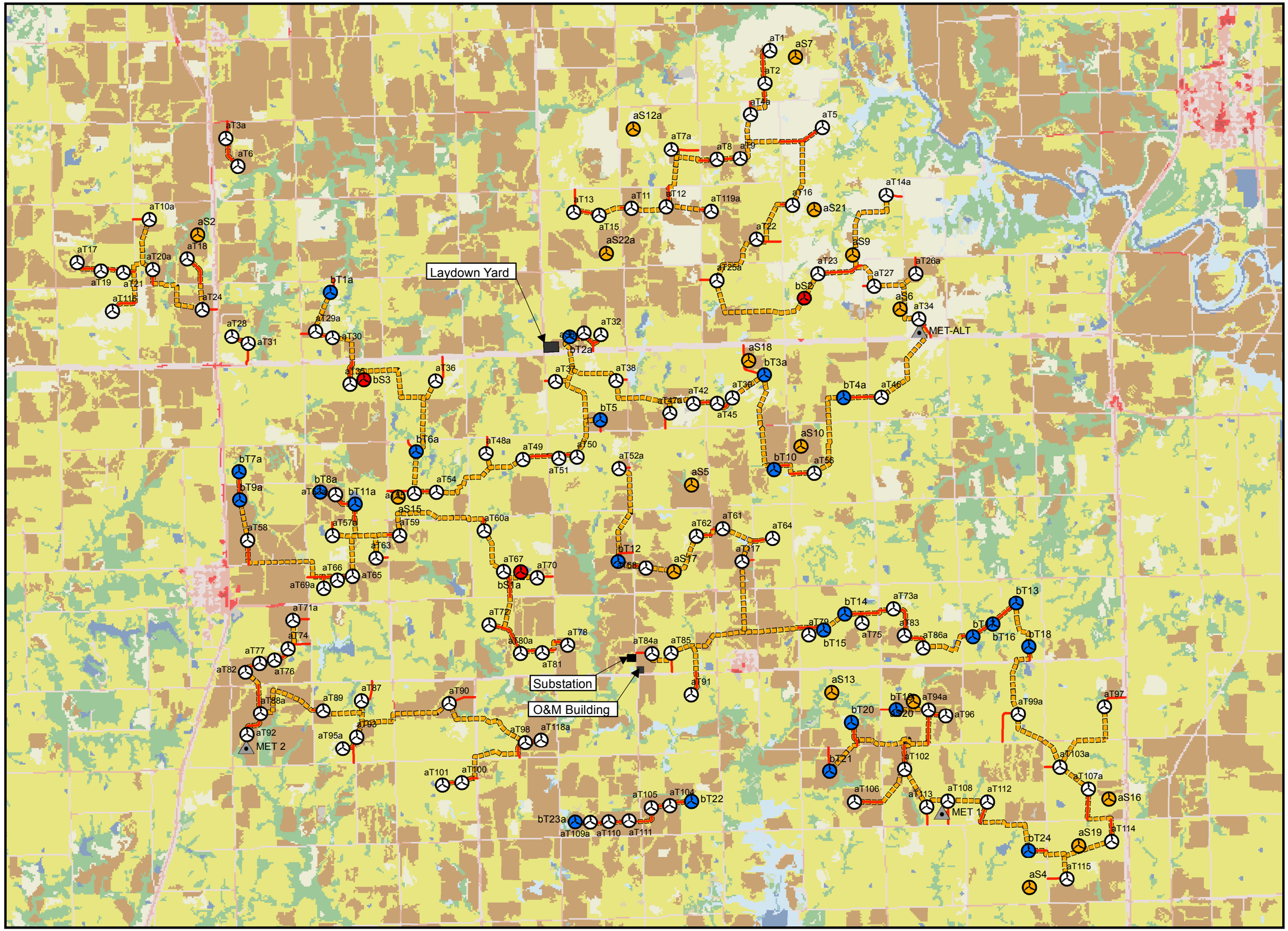

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	EXISTING LANDUSE	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG - V120 (115)
- WTG - V120 (17) - ALT
- WTG - V110 (24)
- WTG - V110 (3) - ALT

Land Cover

- Open Water
- Developed, Open Space
- Developed, Low Intensity
- Developed, Medium Intensity
- Developed, High Intensity
- Barren Land
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Herbaceuous
- Hay/Pasture
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceuous Wetlands

N

0 0.5 1 Miles

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Design By:	P. PEBLER
Drawn By:	P.PEBLER
Approved By:	C. SMAALADEN
Project Number:	18.01123

EXISTING LANDUSE

REVISION:
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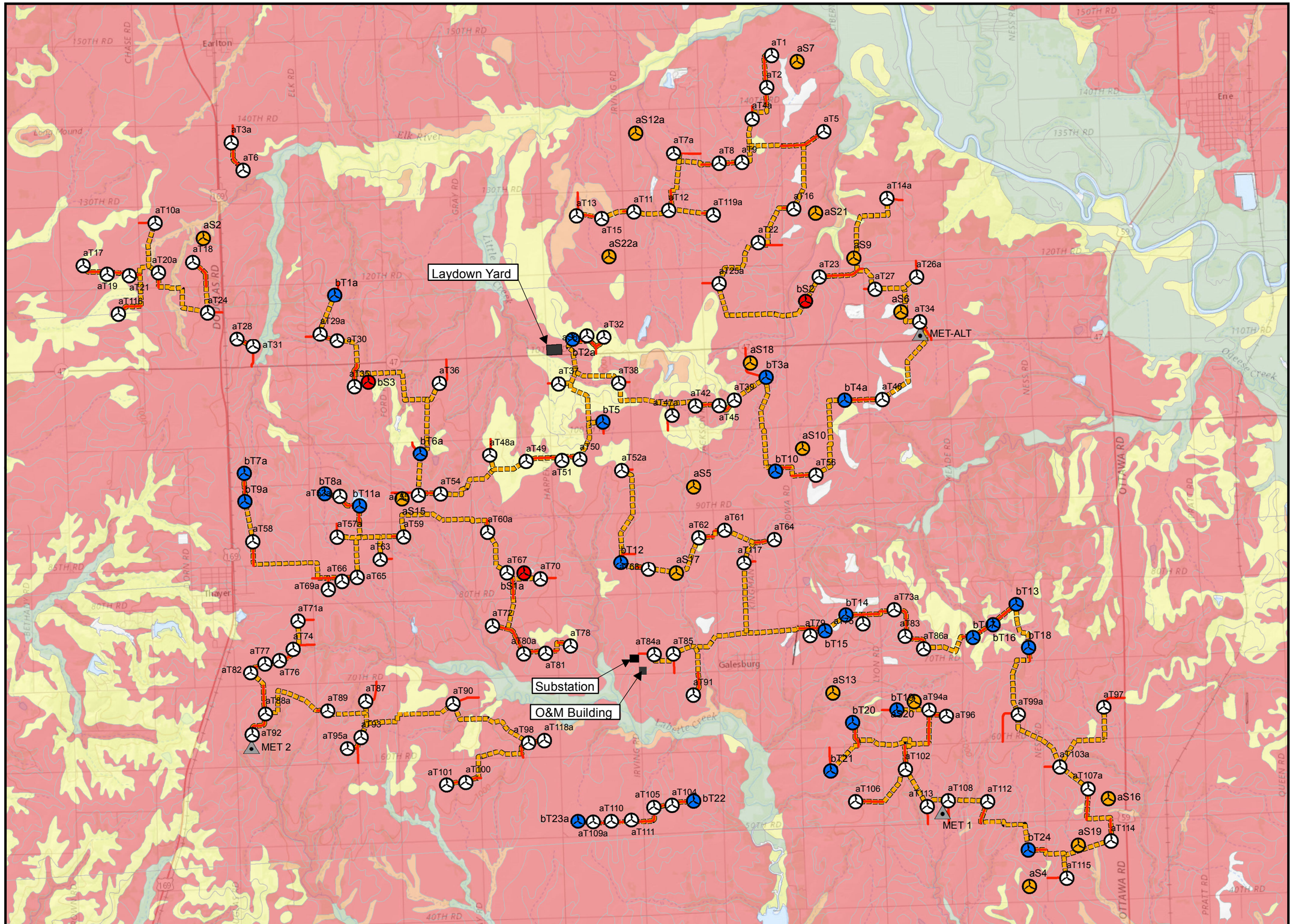

NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0A	08/20/2019	HYDROLOGIC SOIL GROUPS	UEI

Liberty Utilities
EMPIRE DISTRICT

IEA CONSTRUCTORS
6325 Digital Way, Suite 460
Indianapolis, IN 46278

Legend

- WTG - V120 (115)
- WTG - V120 (17) - ALT
- WTG - V110 (24)
- WTG - V110 (3) - ALT
- MET (3)
- Access Road
- Crane Path

Hydrologic Soil Group

- B
- C
- C/D
- D

N

0 0.5 1 Miles

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Drawn By: P.PEBLER
Approved By: C. SMAALADEN
Project Number: 18.01123

HYDROLOGIC SOIL GROUPS

REVISION: 0A

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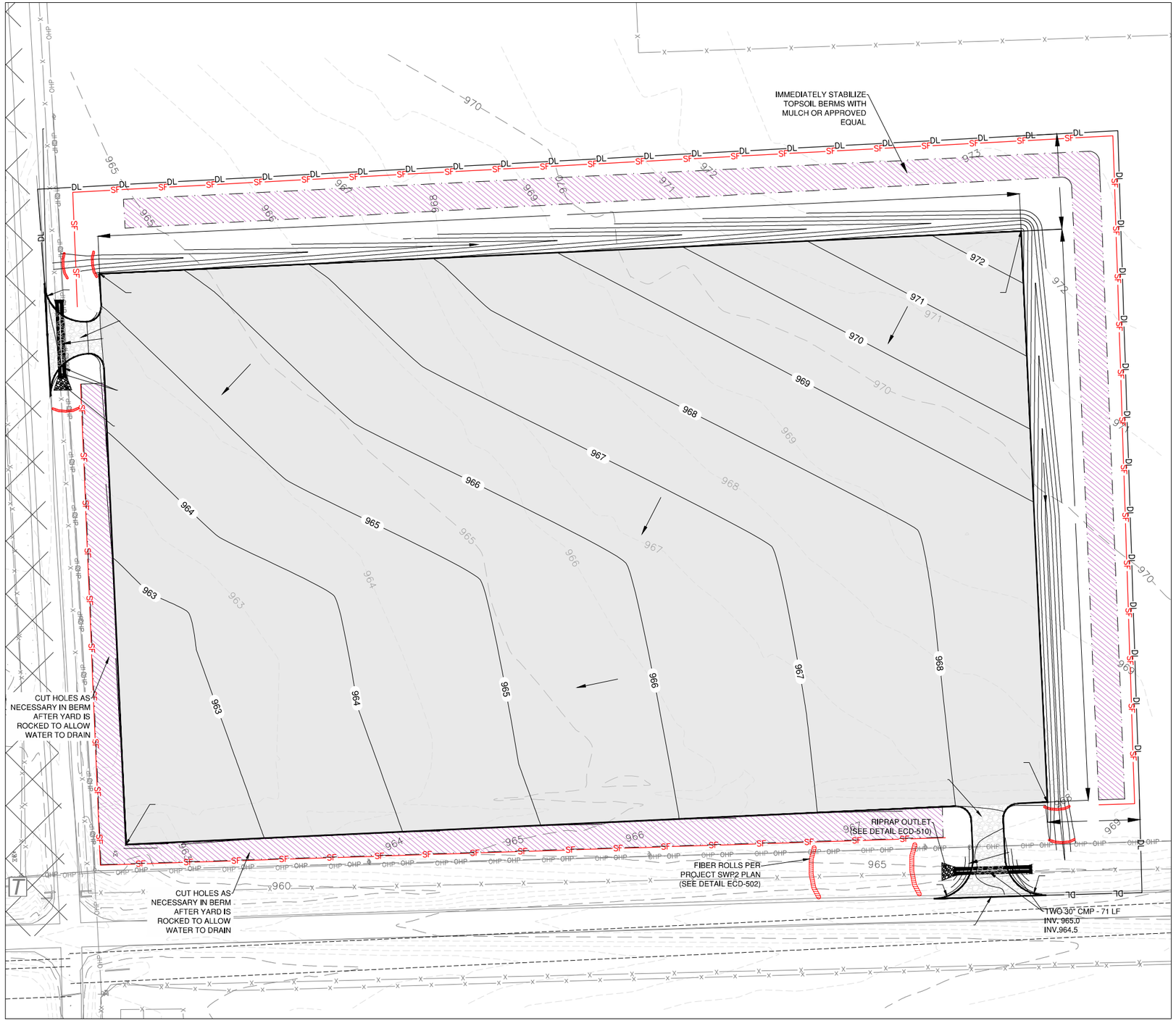

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NEOSHO RIDGE WIND PROJECT

NEOSHO COUNTY, KANSAS

Rev.	Date	Description	By
0	08/02/19	ISSUED FOR CONSTRUCTION	UEI

Liberty Utilities
EMPIRE DISTRICT

6325 DIGITAL WAY
SUITE 460
INDIANAPOLIS, IN 46278

IEA CONSTRUCTORS

W

NAD83 KANSAS STATE PLANE
SOUTH ZONE, US FOOT

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Design By: P. PEBLER
Drawn By: T. DEJONG
Approved By: C. SMAALADEN
Project Number: 18.01123

DWG #:

REVISION:

2019.08.30

Appendix B: Discharge Notification Procedure

United States Environmental Protection Agency
Office of Emergency Management (5104A)
EPA-550-F-06-006
December 2006
www.epa.gov/emergencies

Oil Discharge Reporting Requirements

How to Report Oil Discharges to the National Response Center and EPA

If a facility or vessel discharges oil to navigable waters or adjoining shorelines, waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or Deepwater Port Act of 1974, or which may affect natural resources under exclusive U.S. authority, the owner/operator is required to follow certain federal reporting requirements. These requirements are found in two EPA regulations – 40 CFR part 110, Discharge of Oil regulation, and 40 CFR part 112, Oil Pollution Prevention regulation. The Discharge of Oil regulation provides the framework for determining whether an oil discharge to inland and coastal waters or adjoining shorelines should be reported to the National Response Center. The Oil Pollution Prevention regulation, part of which is commonly referred to as the "SPCC rule," identifies certain types of discharges from regulated facilities that also need to be reported to EPA. Although these reporting requirements were not changed by EPA's recent modifications of the SPCC rule, this Fact Sheet will help facilities with the Reportable Discharge History criterion associated with the qualified facility option and the oil-filled operational equipment option offered in the recent SPCC modifications.

Who is subject to the Discharge of Oil regulation?

Any person in charge of a vessel or of an onshore or offshore facility is subject to the reporting requirements of the Discharge of Oil regulation if it discharges a harmful quantity of oil to U.S. navigable waters, adjoining shorelines, or the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or Deepwater Port Act of 1974, or which may affect natural resources under exclusive U.S. authority.

What is a "harmful quantity" of discharged oil?

A harmful quantity is any quantity of discharged oil that violates state water quality standards, causes a film or sheen on the water's surface, or leaves sludge or emulsion beneath the surface. For this reason, the Discharge of Oil regulation is commonly known as the "sheen" rule. Note that a floating sheen alone is not the only quantity that triggers the reporting requirements (e.g., sludge or emulsion deposited below the surface of the water may also be reportable).

Under this regulation, reporting oil discharges does not depend on the specific amount of oil discharged, but instead can be triggered by the presence of a visible sheen created by the discharged oil or the other criteria described above.

To whom do I report an oil discharge?

A facility should report discharges to the National Response Center (NRC) at 1-800-424-8802 or 1-202-426-2675. The NRC is the federal government's centralized reporting center, which is staffed 24 hours per day by U.S. Coast Guard personnel.

If reporting directly to NRC is not practicable, reports also can be made to the EPA regional office or the U.S. Coast Guard Marine Safety Office (MSO) in the area where the incident occurred.

When must I report to NRC?

Any person in charge of a vessel or an onshore or offshore facility must notify NRC immediately after he or she has knowledge of the discharge.

What information do I need to report?

NRC will ask a caller to provide as much information about the incident as possible including:

- Name, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the discharge
- Types of material(s) discharged
- Quantity of materials discharged
- Danger or threat posed by the discharge

- Number and types of injuries (if any)
- Weather conditions at the incident location
- Other information to help emergency personnel respond to the incident

How are reports to NRC handled?

NRC relays information to an EPA or U.S. Coast Guard On Scene Coordinator (OSC), depending on the location of the incident. After receiving a report, the OSC evaluates the situation and decides if federal emergency response action is necessary.

If I report a discharge to NRC, do I also report to EPA?

If a facility is regulated under the SPCC rule and has a reportable discharge according to EPA regulations (see below), it must be reported to both NRC and EPA.

What are the oil discharge reporting requirements in the SPCC rule?

Any facility owner/operator who is subject to the SPCC rule must comply with the reporting requirements found in §112.4.

A discharge must be reported to the EPA Regional Administrator (RA) when there is a discharge of:

- More than 1,000 U.S. gallons of oil in a single discharge to navigable waters or adjoining shorelines
- More than 42 U.S. gallons of oil in each of two discharges to navigable waters or adjoining shorelines occurring within any twelve-month period

When determining the applicability of this SPCC reporting requirement, the gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil that actually reaches navigable waters or adjoining shorelines, not the total amount of oil spilled.

What do I need to submit to EPA?

The owner/operator must provide the following:

- Name and location of the facility
- Owner/operator name
- Maximum storage/handling capacity of the facility and normal daily throughput
- Corrective actions and countermeasures taken, including descriptions of equipment repairs and replacements
- Adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary
- Cause of the discharge to navigable waters, including a failure analysis
- Failure analysis of the system where the discharge occurred
- Additional preventive measures taken or planned to take to minimize discharge reoccurrence
- Other information the RA may reasonably require

An owner/operator must also send a copy of this information to the agency or agencies in charge of oil pollution control activities in the state in which the facility is located.

What happens after a facility submits this information to EPA?

The EPA Regional Administrator will review the information submitted by the facility and may require a facility to submit and amend its SPCC Plan. Facilities and equipment that qualified for the new streamlined requirements may lose eligibility for those options as determined by the Regional Administrator. A state agency may also make recommendations to EPA for a facility to amend its Plan to prevent or control oil discharges.

For More Information

Review the Discharge of Oil regulation (40 CFR part 110)
http://www.gpoaccess.gov/cfr/

Review the Oil Pollution Prevention regulation (40 CFR part 112)
http://www.gpoaccess.gov/cfr/

Visit the EPA Office of Emergency Management Web site
www.epa.gov/emergencies

Call the Superfund, TRI, EPCRA, RMP, and Oil Information Center
(800) 424-9346 or (703) 412-9810
TDD (800) 553-7672 or (703) 412-3323
www.epa.gov/superfund/resources/infocenter

To Report an Oil or Chemical Discharge

Contact the National Response Center
(800) 424-8802 or (202) 267-2675
TDD (202) 267-4477
http://www.nrc.uscg.mil/index.html

Appendix C: Discharge Notification Form

Discharge Notification Form

Facility: Neosho Ridge Wind Project
392 County Rd. 50, Avon, MN, 56310

Description of Discharge		
Date/Time	Release Date: Release Time: Duration:	Discovery Date: Discovery Time:
Reporting Individual	Name:	Telephone #:
Location of discharge Equipment Source	Latitude: Longitude: ☐ WTG Equipment ☐ Substation Equipment ☐ Fuel Storage Tanks ☐ Heavy Equipment	Description: Description: Equipment ID:
Product	☐ Diesel Fuel ☐ Hydraulic Fluid ☐ Other*	*Describe Other:
Appearance and description		
Environmental conditions	Wind direction: Wind speed:	Rainfall:
Impacts		
Quantity	Released:	Recovered:
Receiving medium	☐ Water** ☐ Land ☐ Other (describe)	☐ Release confined to project property. ☐ Release outside project property. **If water, indicate extent and body of water:
Describe circumstances of the release:		
Assessment of impacts and remedial actions:		
Disposal method for recovered material:		
Action(s) taken to prevent incident from reoccurring:		
Safety Issues:	☐ Injuries ☐ Fatalities ☐ Evacuation	

Notifications		
Agency	**Name**	**Date/Time Reported & Comments**
Company Spill Response Coordinator		
National Response Center (1.800.424.8802)		
State Police		
Fire Department		
Clean-up Contractor		

Appendix F – Discharge History Summary

Spill Log and Spill Report Form						
Date	**Material / Source**	**Amount (gallons)**	**Reportable (Y/N)**	**Cause**	**Corrective Actions Taken**	**Tracking #:**

Appendix G – Discharge Notification Form

Discharge Notification Form

Facility: Neosho Ridge Wind Project
11340 Harper Rd, Thayer, KS, 66776

Description of Discharge		
Date/Time	Release Date: Release Time: Duration:	Discovery Date: Discovery Time:
Reporting Individual	Name:	Telephone #:
Location of discharge Equipment Source	Latitude: Longitude: ☐ WTG Equipment ☐ Substation Equipment ☐ Fuel Storage Tanks ☐ Heavy Equipment	Description: Description: Equipment ID:
Product	☐ Diesel Fuel ☐ Hydraulic Fluid ☐ Other*	*Describe Other:
Appearance and description		
Environmental conditions	Wind direction: Wind speed:	Rainfall:
Impacts		
Quantity	Released:	Recovered:
Receiving medium	☐ Water** ☐ Land ☐ Other (describe)	☐ Release confined to project property. ☐ Release outside project property. **If water, indicate extent and body of water:
Describe circumstances of the release:		
Assessment of impacts and remedial actions:		
Disposal method for recovered material:		
Action(s) taken to prevent incident from reoccurring:		
Safety Issues:	☐ Injuries ☐ Fatalities ☐ Evacuation	

Notifications		
Agency	**Name**	**Date/Time Reported & Comments**
Company Spill Response Coordinator		
National Response Center (1.800.424.8802)		
State Police		
Fire Department		
Clean-up Contractor		

Appendix H – EPA Oil Discharge Reporting Requirements

United States Environmental Protection Agency
Office of Emergency Management (5104A)
EPA-550-F-06-006
December 2006
www.epa.gov/emergencies

Oil Discharge Reporting Requirements

How to Report Oil Discharges to the National Response Center and EPA

If a facility or vessel discharges oil to navigable waters or adjoining shorelines, waters of the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or Deepwater Port Act of 1974, or which may affect natural resources under exclusive U.S. authority, the owner/operator is required to follow certain federal reporting requirements. These requirements are found in two EPA regulations – 40 CFR part 110, Discharge of Oil regulation, and 40 CFR part 112, Oil Pollution Prevention regulation. The Discharge of Oil regulation provides the framework for determining whether an oil discharge to inland and coastal waters or adjoining shorelines should be reported to the National Response Center. The Oil Pollution Prevention regulation, part of which is commonly referred to as the "SPCC rule," identifies certain types of discharges from regulated facilities that also need to be reported to EPA. Although these reporting requirements were not changed by EPA's recent modifications of the SPCC rule, this Fact Sheet will help facilities with the Reportable Discharge History criterion associated with the qualified facility option and the oil-filled operational equipment option offered in the recent SPCC modifications.

Who is subject to the Discharge of Oil regulation?

Any person in charge of a vessel or of an onshore or offshore facility is subject to the reporting requirements of the Discharge of Oil regulation if it discharges a harmful quantity of oil to U.S. navigable waters, adjoining shorelines, or the contiguous zone, or in connection with activities under the Outer Continental Shelf Lands Act or Deepwater Port Act of 1974, or which may affect natural resources under exclusive U.S. authority.

What is a "harmful quantity" of discharged oil?

A harmful quantity is any quantity of discharged oil that violates state water quality standards, causes a film or sheen on the water's surface, or leaves sludge or emulsion beneath the surface. For this reason, the Discharge of Oil regulation is commonly known as the "sheen" rule. Note that a floating sheen alone is not the only quantity that triggers the reporting requirements (e.g., sludge or emulsion deposited below the surface of the water may also be reportable).

Under this regulation, reporting oil discharges does not depend on the specific amount of oil discharged, but instead can be triggered by the presence of a visible sheen created by the discharged oil or the other criteria described above.

To whom do I report an oil discharge?

A facility should report discharges to the National Response Center (NRC) at 1-800-424-8802 or 1-202-426-2675. The NRC is the federal government's centralized reporting center, which is staffed 24 hours per day by U.S. Coast Guard personnel.

If reporting directly to NRC is not practicable, reports also can be made to the EPA regional office or the U.S. Coast Guard Marine Safety Office (MSO) in the area where the incident occurred.

When must I report to NRC?

Any person in charge of a vessel or an onshore or offshore facility must notify NRC immediately after he or she has knowledge of the discharge.

What information do I need to report?

NRC will ask a caller to provide as much information about the incident as possible including:

- Name, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the discharge
- Types of material(s) discharged
- Quantity of materials discharged
- Danger or threat posed by the discharge

- Number and types of injuries (if any)
- Weather conditions at the incident location
- Other information to help emergency personnel respond to the incident

How are reports to NRC handled?

NRC relays information to an EPA or U.S. Coast Guard On Scene Coordinator (OSC), depending on the location of the incident. After receiving a report, the OSC evaluates the situation and decides if federal emergency response action is necessary.

If I report a discharge to NRC, do I also report to EPA?

If a facility is regulated under the SPCC rule and has a reportable discharge according to EPA regulations (see below), it must be reported to both NRC and EPA.

What are the oil discharge reporting requirements in the SPCC rule?

Any facility owner/operator who is subject to the SPCC rule must comply with the reporting requirements found in §112.4.

A discharge must be reported to the EPA Regional Administrator (RA) when there is a discharge of:

- More than 1,000 U.S. gallons of oil in a single discharge to navigable waters or adjoining shorelines
- More than 42 U.S. gallons of oil in each of two discharges to navigable waters or adjoining shorelines occurring within any twelve-month period

When determining the applicability of this SPCC reporting requirement, the gallon amount(s) specified (either 1,000 or 42) refers to the amount of oil that actually reaches navigable waters or adjoining shorelines, not the total amount of oil spilled.

What do I need to submit to EPA?

The owner/operator must provide the following:

- Name and location of the facility
- Owner/operator name
- Maximum storage/handling capacity of the facility and normal daily throughput
- Corrective actions and countermeasures taken, including descriptions of equipment repairs and replacements
- Adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary
- Cause of the discharge to navigable waters, including a failure analysis
- Failure analysis of the system where the discharge occurred
- Additional preventive measures taken or planned to take to minimize discharge reoccurrence
- Other information the RA may reasonably require

An owner/operator must also send a copy of this information to the agency or agencies in charge of oil pollution control activities in the state in which the facility is located.

What happens after a facility submits this information to EPA?

The EPA Regional Administrator will review the information submitted by the facility and may require a facility to submit and amend its SPCC Plan. Facilities and equipment that qualified for the new streamlined requirements may lose eligibility for those options as determined by the Regional Administrator. A state agency may also make recommendations to EPA for a facility to amend its Plan to prevent or control oil discharges.

For More Information

Review the Discharge of Oil regulation (40 CFR part 110)
http://www.gpoaccess.gov/cfr/

Review the Oil Pollution Prevention regulation (40 CFR part 112)
http://www.gpoaccess.gov/cfr/

Visit the EPA Office of Emergency Management Web site
www.epa.gov/emergencies

Call the Superfund, TRI, EPCRA, RMP, and Oil Information Center
(800) 424-9346 or (703) 412-9810
TDD (800) 553-7672 or (703) 412-3323
www.epa.gov/superfund/resources/infocenter

To Report an Oil or Chemical Discharge

Contact the National Response Center
(800) 424-8802 or (202) 267-2675
TDD (202) 267-4477
http://www.nrc.uscg.mil/index.html

Attachment 2

Power Purchase Agreement Announcement between Apex Clean Energy and AEP Energy January 29, 2020

/s/ Christine M.T. Pirik
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(Counsel is willing to accept service via email.)

Apex Clean Energy and AEP Energy Announce 240 MW PPA

Charlottesville, VA and Columbus, OH – January 29, 2020 – AEP Energy, a wholly owned subsidiary of American Electric Power (NYSE: AEP), and Apex Clean Energy today announced a long-term power purchase agreement that will supply AEP Energy with clean power from Emerson Creek Wind, located in Erie and Huron Counties, Ohio. The 240 MW transaction is the largest physical PPA for a wind project serving load in the PJM market and will be used by AEP Energy to serve contracted loads within PJM.

"With this milestone for Emerson Creek Wind, Ohio is one step closer to realizing the extensive benefits of wind energy by stimulating significant local economic investment and satisfying consumer and corporate demand," said Mark Goodwin, Apex Clean Energy president and CEO. "Partnering with like-minded organizations such as AEP Energy allows Apex to help serve customers who are leading the transition to a clean energy economy and, with them, take strides toward decarbonizing the grid at scale."

Emerson Creek Wind, which will be operational in late 2021, will also provide significant economic benefits for the local and state economies. The project will create more than 100 short-term construction jobs and 10 long-term operations positions, as well as generate approximately $40 million in landowner payments and $70 million in tax revenue for Ohioans.

AEP Energy will use the power from Emerson Creek to serve customers who want clean energy for their retail supply—including Google, the largest corporate purchaser of renewable energy in the world. The Emerson Creek project will contribute a renewable source of power for Google's recently announced New Albany data center, which AEP Energy will supply and match the load with 100% renewable energy from new resources.

"This power purchase agreement with Apex enables us to provide our customers with an integrated, carbon-free energy supply that delivers long-term price stability and environmental benefits. Agreements like these demonstrate the innovative energy solutions we can put in place to help our customers power their homes and businesses with clean, cost effective, reliable energy," said Greg Hall, president, AEP Energy.

This PPA represents Apex's third major transaction with AEP, including a 200 MW PPA signed between the Public Service Company of Oklahoma, an AEP subsidiary, and the Apex-developed Balko Wind project in 2013.

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Contacts

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AEP Energy
Melissa McHenry
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About Apex Clean Energy

Apex Clean Energy develops, constructs, and operates utility-scale wind and solar power facilities across North America. Our mission-driven team of more than 200 renewable energy experts uses a data-focused approach and an unrivaled portfolio of projects to create solutions for the world's most innovative and forward-thinking customers. For more information on how Apex is leading the transition to a clean energy future, visit apexcleanenergy.com or follow us on Facebook, Twitter, and LinkedIn.

About AEP Energy

AEP Energy, a subsidiary of American Electric Power (NYSE: AEP), is a certified competitive retail electricity and natural gas supply provider operating in 28 service territories in six states and Washington, D.C. AEP Energy supplies electricity and natural gas solutions for more than 450,000 residential and business customers and takes pride in making it easy for customers to buy, manage and use energy. Based in Columbus, Ohio and Chicago, Illinois, AEP Energy is committed to excellence by serving customers with value, innovation and many years of industry experience.

Attachment 3

National Telecommunications and Information Administration Letter February 4, 2019

/s/ Christine M.T. Pirik
Christine M.T. Pirik (0029759)
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mfleisher@dickinsonwright.com
(Counsel is willing to accept service via email.)

UNITED STATES DEPARTMENT OF COMMERCE
National Telecommunications and Information Administration
Washington, D.C. 20230

Mr. B. Benjamin Evans, P.E.
Evans Engineering Solutions, LLC
524 Alta Loma Drive
Thiensville, WI 53092

Re: Emerson Creek Project, Rev. 1: Huron, Erie, & Seneca Counties, OH

Dear Mr. Evans:

In response to your request on November 30, 2018, the National Telecommunications and Information Administration provided to the federal agencies represented in the Interdepartment Radio Advisory Committee (IRAC) the plans for the Emerson Creek Wind Project, Revision 1, located in Huron, Erie, and Seneca Counties, Ohio.

After a 45+ day period of review, no agencies had issues with turbine placement in this area.

While the IRAC agencies did not identify any concerns regarding radio frequency blockage, this does not eliminate the need for the wind energy facilities to meet any other requirements specified by law related to these agencies. For example, this review by the IRAC does not eliminate any need that may exist to coordinate with the Federal Aviation Administration concerning flight obstruction.

Thank you for the opportunity to review these proposals.

Sincerely,

John R. McFall
Digitally signed by John R. McFall
Date: 2019.02.04 07:30:21 -05'00'

John R. McFall
Deputy Chief, Spectrum Services Division
Office of Spectrum Management

Attachment 4

Sound Memorandum Nordex N149 5.5/5.7 MW RSG
February 18, 2020

/s/ Christine M.T. Pirik
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(Counsel is willing to accept service via email.)

MEMO

TO:	Nathan Pedder
FROM:	Eddie Duncan, INCE Bd. Cert.
DATE:	February 18, 2020
SUBJECT:	Nordex N149 5.5/5.7 MW turbines proposed for the Emerson Creek Wind Farm

Apex Clean Energy is proposing the Emerson Creek Wind Farm project ("Project") for an area straddling Erie and Huron County, Ohio. A noise assessment was previously published for this Project by RSG (*Emerson Creek Wind – Noise Assessment,* June 25, 2019), assuming an 87-turbine array (though only up to 71 are expected to be constructed). The noise emissions for the Nordex N149 5.5/5.7 MW turbines were discussed generally in a previous memorandum dated June 24, 2019. At the time, Nordex had not published sound power data for the 5.5/5.7 MW version of the N149, but they have recently made that data available to us. This memorandum provides model results for the Nordex N149 5.5/5.7 MW turbines for Emerson Creek Wind Farm. The Nordex N149 5.5/5.7 MW turbines have hub heights of 105 meters and 125 meters which are being considered for the Project.

Using the same model methods discussed in the noise assessment, the Project sound propagation model was updated to include two additional model runs:

1. 87 Nordex N149 5.5/5.7 MW turbines at a hub height of 105 meters, and
2. 87 Nordex N149 5.5/5.7 MW turbines at a hub height of 125 meters.

A summary of the model results for these model runs across all receptors is provided in Table 1. The results for the two different hub heights are nearly identical such that there is no difference between the two model runs in the summary in Table 1, and only slight differences (within 1 dB) at some individual receptors as shown in Table 2.

All receptors, except for one, are less than the nighttime sound level limit of 49 dBA, identified in the noise assessment. The highest sound level at a non-participating residence for the project is 46 dBA. The one participating receptor that is over 49 dBA is adjacent to the Project substation and is discussed in the noise assessment.

The results for each receptor for both N149 5.5/5.7 MW model runs are provided in Table 2**.**

As discussed in the June 24, 2019 memorandum related to the Nordex N149 5.5/5.7 MW turbines, the model results from the N149 5.5/5.7 MW turbines were expected to be

less than the model results from the N149 4.5 MW turbines based on the initial overall sound power level data for each turbine model. These model results shown in Table 1 and Table 2 are less than or equal to the results for the N149 4.5 MW model run presented in the Noise Assessment, showing that the previous expectation was correct.

TABLE 1: SUMMARY OF SOUND PRESSURE LEVELS FOR EACH GE MODEL RUN

TURBINE MODEL		RECEPTOR CLASSIFICATION		
		All	Participating	Non-Participating
N149 5.5/5.7 MW, 105 meter hub height	Mean	35	40	35
	Max	54	54	46
	Min	24	28	24
N149 5.5/5.7 MW, 125 meter hub height	Mean	35	40	35
	Max	54	54	46
	Min	24	28	24

TABLE 2: MODEL RESULTS FOR ALL RECEPTORS[1]

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1	Non-participating	34	34
2	Non-participating	38	38
3	Non-participating	41	41
4	Non-participating	33	33
5	Non-participating	39	39
6	Participating	45	45
7	Non-participating	43	43
8	Non-participating	35	35
9	Non-participating	40	40
10	Non-participating	37	37
11	Participating	44	44
12	Participating	38	38
13	Non-participating	36	36
14	Non-participating	34	34
15	Non-participating	42	42
16	Non-participating	39	39
17	Non-participating	33	33
18	Non-participating	34	34

[1] Maps of receptor locations and receptor coordinates provided in the noise assessment.

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
19	Participating	41	41
20	Non-participating	37	37
21	Non-participating	41	41
22	Non-participating	34	34
23	Non-participating	37	37
24	Non-participating	31	31
25	Non-participating	42	42
26	Non-participating	43	43
27	Participating	40	40
28	Non-participating	37	37
29	Non-participating	41	41
30	Non-participating	40	40
31	Non-participating	41	41
32	Non-participating	45	45
33	Participating	41	41
34	Participating	40	40
35	Non-participating	36	36
36	Non-participating	36	36
37	Non-participating	40	40
38	Non-participating	38	38
39	Non-participating	38	38
40	Non-participating	39	39
41	Non-participating	38	38
42	Non-participating	33	33
43	Non-participating	38	38
44	Non-participating	40	40
45	Non-participating	41	41
46	Non-participating	39	39
47	Non-participating	41	41
48	Participating	36	35
49	Non-participating	34	34
50	Non-participating	38	38
51	Non-participating	38	38
52	Non-participating	38	38
53	Non-participating	35	35
54	Participating	44	44
55	Non-participating	31	31
56	Non-participating	35	35
57	Non-participating	39	39

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
58	Non-participating	41	41
59	Non-participating	43	43
60	Non-participating	34	34
61	Non-participating	32	32
62	Non-participating	36	36
63	Non-participating	44	44
64	Participating	45	45
65	Non-participating	37	37
66	Non-participating	38	38
67	Non-participating	35	35
68	Non-participating	41	41
69	Non-participating	32	32
70	Non-participating	36	36
71	Non-participating	37	37
72	Non-participating	39	39
73	Non-participating	34	34
74	Non-participating	39	39
75	Participating	38	38
76	Non-participating	37	37
77	Participating	47	47
78	Non-participating	37	36
79	Non-participating	41	41
80	Non-participating	34	34
81	Non-participating	33	33
82	Non-participating	36	36
83	Non-participating	39	39
84	Non-participating	35	35
85	Non-participating	40	40
86	Participating	38	38
87	Participating	45	45
88	Non-participating	38	38
89	Non-participating	41	41
90	Non-participating	35	35
91	Participating	44	44
92	Non-participating	36	36
93	Non-participating	38	38
94	Non-participating	41	41
95	Non-participating	44	44
96	Non-participating	44	44

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
97	Non-participating	34	34
98	Non-participating	42	42
99	Non-participating	35	35
100	Non-participating	39	39
101	Participating	35	35
102	Non-participating	43	43
103	Non-participating	40	40
104	Non-participating	44	44
105	Participating	35	35
106	Non-participating	37	37
107	Non-participating	39	39
108	Non-participating	33	33
109	Non-participating	33	33
110	Non-participating	36	36
111	Non-participating	39	39
112	Participating	37	37
113	Participating	42	42
114	Non-participating	41	41
115	Non-participating	38	38
116	Non-participating	35	35
117	Non-participating	33	33
118	Participating	37	37
119	Non-participating	36	36
120	Non-participating	40	40
121	Non-participating	34	34
122	Non-participating	37	37
123	Non-participating	39	39
124	Non-participating	39	39
125	Non-participating	36	36
126	Non-participating	29	28
127	Non-participating	43	43
128	Non-participating	34	34
129	Non-participating	37	37
130	Non-participating	39	39
131	Non-participating	38	38
132	Non-participating	35	35
133	Non-participating	37	37
134	Non-participating	38	38
135	Non-participating	38	38

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
136	Non-participating	36	36
137	Participating	44	44
138	Non-participating	31	31
139	Non-participating	36	36
140	Non-participating	39	39
141	Non-participating	35	35
142	Non-participating	39	39
143	Participating	46	46
144	Non-participating	44	44
145	Non-participating	42	42
146	Non-participating	43	43
147	Non-participating	38	38
148	Non-participating	35	35
149	Non-participating	38	38
150	Non-participating	36	36
151	Non-participating	38	38
152	Non-participating	37	37
153	Participating	44	44
154	Non-participating	34	34
155	Non-participating	41	41
156	Non-participating	35	35
157	Non-participating	39	39
158	Non-participating	40	40
159	Non-participating	40	40
160	Non-participating	36	36
161	Non-participating	36	36
162	Non-participating	38	38
163	Non-participating	36	36
164	Non-participating	35	34
165	Non-participating	38	38
166	Non-participating	33	33
167	Non-participating	34	34
168	Non-participating	35	35
169	Participating	39	39
170	Non-participating	38	38
171	Non-participating	41	41
172	Non-participating	37	37
173	Non-participating	37	37
174	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
175	Non-participating	34	34
176	Non-participating	38	38
177	Non-participating	34	34
178	Non-participating	36	36
179	Non-participating	37	37
180	Non-participating	40	40
181	Non-participating	39	39
182	Non-participating	43	43
183	Non-participating	36	36
184	Non-participating	34	34
185	Non-participating	36	36
186	Non-participating	42	42
187	Participating	37	37
188	Non-participating	34	34
189	Non-participating	40	40
190	Non-participating	37	37
191	Non-participating	41	41
192	Non-participating	38	38
193	Non-participating	41	41
194	Non-participating	37	37
195	Non-participating	34	34
196	Non-participating	35	35
197	Participating	48	48
198	Non-participating	37	37
199	Non-participating	41	41
200	Non-participating	43	43
201	Non-participating	35	35
202	Non-participating	39	39
203	Non-participating	37	37
204	Non-participating	38	38
205	Non-participating	36	36
206	Non-participating	41	41
207	Participating	43	43
208	Non-participating	37	37
209	Non-participating	40	40
210	Non-participating	39	39
211	Non-participating	43	42
212	Participating	41	41
213	Non-participating	36	36

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
214	Participating	42	42
215	Non-participating	36	36
216	Non-participating	40	40
217	Non-participating	41	41
218	Non-participating	40	40
219	Non-participating	37	37
220	Non-participating	40	40
221	Non-participating	44	44
222	Participating	44	44
223	Non-participating	36	36
224	Non-participating	39	39
225	Non-participating	44	44
226	Non-participating	34	34
227	Non-participating	45	45
228	Non-participating	42	42
229	Non-participating	37	37
230	Non-participating	40	40
231	Non-participating	40	40
232	Non-participating	44	44
233	Non-participating	44	44
234	Non-participating	41	41
235	Non-participating	38	38
236	Non-participating	38	38
237	Non-participating	40	40
238	Non-participating	29	29
239	Non-participating	35	35
240	Non-participating	38	38
241	Participating	38	38
242	Non-participating	37	37
243	Non-participating	34	35
244	Non-participating	36	36
245	Non-participating	39	39
246	Non-participating	36	36
247	Non-participating	30	30
248	Non-participating	38	38
249	Non-participating	33	33
250	Non-participating	37	37
251	Non-participating	37	37
252	Participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
253	Participating	36	36
254	Non-participating	40	40
255	Non-participating	41	41
256	Non-participating	31	31
257	Non-participating	29	28
258	Non-participating	34	34
259	Participating	35	35
260	Non-participating	36	36
261	Non-participating	40	40
262	Non-participating	34	34
263	Non-participating	37	37
264	Non-participating	41	41
265	Non-participating	40	40
266	Non-participating	38	38
267	Non-participating	34	34
268	Non-participating	36	36
269	Non-participating	34	34
270	Non-participating	37	37
271	Non-participating	37	37
272	Non-participating	41	41
273	Non-participating	38	38
274	Participating	34	34
275	Participating	45	45
276	Non-participating	34	34
277	Participating	45	45
278	Non-participating	41	41
279	Participating	43	43
280	Participating	47	47
281	Non-participating	40	39
282	Participating	36	36
283	Non-participating	37	37
284	Non-participating	40	40
285	Non-participating	39	39
286	Non-participating	38	38
287	Non-participating	37	37
288	Participating	43	43
289	Non-participating	35	35
290	Non-participating	33	33
291	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
292	Non-participating	34	34
293	Non-participating	38	38
294	Participating	39	39
295	Non-participating	36	36
296	Participating	33	33
297	Non-participating	33	33
298	Participating	42	42
299	Non-participating	39	39
300	Non-participating	37	37
301	Non-participating	38	38
302	Non-participating	34	34
303	Non-participating	38	38
304	Non-participating	43	43
305	Participating	41	41
306	Non-participating	33	33
307	Non-participating	35	35
308	Non-participating	32	32
309	Non-participating	35	35
310	Participating	40	40
311	Non-participating	33	33
312	Non-participating	39	39
313	Non-participating	37	37
314	Non-participating	36	36
315	Non-participating	38	38
316	Non-participating	34	34
317	Non-participating	38	38
318	Non-participating	29	29
319	Non-participating	44	44
320	Non-participating	41	40
321	Non-participating	39	39
322	Non-participating	39	39
323	Non-participating	38	38
324	Participating	38	38
325	Participating	39	39
326	Non-participating	29	29
327	Non-participating	39	39
328	Non-participating	40	40
329	Non-participating	39	39
330	Non-participating	43	43

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
331	Non-participating	37	37
332	Participating	42	42
333	Non-participating	40	40
334	Participating	37	37
335	Non-participating	41	41
336	Participating	43	43
337	Non-participating	37	37
338	Non-participating	36	36
339	Non-participating	38	38
340	Non-participating	37	36
341	Non-participating	40	40
342	Non-participating	35	35
343	Non-participating	35	35
344	Non-participating	41	41
345	Non-participating	37	37
346	Non-participating	37	37
347	Non-participating	42	42
348	Non-participating	38	38
349	Non-participating	34	34
350	Participating	42	42
351	Non-participating	42	42
352	Non-participating	39	39
353	Non-participating	41	41
354	Non-participating	38	38
355	Non-participating	38	38
356	Non-participating	34	34
357	Non-participating	36	36
358	Non-participating	32	32
359	Non-participating	36	36
360	Participating	46	46
361	Non-participating	35	35
362	Participating	40	40
363	Non-participating	31	31
364	Non-participating	38	38
365	Participating	39	39
366	Non-participating	40	40
367	Non-participating	35	35
368	Non-participating	41	41
369	Non-participating	37	37

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
370	Participating	43	43
371	Non-participating	41	41
372	Participating	41	41
373	Non-participating	38	38
374	Non-participating	37	37
375	Non-participating	36	36
376	Non-participating	42	42
377	Participating	38	38
378	Non-participating	37	37
379	Non-participating	29	29
380	Participating	40	40
381	Non-participating	36	36
382	Participating	45	45
383	Non-participating	39	39
384	Non-participating	40	40
385	Non-participating	43	43
386	Non-participating	34	34
387	Participating	40	40
388	Non-participating	39	39
389	Non-participating	36	36
390	Participating	45	45
391	Non-participating	39	39
392	Non-participating	34	34
393	Non-participating	38	38
394	Non-participating	38	38
395	Non-participating	34	34
396	Non-participating	44	44
397	Non-participating	38	38
398	Non-participating	38	38
399	Participating	44	44
400	Non-participating	41	41
401	Non-participating	40	40
402	Non-participating	38	38
403	Non-participating	37	37
404	Participating	47	47
405	Non-participating	37	37
406	Non-participating	40	40
407	Non-participating	44	44
408	Participating	43	43

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
409	Non-participating	34	34
410	Non-participating	39	39
411	Non-participating	34	34
412	Participating	40	40
413	Non-participating	35	35
414	Non-participating	31	31
415	Non-participating	34	34
416	Non-participating	40	40
417	Non-participating	42	42
418	Non-participating	41	41
419	Non-participating	32	32
420	Non-participating	40	40
421	Non-participating	41	41
422	Non-participating	44	44
423	Non-participating	44	44
424	Participating	42	42
425	Non-participating	40	40
426	Non-participating	37	37
427	Participating	47	47
428	Non-participating	42	42
429	Non-participating	43	43
430	Participating	38	38
431	Participating	36	36
432	Non-participating	37	37
433	Non-participating	32	32
434	Non-participating	37	37
435	Non-participating	37	37
436	Participating	36	36
437	Participating	41	41
438	Non-participating	38	38
439	Non-participating	38	38
440	Non-participating	37	37
441	Non-participating	41	41
442	Participating	40	40
443	Non-participating	41	41
444	Non-participating	39	39
445	Non-participating	37	37
446	Non-participating	30	30
447	Non-participating	43	43

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
448	Non-participating	37	37
449	Non-participating	39	39
450	Non-participating	34	34
451	Non-participating	43	43
452	Non-participating	39	39
453	Non-participating	35	35
454	Participating	39	39
455	Participating	34	34
456	Non-participating	37	37
457	Non-participating	37	37
458	Non-participating	39	39
459	Non-participating	38	38
460	Non-participating	38	38
461	Non-participating	41	41
462	Non-participating	37	37
463	Non-participating	35	35
464	Non-participating	36	35
465	Non-participating	33	33
466	Non-participating	43	43
467	Non-participating	40	40
468	Non-participating	38	38
469	Non-participating	38	38
470	Non-participating	34	34
471	Non-participating	31	31
472	Non-participating	29	28
473	Non-participating	33	33
474	Non-participating	40	40
475	Non-participating	42	42
476	Non-participating	40	40
477	Non-participating	42	42
478	Non-participating	37	37
479	Participating	43	43
480	Non-participating	34	34
481	Non-participating	37	37
482	Non-participating	42	42
483	Non-participating	36	36
484	Non-participating	39	39
485	Non-participating	40	40
486	Non-participating	39	39

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
487	Participating	46	45
488	Non-participating	38	38
489	Non-participating	39	39
490	Non-participating	40	40
491	Non-participating	38	38
492	Participating	43	43
493	Non-participating	35	35
494	Non-participating	40	40
495	Non-participating	38	38
496	Participating	41	41
497	Non-participating	34	34
498	Non-participating	40	40
499	Non-participating	37	37
500	Participating	44	44
501	Non-participating	44	44
502	Non-participating	36	36
503	Participating	41	41
504	Non-participating	34	34
505	Participating	35	35
506	Non-participating	35	35
507	Non-participating	37	37
508	Non-participating	40	39
509	Non-participating	39	39
510	Participating	45	45
511	Non-participating	29	29
512	Non-participating	36	36
513	Non-participating	39	39
514	Non-participating	36	36
515	Non-participating	39	39
516	Non-participating	38	38
517	Participating	40	40
518	Participating	43	43
519	Participating	44	44
520	Non-participating	40	40
521	Non-participating	38	38
522	Non-participating	32	32
523	Non-participating	42	42
524	Non-participating	38	38
525	Non-participating	37	36

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
526	Non-participating	34	34
527	Participating	37	37
528	Non-participating	43	43
529	Non-participating	44	44
530	Non-participating	34	35
531	Non-participating	36	36
532	Non-participating	35	35
533	Non-participating	36	36
534	Non-participating	43	43
535	Participating	37	37
536	Non-participating	37	37
537	Non-participating	31	31
538	Non-participating	38	38
539	Non-participating	36	36
540	Non-participating	41	41
541	Non-participating	44	44
542	Non-participating	33	33
543	Non-participating	38	38
544	Non-participating	40	40
545	Non-participating	37	36
546	Non-participating	40	40
547	Non-participating	40	40
548	Non-participating	34	34
549	Non-participating	42	42
550	Non-participating	38	38
551	Non-participating	35	35
552	Non-participating	39	39
553	Non-participating	41	41
554	Non-participating	43	43
555	Non-participating	38	38
556	Non-participating	35	35
557	Non-participating	37	37
558	Non-participating	35	35
559	Non-participating	41	41
560	Non-participating	39	39
561	Non-participating	35	35
562	Participating	47	47
563	Participating	41	41
564	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
565	Non-participating	34	34
566	Non-participating	39	39
567	Non-participating	38	38
568	Non-participating	33	33
569	Non-participating	42	42
570	Participating	43	43
571	Participating	42	42
572	Non-participating	35	35
573	Non-participating	37	37
574	Non-participating	42	42
575	Non-participating	37	37
576	Non-participating	44	44
577	Non-participating	34	34
578	Non-participating	33	33
579	Non-participating	39	39
580	Participating	47	47
581	Participating	44	44
582	Non-participating	37	37
583	Non-participating	41	41
584	Non-participating	34	34
585	Non-participating	38	38
586	Participating	39	39
587	Participating	30	30
588	Non-participating	39	39
589	Non-participating	37	37
590	Non-participating	38	38
591	Participating	40	40
592	Non-participating	38	38
593	Participating	38	38
594	Non-participating	42	42
595	Non-participating	35	34
596	Non-participating	43	43
597	Non-participating	38	38
598	Non-participating	43	43
599	Non-participating	45	45
600	Non-participating	34	34
601	Non-participating	42	42
602	Non-participating	41	41
603	Non-participating	29	28

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
604	Non-participating	38	38
605	Participating	43	43
606	Non-participating	38	38
607	Non-participating	34	34
608	Participating	44	44
609	Non-participating	39	39
610	Non-participating	35	35
611	Non-participating	41	41
612	Participating	37	37
613	Non-participating	38	38
614	Participating	43	43
615	Non-participating	41	41
616	Non-participating	36	36
617	Participating	44	44
618	Non-participating	37	37
619	Non-participating	35	35
620	Participating	38	38
621	Non-participating	37	37
622	Participating	39	39
623	Non-participating	31	31
624	Participating	39	39
625	Non-participating	41	41
626	Non-participating	41	41
627	Non-participating	35	35
628	Participating	44	44
629	Non-participating	34	34
630	Participating	43	43
631	Participating	43	43
632	Non-participating	35	35
633	Non-participating	34	34
634	Non-participating	40	40
635	Non-participating	40	40
636	Non-participating	42	42
637	Non-participating	34	34
638	Non-participating	33	33
639	Non-participating	36	36
640	Non-participating	33	33
641	Non-participating	44	44
642	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
643	Non-participating	40	40
644	Non-participating	36	36
645	Non-participating	38	38
646	Non-participating	34	34
647	Non-participating	37	37
648	Participating	44	44
649	Non-participating	36	36
650	Participating	41	41
651	Non-participating	34	34
652	Participating	45	45
653	Participating	41	41
654	Non-participating	36	36
655	Non-participating	38	38
656	Non-participating	38	38
657	Participating	41	41
658	Non-participating	41	41
659	Participating	43	43
660	Non-participating	36	36
661	Non-participating	40	40
662	Non-participating	34	34
663	Non-participating	40	40
664	Non-participating	36	36
665	Participating	43	43
666	Non-participating	34	34
667	Non-participating	36	36
668	Non-participating	36	36
669	Non-participating	36	36
670	Non-participating	38	38
671	Non-participating	35	35
672	Participating	30	30
673	Non-participating	31	31
674	Non-participating	31	31
675	Non-participating	33	33
676	Non-participating	34	34
677	Non-participating	37	37
678	Non-participating	37	37
679	Non-participating	40	40
680	Non-participating	37	37
681	Non-participating	38	38

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
682	Non-participating	43	43
683	Participating	43	43
684	Non-participating	40	40
685	Non-participating	40	40
686	Non-participating	39	39
687	Non-participating	38	38
688	Participating	44	44
689	Non-participating	38	38
690	Non-participating	36	36
691	Non-participating	41	41
692	Non-participating	35	35
693	Non-participating	44	44
694	Non-participating	36	36
695	Non-participating	38	38
696	Non-participating	44	44
697	Non-participating	36	36
698	Non-participating	37	37
699	Non-participating	44	44
700	Participating	36	36
701	Non-participating	40	40
702	Non-participating	38	38
703	Non-participating	35	35
704	Non-participating	41	41
705	Non-participating	38	38
706	Participating	39	39
707	Non-participating	33	33
708	Non-participating	36	36
709	Non-participating	36	36
710	Participating	42	42
711	Non-participating	35	35
712	Non-participating	34	34
713	Non-participating	41	41
714	Non-participating	39	39
715	Non-participating	34	34
716	Non-participating	38	38
717	Non-participating	36	36
718	Non-participating	44	44
719	Non-participating	34	34
720	Participating	36	35

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
721	Non-participating	34	34
722	Non-participating	41	41
723	Non-participating	38	38
724	Non-participating	41	41
725	Non-participating	41	41
726	Non-participating	35	35
727	Participating	37	37
728	Participating	44	44
729	Non-participating	41	41
730	Non-participating	37	37
731	Non-participating	38	38
732	Non-participating	32	32
733	Participating	41	41
734	Non-participating	40	40
735	Non-participating	36	36
736	Non-participating	30	30
737	Non-participating	37	37
738	Non-participating	37	37
739	Non-participating	42	42
740	Non-participating	42	42
741	Non-participating	35	35
742	Non-participating	39	39
743	Non-participating	43	43
744	Non-participating	38	38
745	Non-participating	35	35
746	Non-participating	36	36
747	Non-participating	39	39
748	Non-participating	41	41
749	Non-participating	37	37
750	Non-participating	37	37
751	Non-participating	34	34
752	Participating	45	45
753	Participating	37	37
754	Non-participating	34	34
755	Non-participating	42	42
756	Non-participating	41	40
757	Non-participating	34	34
758	Non-participating	34	34
759	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
760	Non-participating	41	41
761	Participating	36	36
762	Participating	39	39
763	Non-participating	33	33
764	Non-participating	38	38
765	Non-participating	33	33
766	Participating	37	37
767	Non-participating	34	34
768	Participating	36	36
769	Non-participating	40	40
770	Non-participating	45	45
771	Non-participating	36	36
772	Non-participating	41	41
773	Non-participating	32	32
774	Non-participating	35	35
775	Non-participating	34	34
776	Non-participating	42	41
777	Non-participating	40	40
778	Non-participating	38	38
779	Participating	43	43
780	Non-participating	40	40
781	Participating	37	37
782	Non-participating	36	36
783	Non-participating	37	37
784	Non-participating	36	36
785	Participating	45	44
786	Non-participating	34	34
787	Non-participating	45	45
788	Participating	38	38
789	Non-participating	38	38
790	Non-participating	31	31
791	Non-participating	38	38
792	Non-participating	29	28
793	Participating	41	41
794	Non-participating	43	43
795	Non-participating	40	40
796	Non-participating	42	42
797	Non-participating	35	35
798	Non-participating	42	42

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
799	Non-participating	40	40
800	Non-participating	34	34
801	Participating	37	37
802	Non-participating	33	33
803	Non-participating	36	36
804	Non-participating	42	42
805	Non-participating	35	35
806	Non-participating	37	37
807	Non-participating	34	34
808	Non-participating	39	39
809	Non-participating	39	39
810	Non-participating	40	40
811	Non-participating	38	38
812	Non-participating	35	35
813	Non-participating	39	39
814	Non-participating	38	38
815	Non-participating	37	37
816	Non-participating	39	39
817	Non-participating	40	40
818	Non-participating	39	39
819	Non-participating	41	41
820	Non-participating	34	34
821	Non-participating	41	41
822	Non-participating	37	37
823	Participating	43	43
824	Non-participating	42	42
825	Non-participating	37	37
826	Non-participating	41	41
827	Non-participating	45	45
828	Non-participating	36	36
829	Non-participating	35	34
830	Non-participating	39	39
831	Non-participating	38	38
832	Non-participating	42	42
833	Non-participating	34	34
834	Non-participating	43	43
835	Non-participating	36	35
836	Non-participating	34	34
837	Non-participating	39	38

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
838	Non-participating	44	44
839	Non-participating	31	31
840	Non-participating	38	38
841	Non-participating	39	39
842	Non-participating	35	35
843	Non-participating	39	39
844	Non-participating	40	40
845	Non-participating	42	42
846	Non-participating	41	41
847	Non-participating	37	37
848	Non-participating	40	40
849	Non-participating	37	37
850	Participating	38	38
851	Non-participating	38	37
852	Non-participating	36	36
853	Non-participating	40	40
854	Non-participating	40	40
855	Non-participating	45	45
856	Non-participating	34	34
857	Non-participating	45	45
858	Non-participating	36	36
859	Non-participating	34	34
860	Participating	44	44
861	Non-participating	42	42
862	Non-participating	39	39
863	Non-participating	40	40
864	Non-participating	42	42
865	Non-participating	39	39
866	Participating	37	37
867	Non-participating	33	33
868	Non-participating	40	40
869	Non-participating	42	42
870	Non-participating	44	44
871	Participating	43	43
872	Non-participating	36	36
873	Participating	40	40
874	Non-participating	35	35
875	Non-participating	33	33
876	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
877	Non-participating	35	35
878	Participating	36	36
879	Participating	44	44
880	Non-participating	44	43
881	Non-participating	39	39
882	Non-participating	44	44
883	Non-participating	38	38
884	Non-participating	34	34
885	Non-participating	41	41
886	Non-participating	36	35
887	Non-participating	40	40
888	Non-participating	34	34
889	Participating	37	37
890	Non-participating	36	36
891	Non-participating	34	34
892	Non-participating	36	36
893	Non-participating	41	41
894	Non-participating	40	40
895	Non-participating	39	39
896	Non-participating	39	39
897	Non-participating	44	44
898	Non-participating	38	38
899	Non-participating	40	40
900	Non-participating	35	35
901	Non-participating	41	41
902	Non-participating	36	36
903	Participating	41	41
904	Non-participating	38	38
905	Non-participating	36	36
906	Non-participating	30	30
907	Non-participating	38	38
908	Non-participating	43	43
909	Non-participating	38	38
910	Non-participating	35	35
911	Participating	42	41
912	Non-participating	39	39
913	Non-participating	34	34
914	Participating	44	44
915	Non-participating	36	36

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
916	Non-participating	39	39
917	Non-participating	37	37
918	Non-participating	35	35
919	Non-participating	38	38
920	Participating	36	36
921	Non-participating	41	41
922	Non-participating	38	38
923	Participating	44	44
924	Non-participating	37	37
925	Non-participating	41	41
926	Participating	38	38
927	Non-participating	44	44
928	Non-participating	38	38
929	Non-participating	40	40
930	Non-participating	36	36
931	Non-participating	40	40
932	Participating	44	44
933	Non-participating	37	37
934	Non-participating	35	35
935	Non-participating	36	36
936	Non-participating	33	33
937	Non-participating	39	39
938	Participating	44	44
939	Non-participating	35	35
940	Participating	46	46
941	Participating	46	46
942	Non-participating	38	38
943	Participating	38	38
944	Non-participating	40	40
945	Non-participating	41	41
946	Non-participating	41	41
947	Non-participating	36	36
948	Participating	44	44
949	Non-participating	39	39
950	Non-participating	38	38
951	Non-participating	43	43
952	Non-participating	36	36
953	Non-participating	34	34
954	Non-participating	36	36

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
955	Non-participating	38	38
956	Participating	44	44
957	Participating	33	33
958	Participating	39	39
959	Non-participating	35	35
960	Non-participating	37	37
961	Participating	37	37
962	Participating	43	43
963	Non-participating	35	35
964	Non-participating	41	41
965	Non-participating	40	40
966	Non-participating	43	43
967	Non-participating	37	37
968	Non-participating	42	42
969	Non-participating	41	40
970	Non-participating	39	39
971	Participating	39	39
972	Non-participating	39	39
973	Non-participating	40	40
974	Non-participating	40	40
975	Non-participating	44	44
976	Non-participating	39	39
977	Non-participating	37	37
978	Non-participating	37	37
979	Non-participating	37	37
980	Non-participating	43	43
981	Non-participating	38	38
982	Non-participating	37	37
983	Non-participating	35	35
984	Non-participating	33	33
985	Non-participating	37	37
986	Non-participating	41	41
987	Non-participating	39	39
988	Non-participating	37	37
989	Non-participating	31	31
990	Non-participating	34	34
991	Non-participating	34	34
992	Non-participating	40	40
993	Non-participating	39	39

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
994	Non-participating	41	41
995	Non-participating	34	34
996	Non-participating	29	28
997	Non-participating	42	42
998	Participating	46	46
999	Non-participating	43	43
1000	Non-participating	41	41
1001	Non-participating	35	35
1002	Non-participating	36	36
1003	Non-participating	41	41
1004	Non-participating	44	44
1005	Non-participating	41	41
1006	Non-participating	41	41
1007	Non-participating	37	37
1008	Non-participating	42	42
1009	Non-participating	38	38
1010	Non-participating	38	38
1011	Non-participating	39	39
1012	Non-participating	39	39
1013	Participating	46	46
1014	Non-participating	41	41
1015	Non-participating	31	31
1016	Non-participating	35	35
1017	Non-participating	36	36
1018	Non-participating	40	40
1019	Non-participating	40	40
1020	Non-participating	42	41
1021	Non-participating	38	38
1022	Non-participating	42	42
1023	Non-participating	34	34
1024	Participating	40	40
1025	Non-participating	38	38
1026	Non-participating	30	30
1027	Non-participating	33	33
1028	Non-participating	36	36
1029	Non-participating	38	38
1030	Participating	45	45
1031	Non-participating	38	38
1032	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1033	Non-participating	40	40
1034	Non-participating	35	35
1035	Non-participating	39	39
1036	Non-participating	40	40
1037	Non-participating	34	34
1038	Participating	42	42
1039	Non-participating	36	36
1040	Non-participating	43	43
1041	Non-participating	38	38
1042	Non-participating	33	33
1043	Participating	47	47
1044	Non-participating	43	43
1045	Participating	45	44
1046	Non-participating	34	34
1047	Non-participating	38	38
1048	Non-participating	42	42
1049	Non-participating	42	42
1050	Non-participating	31	31
1051	Non-participating	34	34
1052	Non-participating	39	39
1053	Non-participating	41	41
1054	Participating	39	39
1055	Non-participating	44	44
1056	Participating	47	47
1057	Non-participating	34	34
1058	Non-participating	37	37
1059	Non-participating	44	44
1060	Non-participating	41	41
1061	Non-participating	36	36
1062	Non-participating	35	35
1063	Non-participating	37	37
1064	Non-participating	33	33
1065	Non-participating	40	40
1066	Non-participating	39	39
1067	Participating	44	44
1068	Non-participating	42	42
1069	Non-participating	33	33
1070	Non-participating	35	35
1071	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1072	Non-participating	40	40
1073	Non-participating	39	39
1074	Non-participating	38	38
1075	Non-participating	41	41
1076	Non-participating	38	38
1077	Non-participating	39	39
1078	Non-participating	34	34
1079	Non-participating	37	37
1080	Participating	37	37
1081	Non-participating	38	37
1082	Participating	44	43
1083	Non-participating	35	35
1084	Non-participating	36	36
1085	Participating	43	43
1086	Non-participating	36	36
1087	Non-participating	43	43
1088	Non-participating	37	37
1089	Non-participating	38	38
1090	Non-participating	39	39
1091	Non-participating	44	44
1092	Participating	36	35
1093	Non-participating	32	32
1094	Non-participating	40	40
1095	Non-participating	35	35
1096	Participating	46	46
1097	Non-participating	39	39
1098	Participating	44	44
1099	Non-participating	36	36
1100	Participating	36	36
1101	Non-participating	40	40
1102	Non-participating	39	39
1103	Non-participating	44	44
1104	Participating	46	46
1105	Non-participating	42	42
1106	Non-participating	44	44
1107	Non-participating	38	38
1108	Participating	39	39
1109	Non-participating	43	43
1110	Non-participating	39	39

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1111	Participating	39	39
1112	Non-participating	35	34
1113	Non-participating	38	37
1114	Non-participating	42	42
1115	Non-participating	38	38
1116	Non-participating	35	35
1117	Non-participating	43	43
1118	Non-participating	42	42
1119	Non-participating	41	41
1120	Non-participating	37	37
1121	Non-participating	33	33
1122	Non-participating	33	33
1123	Non-participating	36	36
1124	Participating	39	39
1125	Non-participating	40	40
1126	Non-participating	37	37
1127	Non-participating	40	40
1128	Non-participating	36	36
1129	Non-participating	34	34
1130	Non-participating	39	39
1131	Participating	46	45
1132	Non-participating	37	37
1133	Non-participating	38	38
1134	Non-participating	36	36
1135	Non-participating	37	37
1136	Non-participating	44	44
1137	Non-participating	44	44
1138	Non-participating	33	33
1139	Non-participating	39	39
1140	Non-participating	39	39
1141	Non-participating	37	37
1142	Non-participating	35	35
1143	Non-participating	44	44
1144	Non-participating	38	38
1145	Non-participating	36	36
1146	Non-participating	42	42
1147	Non-participating	35	35
1148	Non-participating	43	43
1149	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1150	Non-participating	35	35
1151	Participating	45	45
1152	Participating	36	35
1153	Non-participating	39	39
1154	Non-participating	37	37
1155	Non-participating	40	40
1156	Non-participating	43	43
1157	Non-participating	36	36
1158	Non-participating	44	44
1159	Non-participating	31	31
1160	Non-participating	34	34
1161	Non-participating	37	37
1162	Participating	40	40
1163	Non-participating	29	28
1164	Non-participating	40	40
1165	Non-participating	33	33
1166	Non-participating	38	38
1167	Non-participating	38	38
1168	Non-participating	34	34
1169	Participating	43	43
1170	Non-participating	35	35
1171	Non-participating	44	44
1172	Non-participating	41	41
1173	Non-participating	41	41
1174	Non-participating	44	44
1175	Non-participating	38	39
1176	Non-participating	35	35
1177	Non-participating	43	43
1178	Non-participating	37	37
1179	Non-participating	46	46
1180	Non-participating	34	34
1181	Non-participating	39	39
1182	Non-participating	35	35
1183	Participating	43	43
1184	Non-participating	35	35
1185	Non-participating	41	41
1186	Non-participating	41	41
1187	Non-participating	34	34
1188	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1189	Non-participating	38	38
1190	Non-participating	41	41
1191	Non-participating	40	40
1192	Non-participating	34	34
1193	Non-participating	40	40
1194	Non-participating	37	37
1195	Non-participating	40	40
1196	Non-participating	38	38
1197	Non-participating	40	40
1198	Participating	37	37
1199	Non-participating	34	34
1200	Non-participating	37	37
1201	Non-participating	35	35
1202	Non-participating	35	35
1203	Non-participating	44	44
1204	Non-participating	45	44
1205	Non-participating	35	35
1206	Non-participating	36	36
1207	Non-participating	35	34
1208	Non-participating	35	35
1209	Non-participating	34	34
1210	Non-participating	40	40
1211	Participating	43	43
1212	Non-participating	38	38
1213	Non-participating	34	34
1214	Non-participating	34	34
1215	Non-participating	40	40
1216	Non-participating	32	32
1217	Non-participating	35	35
1218	Non-participating	40	40
1219	Non-participating	40	40
1220	Non-participating	36	36
1221	Non-participating	38	38
1222	Non-participating	30	30
1223	Non-participating	34	34
1224	Non-participating	41	41
1225	Non-participating	38	38
1226	Participating	35	35
1227	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1228	Participating	46	46
1229	Participating	43	43
1230	Non-participating	37	37
1231	Participating	46	45
1232	Non-participating	33	33
1233	Participating	35	35
1234	Participating	39	39
1235	Non-participating	37	37
1236	Participating	45	45
1237	Participating	44	44
1238	Non-participating	40	40
1239	Non-participating	43	43
1240	Participating	45	45
1241	Participating	39	39
1242	Non-participating	43	42
1243	Non-participating	33	33
1244	Participating	38	38
1245	Non-participating	39	39
1246	Non-participating	36	36
1247	Non-participating	32	32
1248	Non-participating	39	39
1249	Non-participating	38	37
1250	Non-participating	35	35
1251	Non-participating	33	33
1252	Non-participating	38	38
1253	Non-participating	41	41
1254	Participating	39	39
1255	Non-participating	34	34
1256	Non-participating	34	33
1257	Non-participating	39	39
1258	Non-participating	37	37
1259	Non-participating	39	39
1260	Non-participating	41	41
1261	Participating	34	34
1262	Non-participating	35	35
1263	Non-participating	37	37
1264	Non-participating	43	42
1265	Participating	43	43
1266	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1267	Non-participating	39	39
1268	Non-participating	37	37
1269	Participating	44	44
1270	Non-participating	36	36
1271	Non-participating	44	44
1272	Non-participating	36	36
1273	Non-participating	38	38
1274	Non-participating	34	34
1275	Non-participating	34	34
1276	Non-participating	40	40
1277	Non-participating	40	40
1278	Non-participating	38	38
1279	Non-participating	39	39
1280	Non-participating	38	38
1281	Participating	36	36
1282	Non-participating	42	42
1283	Non-participating	40	40
1284	Participating	40	39
1285	Participating	42	42
1286	Participating	38	38
1287	Non-participating	35	35
1288	Non-participating	37	37
1289	Non-participating	38	38
1290	Non-participating	40	40
1291	Non-participating	32	32
1292	Participating	38	38
1293	Non-participating	34	34
1294	Participating	37	37
1295	Participating	37	37
1296	Participating	35	35
1297	Non-participating	36	36
1298	Non-participating	33	34
1299	Non-participating	37	37
1300	Participating	43	43
1301	Participating	45	45
1302	Non-participating	40	40
1303	Participating	39	39
1304	Non-participating	36	36
1305	Non-participating	42	42

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1306	Non-participating	44	44
1307	Non-participating	36	36
1308	Non-participating	41	41
1309	Non-participating	43	43
1310	Non-participating	41	41
1311	Non-participating	36	36
1312	Non-participating	39	39
1313	Non-participating	38	38
1314	Non-participating	44	44
1315	Non-participating	40	40
1316	Non-participating	34	34
1317	Non-participating	40	40
1318	Non-participating	38	38
1319	Non-participating	42	42
1320	Non-participating	35	35
1321	Non-participating	39	39
1322	Non-participating	36	36
1323	Non-participating	36	36
1324	Participating	41	41
1325	Non-participating	38	38
1326	Non-participating	34	34
1327	Non-participating	32	32
1328	Non-participating	38	38
1329	Participating	44	44
1330	Non-participating	39	39
1331	Participating	46	46
1332	Non-participating	36	35
1333	Non-participating	33	33
1334	Non-participating	40	40
1335	Non-participating	38	38
1336	Non-participating	34	34
1337	Non-participating	34	34
1338	Non-participating	38	38
1339	Non-participating	37	37
1340	Non-participating	35	35
1341	Non-participating	41	41
1342	Non-participating	31	31
1343	Non-participating	42	42
1344	Non-participating	42	42

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1345	Non-participating	36	36
1346	Non-participating	35	35
1347	Non-participating	36	36
1348	Non-participating	39	39
1349	Participating	36	36
1350	Non-participating	44	44
1351	Non-participating	37	37
1352	Non-participating	37	37
1353	Non-participating	39	38
1354	Participating	37	37
1355	Non-participating	43	42
1356	Non-participating	41	41
1357	Non-participating	36	36
1358	Non-participating	42	42
1359	Non-participating	37	37
1360	Non-participating	39	39
1361	Non-participating	39	39
1362	Non-participating	44	44
1363	Non-participating	36	36
1364	Non-participating	45	45
1365	Non-participating	30	30
1366	Non-participating	44	44
1367	Non-participating	34	34
1368	Non-participating	35	35
1369	Non-participating	35	35
1370	Non-participating	35	35
1371	Non-participating	44	44
1372	Non-participating	41	41
1373	Participating	35	35
1374	Non-participating	36	36
1375	Non-participating	46	46
1376	Non-participating	35	35
1377	Non-participating	43	43
1378	Non-participating	35	35
1379	Non-participating	38	38
1380	Non-participating	42	42
1381	Non-participating	36	36
1382	Non-participating	29	29
1383	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1384	Non-participating	41	40
1385	Non-participating	44	44
1386	Participating	37	37
1387	Non-participating	39	39
1388	Non-participating	34	34
1389	Non-participating	43	43
1390	Non-participating	39	39
1391	Non-participating	34	34
1392	Participating	37	37
1393	Non-participating	32	32
1394	Non-participating	36	36
1395	Non-participating	41	41
1396	Non-participating	43	43
1397	Non-participating	37	37
1398	Non-participating	36	36
1399	Non-participating	37	37
1400	Non-participating	38	38
1401	Non-participating	34	34
1402	Non-participating	35	35
1403	Participating	36	36
1404	Non-participating	38	38
1405	Non-participating	35	35
1406	Participating	46	45
1407	Non-participating	34	34
1408	Non-participating	39	39
1409	Participating	38	38
1410	Non-participating	42	42
1411	Non-participating	41	41
1412	Non-participating	36	36
1413	Participating	36	36
1414	Non-participating	37	37
1415	Non-participating	38	38
1416	Non-participating	35	35
1417	Non-participating	35	35
1418	Non-participating	41	41
1419	Non-participating	32	32
1420	Participating	40	40
1421	Non-participating	38	38
1422	Non-participating	43	43

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1423	Non-participating	38	38
1424	Participating	38	38
1425	Non-participating	40	40
1426	Non-participating	42	42
1427	Non-participating	34	34
1428	Non-participating	39	39
1429	Non-participating	36	36
1430	Non-participating	42	42
1431	Participating	44	44
1432	Non-participating	35	35
1433	Non-participating	40	40
1434	Non-participating	41	41
1435	Non-participating	38	38
1436	Participating	39	39
1437	Non-participating	40	40
1438	Non-participating	42	42
1439	Non-participating	38	38
1440	Non-participating	33	33
1441	Participating	41	41
1442	Participating	43	43
1443	Non-participating	35	35
1444	Non-participating	37	37
1445	Participating	46	46
1446	Non-participating	42	42
1447	Non-participating	31	30
1448	Non-participating	34	34
1449	Non-participating	38	38
1450	Non-participating	35	35
1451	Non-participating	39	39
1452	Participating	40	40
1453	Non-participating	36	36
1454	Non-participating	35	35
1455	Non-participating	39	39
1456	Non-participating	44	44
1457	Non-participating	39	39
1458	Non-participating	42	42
1459	Non-participating	41	41
1460	Non-participating	39	39
1461	Non-participating	42	42

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1462	Non-participating	41	41
1463	Non-participating	41	41
1464	Non-participating	30	31
1465	Non-participating	34	34
1466	Non-participating	37	37
1467	Non-participating	39	39
1468	Participating	43	43
1469	Non-participating	35	35
1470	Non-participating	42	42
1471	Participating	54	54
1472	Participating	43	43
1473	Non-participating	46	46
1474	Non-participating	34	34
1475	Non-participating	36	36
1476	Non-participating	36	36
1477	Non-participating	37	37
1478	Participating	43	43
1479	Non-participating	31	31
1480	Non-participating	36	36
1481	Non-participating	35	35
1482	Non-participating	38	38
1483	Non-participating	40	39
1484	Non-participating	41	41
1485	Non-participating	34	34
1486	Non-participating	40	40
1487	Non-participating	34	34
1488	Participating	42	42
1489	Non-participating	32	32
1490	Non-participating	39	39
1491	Non-participating	39	39
1492	Non-participating	41	41
1493	Non-participating	44	44
1494	Participating	38	38
1495	Participating	46	46
1496	Non-participating	36	36
1497	Non-participating	44	43
1498	Non-participating	35	35
1499	Non-participating	35	35
1500	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1501	Participating	45	45
1502	Non-participating	34	34
1503	Non-participating	33	33
1504	Non-participating	41	41
1505	Non-participating	44	44
1506	Non-participating	30	30
1507	Non-participating	44	44
1508	Non-participating	37	37
1509	Non-participating	42	42
1510	Non-participating	43	43
1511	Non-participating	36	36
1512	Non-participating	34	34
1513	Non-participating	32	32
1514	Non-participating	35	35
1515	Non-participating	44	44
1516	Non-participating	34	34
1517	Participating	38	38
1518	Participating	44	44
1519	Participating	40	40
1520	Non-participating	36	36
1521	Non-participating	35	35
1522	Non-participating	34	34
1523	Non-participating	38	38
1524	Non-participating	40	40
1525	Non-participating	38	38
1526	Participating	45	45
1527	Non-participating	42	42
1528	Non-participating	37	37
1529	Non-participating	41	41
1530	Non-participating	35	35
1531	Participating	43	43
1532	Participating	44	44
1533	Non-participating	41	41
1534	Non-participating	38	38
1535	Non-participating	37	37
1536	Non-participating	35	35
1537	Non-participating	35	35
1538	Participating	47	46
1539	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1540	Non-participating	39	39
1541	Non-participating	44	44
1542	Non-participating	40	40
1543	Non-participating	39	39
1544	Non-participating	34	34
1545	Non-participating	41	41
1546	Non-participating	39	39
1547	Non-participating	35	35
1548	Non-participating	40	40
1549	Participating	46	46
1550	Non-participating	39	39
1551	Non-participating	42	42
1552	Participating	45	45
1553	Non-participating	38	38
1554	Participating	42	42
1555	Non-participating	35	35
1556	Non-participating	36	36
1557	Non-participating	36	36
1558	Non-participating	37	37
1559	Non-participating	39	38
1560	Non-participating	34	34
1561	Non-participating	34	34
1562	Non-participating	40	40
1563	Non-participating	32	32
1564	Non-participating	39	39
1565	Non-participating	32	32
1566	Non-participating	36	36
1567	Participating	44	44
1568	Participating	43	43
1569	Non-participating	37	37
1570	Participating	43	43
1571	Non-participating	37	37
1572	Non-participating	36	36
1573	Non-participating	38	38
1574	Non-participating	34	34
1575	Non-participating	42	42
1576	Non-participating	36	36
1577	Non-participating	40	40
1578	Non-participating	39	38

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1579	Non-participating	38	38
1580	Non-participating	41	41
1581	Non-participating	32	33
1582	Non-participating	35	35
1583	Non-participating	45	45
1584	Non-participating	36	36
1585	Non-participating	44	44
1586	Non-participating	41	41
1587	Non-participating	42	42
1588	Non-participating	40	40
1589	Non-participating	37	37
1590	Non-participating	37	37
1591	Non-participating	44	44
1592	Non-participating	42	42
1593	Non-participating	38	38
1594	Non-participating	39	39
1595	Non-participating	40	40
1596	Non-participating	35	35
1597	Non-participating	35	35
1598	Non-participating	37	37
1599	Participating	37	37
1600	Non-participating	33	33
1601	Non-participating	40	40
1602	Non-participating	45	45
1603	Participating	44	44
1604	Non-participating	34	34
1605	Non-participating	35	35
1606	Non-participating	41	41
1607	Non-participating	46	45
1608	Non-participating	34	34
1609	Non-participating	37	37
1610	Non-participating	37	37
1611	Participating	36	36
1612	Non-participating	36	36
1613	Non-participating	39	39
1614	Non-participating	42	42
1615	Non-participating	37	37
1616	Non-participating	39	39
1617	Non-participating	38	38

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1618	Non-participating	40	40
1619	Non-participating	37	37
1620	Non-participating	42	42
1621	Non-participating	36	35
1622	Non-participating	42	42
1623	Participating	34	34
1624	Non-participating	40	40
1625	Non-participating	38	38
1626	Non-participating	35	35
1627	Non-participating	38	38
1628	Non-participating	37	37
1629	Non-participating	41	41
1630	Non-participating	36	36
1631	Non-participating	42	42
1632	Non-participating	34	34
1633	Non-participating	35	35
1634	Non-participating	38	38
1635	Participating	39	39
1636	Non-participating	38	38
1637	Non-participating	41	41
1638	Non-participating	38	38
1639	Participating	41	41
1640	Participating	38	38
1641	Non-participating	39	39
1642	Non-participating	36	36
1643	Non-participating	41	41
1644	Participating	30	30
1645	Non-participating	35	34
1646	Non-participating	34	34
1647	Non-participating	37	37
1648	Non-participating	43	43
1649	Non-participating	36	36
1650	Non-participating	38	38
1651	Non-participating	39	39
1652	Non-participating	38	38
1653	Participating	47	46
1654	Non-participating	37	37
1655	Non-participating	33	33
1656	Non-participating	41	41

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1657	Non-participating	36	35
1658	Non-participating	34	34
1659	Non-participating	35	35
1660	Non-participating	36	36
1661	Non-participating	40	40
1662	Participating	40	40
1663	Participating	39	39
1664	Participating	34	34
1665	Non-participating	41	41
1666	Participating	44	44
1667	Non-participating	36	36
1668	Non-participating	32	32
1669	Non-participating	34	34
1670	Non-participating	35	35
1671	Non-participating	40	40
1672	Participating	43	43
1673	Non-participating	39	39
1674	Non-participating	43	43
1675	Participating	31	31
1676	Participating	34	34
1677	Participating	32	32
1678	Participating	29	29
1679	Participating	34	34
1680	Participating	31	31
1681	Participating	30	30
1682	Participating	33	33
1683	Participating	30	30
1684	Participating	29	29
1685	Participating	36	36
1686	Participating	31	31
1687	Participating	34	34
1688	Participating	33	33
1689	Participating	34	34
1690	Participating	30	30
1691	Participating	28	28
1692	Participating	35	35
1693	Participating	35	35
1694	Participating	33	33
1695	Participating	35	35

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1696	Participating	31	31
1697	Participating	32	32
1698	Participating	32	32
1699	Participating	29	29
1700	Participating	30	30
1701	Participating	31	31
1702	Participating	33	33
1703	Participating	34	34
1704	Participating	28	28
1705	Participating	34	34
1706	Non-participating	30	30
1707	Non-participating	33	33
1708	Non-participating	30	30
1709	Non-participating	36	36
1710	Non-participating	32	32
1711	Non-participating	30	30
1712	Non-participating	27	27
1713	Non-participating	31	31
1714	Non-participating	34	34
1715	Non-participating	33	33
1716	Non-participating	32	32
1717	Non-participating	31	31
1718	Non-participating	33	33
1719	Non-participating	31	31
1720	Non-participating	30	30
1721	Non-participating	34	34
1722	Non-participating	29	29
1723	Non-participating	32	32
1724	Non-participating	32	32
1725	Non-participating	31	31
1726	Non-participating	28	28
1727	Non-participating	33	33
1728	Non-participating	36	36
1729	Non-participating	34	34
1730	Non-participating	24	24
1731	Non-participating	28	28
1732	Non-participating	31	31
1733	Non-participating	34	34
1734	Non-participating	25	26

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1735	Non-participating	34	34
1736	Non-participating	33	33
1737	Non-participating	33	33
1738	Non-participating	31	31
1739	Non-participating	33	33
1740	Non-participating	31	31
1741	Non-participating	31	31
1742	Non-participating	32	32
1743	Non-participating	29	29
1744	Non-participating	33	33
1745	Non-participating	31	31
1746	Non-participating	35	35
1747	Non-participating	30	30
1748	Non-participating	33	33
1749	Non-participating	33	33
1750	Non-participating	31	31
1751	Non-participating	32	32
1752	Non-participating	28	28
1753	Non-participating	32	32
1754	Non-participating	30	30
1755	Non-participating	33	32
1756	Non-participating	31	30
1757	Non-participating	33	33
1758	Non-participating	29	29
1759	Non-participating	32	32
1760	Non-participating	31	31
1761	Non-participating	35	35
1762	Non-participating	30	30
1763	Non-participating	28	28
1764	Non-participating	37	37
1765	Non-participating	32	32
1766	Non-participating	33	33
1767	Non-participating	33	33
1768	Non-participating	28	29
1769	Non-participating	32	32
1770	Non-participating	34	34
1771	Non-participating	30	30
1772	Non-participating	31	31
1773	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1774	Non-participating	32	32
1775	Non-participating	32	32
1776	Non-participating	32	32
1777	Non-participating	31	31
1778	Non-participating	34	34
1779	Non-participating	35	35
1780	Non-participating	31	31
1781	Non-participating	32	32
1782	Non-participating	33	33
1783	Non-participating	34	34
1784	Non-participating	35	35
1785	Non-participating	32	32
1786	Non-participating	34	34
1787	Non-participating	30	30
1788	Non-participating	32	32
1789	Non-participating	34	34
1790	Non-participating	35	35
1791	Non-participating	32	32
1792	Non-participating	33	32
1793	Non-participating	31	31
1794	Non-participating	30	30
1795	Non-participating	36	36
1796	Non-participating	33	33
1797	Non-participating	31	31
1798	Non-participating	32	32
1799	Non-participating	32	32
1800	Non-participating	30	30
1801	Non-participating	32	32
1802	Non-participating	32	32
1803	Non-participating	28	28
1804	Non-participating	34	34
1805	Non-participating	31	31
1806	Non-participating	34	34
1807	Non-participating	29	29
1808	Non-participating	28	28
1809	Non-participating	32	32
1810	Non-participating	34	34
1811	Non-participating	35	35
1812	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1813	Non-participating	32	32
1814	Non-participating	30	30
1815	Non-participating	33	33
1816	Non-participating	31	31
1817	Non-participating	31	31
1818	Non-participating	32	32
1819	Non-participating	31	31
1820	Non-participating	31	31
1821	Non-participating	32	32
1822	Non-participating	28	28
1823	Non-participating	34	34
1824	Non-participating	34	34
1825	Non-participating	31	31
1826	Non-participating	31	31
1827	Non-participating	30	30
1828	Non-participating	31	31
1829	Non-participating	33	33
1830	Non-participating	35	35
1831	Non-participating	33	33
1832	Non-participating	34	34
1833	Non-participating	33	33
1834	Non-participating	24	24
1835	Non-participating	32	32
1836	Non-participating	34	34
1837	Non-participating	31	31
1838	Non-participating	27	27
1839	Non-participating	28	28
1840	Non-participating	32	32
1841	Non-participating	37	36
1842	Non-participating	30	30
1843	Non-participating	33	33
1844	Non-participating	30	30
1845	Non-participating	35	35
1846	Non-participating	31	31
1847	Non-participating	29	29
1848	Non-participating	33	33
1849	Non-participating	30	30
1850	Non-participating	33	33
1851	Non-participating	29	29

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1852	Non-participating	30	29
1853	Non-participating	36	36
1854	Non-participating	30	30
1855	Non-participating	32	32
1856	Non-participating	30	30
1857	Non-participating	34	34
1858	Non-participating	31	31
1859	Non-participating	31	31
1860	Non-participating	30	30
1861	Non-participating	33	33
1862	Non-participating	35	35
1863	Non-participating	35	35
1864	Non-participating	30	30
1865	Non-participating	30	30
1866	Non-participating	32	32
1867	Non-participating	32	32
1868	Non-participating	32	32
1869	Non-participating	29	29
1870	Non-participating	28	28
1871	Non-participating	35	35
1872	Non-participating	35	35
1873	Non-participating	32	32
1874	Non-participating	30	31
1875	Non-participating	31	31
1876	Non-participating	36	36
1877	Non-participating	30	30
1878	Non-participating	32	31
1879	Non-participating	33	33
1880	Non-participating	35	35
1881	Non-participating	33	33
1882	Non-participating	34	34
1883	Non-participating	31	31
1884	Non-participating	31	31
1885	Non-participating	32	31
1886	Non-participating	31	31
1887	Non-participating	36	36
1888	Non-participating	33	33
1889	Non-participating	27	27
1890	Non-participating	29	29

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1891	Non-participating	26	26
1892	Non-participating	32	32
1893	Non-participating	32	32
1894	Non-participating	30	30
1895	Non-participating	33	33
1896	Non-participating	33	33
1897	Non-participating	31	31
1898	Non-participating	32	32
1899	Non-participating	35	35
1900	Non-participating	32	32
1901	Non-participating	29	29
1902	Non-participating	30	30
1903	Non-participating	31	31
1904	Non-participating	29	29
1905	Non-participating	31	31
1906	Non-participating	36	36
1907	Non-participating	32	32
1908	Non-participating	28	28
1909	Non-participating	34	34
1910	Non-participating	29	29
1911	Non-participating	31	31
1912	Non-participating	33	33
1913	Non-participating	32	32
1914	Non-participating	33	33
1915	Non-participating	34	34
1916	Non-participating	34	34
1917	Non-participating	33	33
1918	Non-participating	33	33
1919	Non-participating	33	33
1920	Non-participating	34	34
1921	Non-participating	32	32
1922	Non-participating	30	30
1923	Non-participating	31	31
1924	Non-participating	32	32
1925	Non-participating	31	31
1926	Non-participating	33	33
1927	Non-participating	33	33
1928	Non-participating	31	31
1929	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1930	Non-participating	33	33
1931	Non-participating	31	31
1932	Non-participating	27	27
1933	Non-participating	32	31
1934	Non-participating	31	31
1935	Non-participating	31	31
1936	Non-participating	33	33
1937	Non-participating	31	31
1938	Non-participating	31	31
1939	Non-participating	31	31
1940	Non-participating	34	34
1941	Non-participating	31	31
1942	Non-participating	32	32
1943	Non-participating	35	35
1944	Non-participating	33	33
1945	Non-participating	31	31
1946	Non-participating	33	33
1947	Non-participating	27	27
1948	Non-participating	31	31
1949	Non-participating	31	31
1950	Non-participating	26	25
1951	Non-participating	31	31
1952	Non-participating	34	34
1953	Non-participating	36	36
1954	Non-participating	32	32
1955	Non-participating	26	26
1956	Non-participating	27	27
1957	Non-participating	30	30
1958	Non-participating	30	30
1959	Non-participating	29	29
1960	Non-participating	35	35
1961	Non-participating	26	26
1962	Non-participating	28	28
1963	Non-participating	30	30
1964	Non-participating	32	32
1965	Non-participating	35	35
1966	Non-participating	34	34
1967	Non-participating	34	34
1968	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
1969	Non-participating	33	33
1970	Non-participating	34	34
1971	Non-participating	34	34
1972	Non-participating	31	31
1973	Non-participating	31	31
1974	Non-participating	29	29
1975	Non-participating	28	28
1976	Non-participating	31	30
1977	Non-participating	29	29
1978	Non-participating	31	31
1979	Non-participating	36	36
1980	Non-participating	35	35
1981	Non-participating	32	32
1982	Non-participating	31	31
1983	Non-participating	30	30
1984	Non-participating	29	29
1985	Non-participating	34	35
1986	Non-participating	30	30
1987	Non-participating	33	33
1988	Non-participating	31	31
1989	Non-participating	31	31
1990	Non-participating	28	28
1991	Non-participating	31	31
1992	Non-participating	32	32
1993	Non-participating	34	34
1994	Non-participating	30	30
1995	Non-participating	31	31
1996	Non-participating	32	32
1997	Non-participating	34	34
1998	Non-participating	34	34
1999	Non-participating	31	31
2000	Non-participating	30	30
2001	Non-participating	31	31
2002	Non-participating	31	31
2003	Non-participating	33	33
2004	Non-participating	32	32
2005	Non-participating	34	34
2006	Non-participating	31	31
2007	Non-participating	32	32

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2008	Non-participating	30	30
2009	Non-participating	34	34
2010	Non-participating	31	30
2011	Non-participating	32	32
2012	Non-participating	30	31
2013	Non-participating	35	35
2014	Non-participating	35	35
2015	Non-participating	29	29
2016	Non-participating	35	35
2017	Non-participating	31	31
2018	Non-participating	33	32
2019	Non-participating	31	31
2020	Non-participating	32	32
2021	Non-participating	25	25
2022	Non-participating	34	34
2023	Non-participating	33	33
2024	Non-participating	31	31
2025	Non-participating	33	33
2026	Non-participating	31	31
2027	Non-participating	26	26
2028	Non-participating	32	32
2029	Non-participating	32	32
2030	Non-participating	33	33
2031	Non-participating	27	27
2032	Non-participating	35	35
2033	Non-participating	35	35
2034	Non-participating	34	34
2035	Non-participating	30	30
2036	Non-participating	30	30
2037	Non-participating	31	31
2038	Non-participating	25	25
2039	Non-participating	33	33
2040	Non-participating	33	33
2041	Non-participating	36	35
2042	Non-participating	26	26
2043	Non-participating	32	32
2044	Non-participating	31	31
2045	Non-participating	31	31
2046	Non-participating	30	30

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2047	Non-participating	33	33
2048	Non-participating	32	32
2049	Non-participating	36	36
2050	Non-participating	26	26
2051	Non-participating	30	30
2052	Non-participating	31	31
2053	Non-participating	37	37
2054	Non-participating	32	32
2055	Non-participating	32	32
2056	Non-participating	30	30
2057	Non-participating	30	29
2058	Non-participating	32	33
2059	Non-participating	26	26
2060	Non-participating	34	34
2061	Non-participating	25	25
2062	Non-participating	32	32
2063	Non-participating	29	29
2064	Non-participating	32	32
2065	Non-participating	33	33
2066	Non-participating	33	33
2067	Non-participating	33	33
2068	Non-participating	34	33
2069	Non-participating	34	34
2070	Non-participating	29	28
2071	Non-participating	32	32
2072	Non-participating	32	32
2073	Non-participating	25	25
2074	Non-participating	33	33
2075	Non-participating	33	33
2076	Non-participating	30	30
2077	Non-participating	33	33
2078	Non-participating	31	31
2079	Non-participating	31	31
2080	Non-participating	32	32
2081	Non-participating	30	30
2082	Non-participating	30	29
2083	Non-participating	30	30
2084	Non-participating	31	31
2085	Non-participating	30	30

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2086	Non-participating	34	34
2087	Non-participating	31	31
2088	Non-participating	26	25
2089	Non-participating	31	31
2090	Non-participating	36	36
2091	Non-participating	33	33
2092	Non-participating	33	33
2093	Non-participating	35	35
2094	Non-participating	30	30
2095	Non-participating	28	27
2096	Non-participating	31	31
2097	Non-participating	33	33
2098	Non-participating	34	34
2099	Non-participating	32	32
2100	Non-participating	31	32
2101	Non-participating	31	31
2102	Non-participating	32	32
2103	Non-participating	35	35
2104	Non-participating	36	36
2105	Non-participating	31	31
2106	Non-participating	26	25
2107	Non-participating	36	36
2108	Non-participating	33	33
2109	Non-participating	33	33
2110	Non-participating	31	31
2111	Non-participating	32	31
2112	Non-participating	31	31
2113	Non-participating	31	31
2114	Non-participating	27	27
2115	Non-participating	31	31
2116	Non-participating	32	32
2117	Non-participating	32	32
2118	Non-participating	35	35
2119	Non-participating	31	31
2120	Non-participating	29	29
2121	Non-participating	32	32
2122	Non-participating	35	35
2123	Non-participating	34	34
2124	Non-participating	26	26

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2125	Non-participating	31	31
2126	Non-participating	33	33
2127	Non-participating	30	30
2128	Non-participating	26	26
2129	Non-participating	35	35
2130	Non-participating	34	34
2131	Non-participating	31	31
2132	Non-participating	33	33
2133	Non-participating	29	29
2134	Non-participating	28	28
2135	Non-participating	32	32
2136	Non-participating	31	31
2137	Non-participating	31	31
2138	Non-participating	34	34
2139	Non-participating	30	30
2140	Non-participating	31	31
2141	Non-participating	27	27
2142	Non-participating	31	31
2143	Non-participating	31	31
2144	Non-participating	31	31
2145	Non-participating	28	28
2146	Non-participating	32	32
2147	Non-participating	35	35
2148	Non-participating	33	33
2149	Non-participating	32	31
2150	Non-participating	34	34
2151	Non-participating	31	31
2152	Non-participating	32	32
2153	Non-participating	24	24
2154	Non-participating	29	29
2155	Non-participating	28	28
2156	Non-participating	31	31
2157	Non-participating	34	34
2158	Non-participating	34	34
2159	Non-participating	33	33
2160	Non-participating	34	34
2161	Non-participating	31	31
2162	Non-participating	35	35
2163	Non-participating	32	32

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2164	Non-participating	31	31
2165	Non-participating	32	32
2166	Non-participating	29	29
2167	Non-participating	35	35
2168	Non-participating	33	33
2169	Non-participating	31	31
2170	Non-participating	33	33
2171	Non-participating	36	36
2172	Non-participating	36	36
2173	Non-participating	31	31
2174	Non-participating	31	31
2175	Non-participating	35	35
2176	Non-participating	31	31
2177	Non-participating	30	30
2178	Non-participating	31	31
2179	Non-participating	33	33
2180	Non-participating	33	33
2181	Non-participating	32	32
2182	Non-participating	33	32
2183	Non-participating	33	33
2184	Non-participating	29	29
2185	Non-participating	31	31
2186	Non-participating	33	33
2187	Non-participating	32	32
2188	Non-participating	31	32
2189	Non-participating	30	30
2190	Non-participating	34	34
2191	Non-participating	32	32
2192	Non-participating	25	25
2193	Non-participating	33	32
2194	Non-participating	34	34
2195	Non-participating	31	31
2196	Non-participating	33	33
2197	Non-participating	31	31
2198	Non-participating	29	28
2199	Non-participating	29	29
2200	Non-participating	35	35
2201	Non-participating	31	31
2202	Non-participating	28	28

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2203	Non-participating	33	33
2204	Non-participating	29	29
2205	Non-participating	30	30
2206	Non-participating	30	30
2207	Non-participating	32	32
2208	Non-participating	35	35
2209	Non-participating	32	32
2210	Non-participating	30	30
2211	Non-participating	31	31
2212	Non-participating	32	32
2213	Non-participating	36	36
2214	Non-participating	32	32
2215	Non-participating	32	32
2216	Non-participating	33	33
2217	Non-participating	32	32
2218	Non-participating	31	31
2219	Non-participating	34	34
2220	Non-participating	36	36
2221	Non-participating	31	31
2222	Non-participating	30	29
2223	Non-participating	31	31
2224	Non-participating	28	28
2225	Non-participating	34	34
2226	Non-participating	29	29
2227	Non-participating	31	31
2228	Non-participating	34	34
2229	Non-participating	33	33
2230	Non-participating	34	34
2231	Non-participating	29	29
2232	Non-participating	32	32
2233	Non-participating	28	28
2234	Non-participating	33	33
2235	Non-participating	33	33
2236	Non-participating	33	33
2237	Non-participating	34	34
2238	Non-participating	27	28
2239	Non-participating	33	33
2240	Non-participating	31	31
2241	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2242	Non-participating	33	32
2243	Non-participating	33	32
2244	Non-participating	31	31
2245	Non-participating	31	31
2246	Non-participating	29	29
2247	Non-participating	25	25
2248	Non-participating	25	25
2249	Non-participating	32	31
2250	Non-participating	33	33
2251	Non-participating	31	31
2252	Non-participating	36	36
2253	Non-participating	31	31
2254	Non-participating	28	28
2255	Non-participating	32	32
2256	Non-participating	32	32
2257	Non-participating	28	28
2258	Non-participating	31	31
2259	Non-participating	28	28
2260	Non-participating	33	33
2261	Non-participating	34	34
2262	Non-participating	35	35
2263	Non-participating	34	34
2264	Non-participating	33	33
2265	Non-participating	32	32
2266	Non-participating	31	31
2267	Non-participating	33	33
2268	Non-participating	32	32
2269	Non-participating	32	32
2270	Non-participating	31	31
2271	Non-participating	29	29
2272	Non-participating	31	31
2273	Non-participating	31	31
2274	Non-participating	27	29
2275	Non-participating	30	30
2276	Non-participating	32	32
2277	Non-participating	28	28
2278	Non-participating	35	35
2279	Non-participating	31	31
2280	Non-participating	32	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2281	Non-participating	32	32
2282	Non-participating	32	32
2283	Non-participating	31	31
2284	Non-participating	31	31
2285	Non-participating	30	30
2286	Non-participating	31	31
2287	Non-participating	31	31
2288	Non-participating	30	30
2289	Non-participating	33	33
2290	Non-participating	31	31
2291	Non-participating	33	33
2292	Non-participating	32	32
2293	Non-participating	32	31
2294	Non-participating	30	30
2295	Non-participating	25	25
2296	Non-participating	32	32
2297	Non-participating	32	32
2298	Non-participating	32	32
2299	Non-participating	31	31
2300	Non-participating	34	34
2301	Non-participating	34	34
2302	Non-participating	36	36
2303	Non-participating	35	35
2304	Non-participating	31	31
2305	Non-participating	24	24
2306	Non-participating	33	33
2307	Non-participating	31	31
2308	Non-participating	36	36
2309	Non-participating	32	32
2310	Non-participating	35	35
2311	Non-participating	34	34
2312	Non-participating	31	31
2313	Non-participating	30	30
2314	Non-participating	33	33
2315	Non-participating	32	32
2316	Non-participating	30	30
2317	Non-participating	29	29
2318	Non-participating	31	31
2319	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2320	Non-participating	32	32
2321	Non-participating	30	30
2322	Non-participating	33	33
2323	Non-participating	28	28
2324	Non-participating	30	30
2325	Non-participating	26	26
2326	Non-participating	31	31
2327	Non-participating	32	32
2328	Non-participating	31	31
2329	Non-participating	31	31
2330	Non-participating	33	33
2331	Non-participating	30	30
2332	Non-participating	33	33
2333	Non-participating	31	31
2334	Non-participating	32	32
2335	Non-participating	35	35
2336	Non-participating	33	33
2337	Non-participating	34	34
2338	Non-participating	32	32
2339	Non-participating	29	29
2340	Non-participating	32	32
2341	Non-participating	31	31
2342	Non-participating	27	27
2343	Non-participating	29	29
2344	Non-participating	31	31
2345	Non-participating	36	36
2346	Non-participating	35	35
2347	Non-participating	30	30
2348	Non-participating	31	31
2349	Non-participating	32	32
2350	Non-participating	31	31
2351	Non-participating	32	32
2352	Non-participating	27	28
2353	Non-participating	36	36
2354	Non-participating	31	31
2355	Non-participating	32	32
2356	Non-participating	31	31
2357	Non-participating	30	29
2358	Non-participating	28	27

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2359	Non-participating	33	33
2360	Non-participating	29	29
2361	Non-participating	32	32
2362	Non-participating	29	29
2363	Non-participating	30	30
2364	Non-participating	31	31
2365	Non-participating	30	30
2366	Non-participating	31	31
2367	Non-participating	29	29
2368	Non-participating	35	35
2369	Non-participating	24	25
2370	Non-participating	31	31
2371	Non-participating	35	35
2372	Non-participating	33	33
2373	Non-participating	31	31
2374	Non-participating	31	31
2375	Non-participating	30	30
2376	Non-participating	31	30
2377	Non-participating	27	27
2378	Non-participating	31	31
2379	Non-participating	30	30
2380	Non-participating	34	34
2381	Non-participating	33	33
2382	Non-participating	34	34
2383	Non-participating	33	33
2384	Non-participating	31	31
2385	Non-participating	30	30
2386	Non-participating	32	32
2387	Non-participating	31	31
2388	Non-participating	36	36
2389	Non-participating	32	32
2390	Non-participating	35	35
2391	Non-participating	31	31
2392	Non-participating	36	36
2393	Non-participating	35	35
2394	Non-participating	32	32
2395	Non-participating	31	31
2396	Non-participating	29	30
2397	Non-participating	29	29

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2398	Non-participating	29	29
2399	Non-participating	31	31
2400	Non-participating	32	32
2401	Non-participating	31	31
2402	Non-participating	31	31
2403	Non-participating	30	30
2404	Non-participating	32	32
2405	Non-participating	32	32
2406	Non-participating	31	31
2407	Non-participating	35	35
2408	Non-participating	27	27
2409	Non-participating	34	34
2410	Non-participating	32	32
2411	Non-participating	33	33
2412	Non-participating	26	27
2413	Non-participating	34	34
2414	Non-participating	31	31
2415	Non-participating	31	31
2416	Non-participating	32	32
2417	Non-participating	30	30
2418	Non-participating	33	33
2419	Non-participating	34	34
2420	Non-participating	34	34
2421	Non-participating	31	31
2422	Non-participating	33	33
2423	Non-participating	27	27
2424	Non-participating	31	31
2425	Non-participating	31	31
2426	Non-participating	32	32
2427	Non-participating	31	31
2428	Non-participating	31	31
2429	Non-participating	26	26
2430	Non-participating	31	31
2431	Non-participating	30	30
2432	Non-participating	35	35
2433	Non-participating	31	31
2434	Non-participating	33	33
2435	Non-participating	31	31
2436	Non-participating	31	32

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2437	Non-participating	31	31
2438	Non-participating	35	35
2439	Non-participating	34	34
2440	Non-participating	33	32
2441	Non-participating	30	30
2442	Non-participating	31	31
2443	Non-participating	32	32
2444	Non-participating	30	30
2445	Non-participating	32	32
2446	Non-participating	32	32
2447	Non-participating	32	32
2448	Non-participating	31	31
2449	Non-participating	35	35
2450	Non-participating	26	26
2451	Non-participating	32	32
2452	Non-participating	36	36
2453	Non-participating	31	31
2454	Non-participating	31	31
2455	Non-participating	32	32
2456	Non-participating	32	32
2457	Non-participating	32	32
2458	Non-participating	31	31
2459	Non-participating	31	31
2460	Non-participating	35	35
2461	Non-participating	31	31
2462	Non-participating	31	31
2463	Non-participating	34	34
2464	Non-participating	29	29
2465	Non-participating	31	31
2466	Non-participating	28	28
2467	Non-participating	30	30
2468	Non-participating	32	32
2469	Non-participating	31	31
2470	Non-participating	34	34
2471	Non-participating	37	37
2472	Non-participating	32	31
2473	Non-participating	31	30
2474	Non-participating	33	33
2475	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2476	Non-participating	30	30
2477	Non-participating	31	31
2478	Non-participating	30	30
2479	Non-participating	33	33
2480	Non-participating	35	35
2481	Non-participating	32	32
2482	Non-participating	33	33
2483	Non-participating	31	31
2484	Non-participating	30	30
2485	Non-participating	29	29
2486	Non-participating	29	29
2487	Non-participating	28	28
2488	Non-participating	33	33
2489	Non-participating	30	30
2490	Non-participating	30	30
2491	Non-participating	32	32
2492	Non-participating	35	34
2493	Non-participating	30	30
2494	Non-participating	33	33
2495	Non-participating	36	36
2496	Non-participating	31	31
2497	Non-participating	33	33
2498	Non-participating	34	34
2499	Non-participating	33	33
2500	Non-participating	32	32
2501	Non-participating	30	30
2502	Non-participating	31	31
2503	Non-participating	27	27
2504	Non-participating	31	31
2505	Non-participating	27	28
2506	Non-participating	34	34
2507	Non-participating	32	32
2508	Non-participating	32	32
2509	Non-participating	32	32
2510	Non-participating	28	29
2511	Non-participating	32	32
2512	Non-participating	32	32
2513	Non-participating	30	30
2514	Non-participating	30	30

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2515	Non-participating	34	34
2516	Non-participating	36	36
2517	Non-participating	30	30
2518	Non-participating	32	32
2519	Non-participating	31	31
2520	Non-participating	29	29
2521	Non-participating	30	30
2522	Non-participating	32	32
2523	Non-participating	33	33
2524	Non-participating	32	32
2525	Non-participating	35	35
2526	Non-participating	33	33
2527	Non-participating	33	33
2528	Non-participating	30	30
2529	Non-participating	29	29
2530	Non-participating	30	30
2531	Non-participating	34	34
2532	Non-participating	30	30
2533	Non-participating	31	31
2534	Non-participating	29	29
2535	Non-participating	33	33
2536	Non-participating	31	31
2537	Non-participating	33	33
2538	Non-participating	33	33
2539	Non-participating	33	33
2540	Non-participating	33	33
2541	Non-participating	32	32
2542	Non-participating	27	27
2543	Non-participating	33	33
2544	Non-participating	35	35
2545	Non-participating	31	30
2546	Non-participating	32	32
2547	Non-participating	30	30
2548	Non-participating	27	27
2549	Non-participating	31	31
2550	Non-participating	36	35
2551	Non-participating	33	33
2552	Non-participating	26	26
2553	Non-participating	27	27

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2554	Non-participating	37	37
2555	Non-participating	31	31
2556	Non-participating	36	36
2557	Non-participating	33	33
2558	Non-participating	32	32
2559	Non-participating	28	28
2560	Non-participating	33	33
2561	Non-participating	36	36
2562	Non-participating	30	30
2563	Non-participating	31	31
2564	Non-participating	33	33
2565	Non-participating	33	33
2566	Non-participating	31	31
2567	Non-participating	33	32
2568	Non-participating	31	31
2569	Non-participating	33	33
2570	Non-participating	30	30
2571	Non-participating	34	33
2572	Non-participating	32	32
2573	Non-participating	31	31
2574	Non-participating	32	32
2575	Non-participating	33	33
2576	Non-participating	33	33
2577	Non-participating	32	32
2578	Non-participating	33	33
2579	Non-participating	32	32
2580	Non-participating	35	35
2581	Non-participating	33	33
2582	Non-participating	26	26
2583	Non-participating	30	30
2584	Non-participating	34	34
2585	Non-participating	29	29
2586	Non-participating	35	35
2587	Non-participating	30	30
2588	Non-participating	34	34
2589	Non-participating	33	33
2590	Non-participating	34	34
2591	Non-participating	32	32
2592	Non-participating	24	24

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2593	Non-participating	32	32
2594	Non-participating	33	33
2595	Non-participating	32	32
2596	Non-participating	33	33
2597	Non-participating	32	32
2598	Non-participating	27	26
2599	Non-participating	30	30
2600	Non-participating	35	35
2601	Non-participating	35	35
2602	Non-participating	29	29
2603	Non-participating	34	34
2604	Non-participating	31	32
2605	Non-participating	28	28
2606	Non-participating	35	35
2607	Non-participating	34	34
2608	Non-participating	33	33
2609	Non-participating	30	30
2610	Non-participating	31	31
2611	Non-participating	30	30
2612	Non-participating	36	36
2613	Non-participating	31	31
2614	Non-participating	33	33
2615	Non-participating	31	31
2616	Non-participating	33	33
2617	Non-participating	30	30
2618	Non-participating	27	28
2619	Non-participating	36	36
2620	Non-participating	34	34
2621	Non-participating	31	31
2622	Non-participating	32	32
2623	Non-participating	35	35
2624	Non-participating	31	31
2625	Non-participating	35	35
2626	Non-participating	34	34
2627	Non-participating	31	31
2628	Non-participating	31	31
2629	Non-participating	30	30
2630	Non-participating	31	31
2631	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2632	Non-participating	34	34
2633	Non-participating	31	31
2634	Non-participating	27	27
2635	Non-participating	32	32
2636	Non-participating	30	30
2637	Non-participating	31	31
2638	Non-participating	30	29
2639	Non-participating	35	35
2640	Non-participating	30	30
2641	Non-participating	27	27
2642	Non-participating	24	25
2643	Non-participating	29	29
2644	Non-participating	33	33
2645	Non-participating	34	34
2646	Non-participating	31	31
2647	Non-participating	35	35
2648	Non-participating	33	33
2649	Non-participating	29	30
2650	Non-participating	31	31
2651	Non-participating	27	27
2652	Non-participating	31	31
2653	Non-participating	31	31
2654	Non-participating	31	31
2655	Non-participating	31	31
2656	Non-participating	28	28
2657	Non-participating	30	30
2658	Non-participating	32	32
2659	Non-participating	36	36
2660	Non-participating	32	31
2661	Non-participating	31	31
2662	Non-participating	33	33
2663	Non-participating	31	31
2664	Non-participating	29	29
2665	Non-participating	31	31
2666	Non-participating	34	34
2667	Non-participating	28	28
2668	Non-participating	31	31
2669	Non-participating	30	30
2670	Non-participating	29	29

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2671	Non-participating	32	32
2672	Non-participating	34	34
2673	Non-participating	35	35
2674	Non-participating	33	33
2675	Non-participating	33	33
2676	Non-participating	32	32
2677	Non-participating	28	29
2678	Non-participating	31	31
2679	Non-participating	31	31
2680	Non-participating	27	27
2681	Non-participating	34	34
2682	Non-participating	29	29
2683	Non-participating	33	33
2684	Non-participating	33	33
2685	Non-participating	31	31
2686	Non-participating	32	32
2687	Non-participating	34	34
2688	Non-participating	30	30
2689	Non-participating	34	34
2690	Non-participating	35	35
2691	Non-participating	33	33
2692	Non-participating	33	33
2693	Non-participating	28	27
2694	Non-participating	34	34
2695	Non-participating	33	33
2696	Non-participating	31	31
2697	Non-participating	26	25
2698	Non-participating	32	32
2699	Non-participating	34	34
2700	Non-participating	33	33
2701	Non-participating	31	31
2702	Non-participating	29	29
2703	Non-participating	32	32
2704	Non-participating	34	34
2705	Non-participating	32	32
2706	Non-participating	35	35
2707	Non-participating	30	30
2708	Non-participating	33	33
2709	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2710	Non-participating	31	31
2711	Non-participating	31	32
2712	Non-participating	31	31
2713	Non-participating	32	31
2714	Non-participating	36	35
2715	Non-participating	33	33
2716	Non-participating	35	35
2717	Non-participating	36	36
2718	Non-participating	31	31
2719	Non-participating	35	35
2720	Non-participating	32	32
2721	Non-participating	28	28
2722	Non-participating	32	32
2723	Non-participating	33	33
2724	Non-participating	29	29
2725	Non-participating	31	31
2726	Non-participating	32	32
2727	Non-participating	26	26
2728	Non-participating	34	34
2729	Non-participating	30	30
2730	Non-participating	35	35
2731	Non-participating	33	33
2732	Non-participating	26	26
2733	Non-participating	28	27
2734	Non-participating	33	33
2735	Non-participating	34	34
2736	Non-participating	33	33
2737	Non-participating	33	33
2738	Non-participating	31	31
2739	Non-participating	27	28
2740	Non-participating	33	32
2741	Non-participating	33	33
2742	Non-participating	32	32
2743	Non-participating	34	34
2744	Non-participating	32	31
2745	Non-participating	33	33
2746	Non-participating	31	31
2747	Non-participating	34	34
2748	Non-participating	31	31

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2749	Non-participating	32	32
2750	Non-participating	31	31
2751	Non-participating	31	31
2752	Non-participating	31	31
2753	Non-participating	35	35
2754	Non-participating	27	27
2755	Non-participating	32	32
2756	Non-participating	35	35
2757	Non-participating	33	33
2758	Non-participating	35	35
2759	Non-participating	36	36
2760	Non-participating	30	31
2761	Non-participating	35	35
2762	Non-participating	28	28
2763	Non-participating	35	35
2764	Non-participating	31	31
2765	Non-participating	34	34
2766	Non-participating	30	30
2767	Non-participating	32	32
2768	Non-participating	27	27
2769	Non-participating	33	33
2770	Non-participating	32	32
2771	Non-participating	33	33
2772	Non-participating	33	33
2773	Non-participating	33	33
2774	Non-participating	28	28
2775	Non-participating	30	30
2776	Non-participating	32	32
2777	Non-participating	34	34
2778	Non-participating	35	35
2779	Non-participating	34	34
2780	Non-participating	33	32
2781	Non-participating	32	32
2782	Non-participating	31	31
2783	Non-participating	34	34
2784	Non-participating	30	29
2785	Non-participating	28	28
2786	Non-participating	30	30
2787	Non-participating	29	29

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2788	Non-participating	33	33
2789	Non-participating	35	35
2790	Non-participating	31	31
2791	Non-participating	30	30
2792	Non-participating	31	31
2793	Non-participating	25	25
2794	Non-participating	30	30
2795	Non-participating	32	32
2796	Non-participating	28	28
2797	Non-participating	31	31
2798	Non-participating	28	28
2799	Non-participating	34	34
2800	Non-participating	33	33
2801	Non-participating	33	33
2802	Non-participating	31	31
2803	Non-participating	31	31
2804	Non-participating	27	27
2805	Non-participating	31	31
2806	Non-participating	31	31
2807	Non-participating	33	33
2808	Non-participating	29	29
2809	Non-participating	35	34
2810	Non-participating	34	34
2811	Non-participating	33	33
2812	Non-participating	28	28
2813	Non-participating	29	29
2814	Non-participating	30	30
2815	Non-participating	31	31
2816	Non-participating	29	29
2817	Non-participating	37	37
2818	Non-participating	29	29
2819	Non-participating	30	29
2820	Non-participating	37	37
2821	Non-participating	27	27
2822	Non-participating	31	31
2823	Non-participating	31	31
2824	Non-participating	28	28
2825	Non-participating	31	31
2826	Non-participating	35	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2827	Non-participating	31	31
2828	Non-participating	35	35
2829	Non-participating	28	28
2830	Non-participating	30	30
2831	Non-participating	30	30
2832	Non-participating	29	29
2833	Non-participating	30	30
2834	Non-participating	35	35
2835	Non-participating	35	35
2836	Non-participating	31	31
2837	Non-participating	28	28
2838	Non-participating	31	31
2839	Non-participating	31	31
2840	Non-participating	29	30
2841	Non-participating	30	30
2842	Non-participating	32	32
2843	Non-participating	31	31
2844	Non-participating	36	36
2845	Non-participating	34	34
2846	Non-participating	30	30
2847	Non-participating	31	31
2848	Non-participating	35	35
2849	Non-participating	31	31
2850	Non-participating	36	36
2851	Non-participating	33	33
2852	Non-participating	28	28
2853	Non-participating	29	29
2854	Non-participating	29	29
2855	Non-participating	32	32
2856	Non-participating	32	31
2857	Non-participating	35	35
2858	Non-participating	32	32
2859	Non-participating	28	28
2860	Non-participating	35	35
2861	Non-participating	34	34
2862	Non-participating	34	34
2863	Non-participating	34	34
2864	Non-participating	32	32
2865	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2866	Non-participating	31	31
2867	Non-participating	28	28
2868	Non-participating	33	33
2869	Non-participating	32	31
2870	Non-participating	31	31
2871	Non-participating	27	27
2872	Non-participating	29	29
2873	Non-participating	32	32
2874	Non-participating	33	33
2875	Non-participating	31	31
2876	Non-participating	33	33
2877	Non-participating	36	36
2878	Non-participating	31	31
2879	Non-participating	32	32
2880	Non-participating	36	36
2881	Non-participating	31	31
2882	Non-participating	31	31
2883	Non-participating	31	32
2884	Non-participating	32	32
2885	Non-participating	30	30
2886	Non-participating	32	32
2887	Non-participating	28	28
2888	Non-participating	31	31
2889	Non-participating	32	32
2890	Non-participating	36	36
2891	Non-participating	35	35
2892	Non-participating	32	32
2893	Non-participating	31	31
2894	Non-participating	32	32
2895	Non-participating	31	31
2896	Non-participating	30	30
2897	Non-participating	35	35
2898	Non-participating	31	31
2899	Non-participating	36	36
2900	Non-participating	27	27
2901	Non-participating	25	25
2902	Non-participating	34	34
2903	Non-participating	30	30
2904	Non-participating	28	28

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2905	Non-participating	31	31
2906	Non-participating	32	32
2907	Non-participating	30	30
2908	Non-participating	31	31
2909	Non-participating	31	31
2910	Non-participating	33	33
2911	Non-participating	32	32
2912	Non-participating	31	31
2913	Non-participating	31	31
2914	Non-participating	33	33
2915	Non-participating	33	33
2916	Non-participating	32	32
2917	Non-participating	31	31
2918	Non-participating	31	31
2919	Non-participating	35	35
2920	Non-participating	33	33
2921	Non-participating	30	30
2922	Non-participating	32	32
2923	Non-participating	35	35
2924	Non-participating	33	33
2925	Non-participating	29	29
2926	Non-participating	33	33
2927	Non-participating	26	25
2928	Non-participating	24	24
2929	Non-participating	32	32
2930	Non-participating	31	31
2931	Non-participating	31	31
2932	Non-participating	31	30
2933	Non-participating	34	34
2934	Non-participating	32	32
2935	Non-participating	32	32
2936	Non-participating	33	33
2937	Non-participating	30	30
2938	Non-participating	35	35
2939	Non-participating	31	31
2940	Non-participating	32	32
2941	Non-participating	32	32
2942	Non-participating	31	31
2943	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2944	Non-participating	30	30
2945	Non-participating	35	35
2946	Non-participating	30	30
2947	Non-participating	32	32
2948	Non-participating	32	32
2949	Non-participating	31	31
2950	Non-participating	34	34
2951	Non-participating	33	33
2952	Non-participating	31	31
2953	Non-participating	31	31
2954	Non-participating	35	35
2955	Non-participating	32	31
2956	Non-participating	31	31
2957	Non-participating	31	31
2958	Non-participating	35	35
2959	Non-participating	31	31
2960	Non-participating	31	31
2961	Non-participating	35	35
2962	Non-participating	35	35
2963	Non-participating	32	32
2964	Non-participating	34	34
2965	Non-participating	31	31
2966	Non-participating	31	31
2967	Non-participating	32	32
2968	Non-participating	35	35
2969	Non-participating	35	35
2970	Non-participating	32	32
2971	Non-participating	32	32
2972	Non-participating	36	36
2973	Non-participating	32	32
2974	Non-participating	37	37
2975	Non-participating	34	34
2976	Non-participating	33	33
2977	Non-participating	31	31
2978	Non-participating	33	33
2979	Non-participating	28	28
2980	Non-participating	35	34
2981	Non-participating	28	28
2982	Non-participating	33	33

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
2983	Non-participating	31	31
2984	Non-participating	32	32
2985	Non-participating	31	31
2986	Non-participating	28	28
2987	Non-participating	28	28
2988	Non-participating	32	32
2989	Non-participating	35	35
2990	Non-participating	34	34
2991	Non-participating	28	28
2992	Non-participating	35	35
2993	Non-participating	29	29
2994	Non-participating	31	31
2995	Non-participating	31	30
2996	Non-participating	30	30
2997	Non-participating	34	34
2998	Non-participating	34	34
2999	Non-participating	27	27
3000	Non-participating	28	28
3001	Non-participating	27	27
3002	Non-participating	32	32
3003	Non-participating	32	32
3004	Non-participating	29	29
3005	Non-participating	35	35
3006	Non-participating	30	29
3007	Non-participating	35	35
3008	Non-participating	32	32
3009	Non-participating	31	31
3010	Non-participating	27	27
3011	Non-participating	32	32
3012	Non-participating	31	31
3013	Non-participating	34	34
3014	Non-participating	33	33
3015	Non-participating	31	31
3016	Non-participating	31	31
3017	Non-participating	31	31
3018	Non-participating	31	31
3019	Non-participating	31	31
3020	Non-participating	34	34
3021	Non-participating	35	35

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3022	Non-participating	35	35
3023	Non-participating	30	29
3024	Non-participating	30	30
3025	Non-participating	29	29
3026	Non-participating	33	33
3027	Non-participating	30	30
3028	Non-participating	34	34
3029	Non-participating	28	28
3030	Non-participating	28	28
3031	Non-participating	29	29
3032	Non-participating	31	31
3033	Non-participating	31	31
3034	Non-participating	29	29
3035	Non-participating	31	31
3036	Non-participating	29	28
3037	Non-participating	35	35
3038	Non-participating	28	28
3039	Non-participating	30	30
3040	Non-participating	24	24
3041	Non-participating	32	32
3042	Non-participating	33	33
3043	Non-participating	33	33
3044	Non-participating	33	33
3045	Non-participating	31	31
3046	Non-participating	30	30
3047	Non-participating	30	30
3048	Non-participating	29	29
3049	Non-participating	32	32
3050	Non-participating	29	29
3051	Non-participating	28	28
3052	Non-participating	30	30
3053	Non-participating	30	29
3054	Non-Participating	36	35
3055	Non-Participating	35	35
3056	Non-Participating	36	36
3057	Non-Participating	36	36
3058	Non-Participating	36	36
3059	Non-Participating	36	36
3060	Non-Participating	36	36

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3061	Non-Participating	36	36
3062	Non-Participating	36	36
3063	Non-Participating	36	36
3064	Non-Participating	36	36
3065	Non-Participating	36	36
3066	Non-Participating	36	36
3067	Non-Participating	36	36
3068	Non-Participating	36	36
3069	Non-Participating	35	35
3070	Non-Participating	36	35
3071	Non-Participating	36	35
3072	Non-Participating	37	36
3073	Non-Participating	36	36
3074	Non-Participating	35	35
3075	Non-Participating	35	35
3076	Non-Participating	35	35
3077	Non-Participating	35	35
3078	Non-Participating	35	35
3079	Non-Participating	35	35
3080	Non-Participating	35	35
3081	Non-Participating	36	36
3082	Non-Participating	36	36
3083	Non-Participating	36	36
3084	Non-Participating	35	35
3085	Non-Participating	35	35
3086	Non-Participating	36	35
3087	Non-Participating	35	35
3088	Non-Participating	34	34
3089	Non-Participating	35	35
3090	Non-Participating	35	34
3091	Non-Participating	35	34
3092	Non-Participating	34	34
3093	Non-Participating	34	34
3094	Non-Participating	34	34
3095	Non-Participating	34	34
3096	Non-Participating	35	35
3097	Church	38	38
3098	Non-Participating	37	37
3099	Church	37	37

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3100	Non-Participating	37	36
3101	Non-Participating	36	36
3102	Non-Participating	37	37
3103	Non-Participating	37	36
3104	Non-Participating	37	37
3105	Non-Participating	36	36
3106	Non-Participating	36	36
3107	Non-Participating	36	36
3108	Non-Participating	34	34
3109	Non-Participating	34	34
3110	Non-Participating	34	34
3111	Non-Participating	34	34
3112	Non-Participating	34	34
3113	Non-Participating	34	34
3114	Non-Participating	34	33
3115	Non-Participating	33	33
3116	Non-Participating	33	33
3117	Non-Participating	33	33
3118	Non-Participating	33	33
3119	Non-Participating	33	33
3120	Non-Participating	33	33
3121	School	32	32
3122	Non-Participating	36	36
3123	Non-Participating	37	37
3124	Non-Participating	35	35
3125	Non-Participating	35	35
3126	Non-Participating	35	35
3127	Non-Participating	35	35
3128	Non-Participating	35	35
3129	Non-Participating	35	34
3130	Non-Participating	34	34
3131	Non-Participating	34	34
3132	Non-Participating	34	34
3133	Non-Participating	34	34
3134	Non-Participating	34	34
3135	Non-Participating	34	34
3136	Non-Participating	34	33
3137	Non-Participating	39	39
3138	Non-Participating	37	37

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3139	Non-Participating	37	37
3140	Non-Participating	36	36
3141	Non-Participating	36	36
3142	Non-Participating	36	36
3143	Non-Participating	34	34
3144	Non-Participating	34	34
3145	Non-Participating	34	34
3146	Church	42	42
3147	Non-Participating	40	40
3148	Church	35	35
3149	Non-Participating	36	36
3150	Church	33	33
3151	Non-participating	35	35
3152	Non-participating	36	36
3153	Non-participating	36	36
3154	Non-participating	35	35
3155	Non-participating	35	35
3156	Non-participating	35	35
3157	Non-participating	41	41
3158	Non-participating	41	41
3159	Church	34	34
3160	Non-participating	35	35
3161	Non-participating	35	35
3162	Participating	35	35
3163	Non-participating	35	35
3164	Non-participating	35	35
3165	Non-participating	36	36
3166	Non-participating	36	36
3167	Non-participating	36	36
3168	Non-participating	36	36
3169	Non-participating	36	36
3170	Non-participating	36	36
3171	Non-participating	36	36
3172	Non-participating	36	36
3173	Non-participating	36	36
3174	Non-participating	37	37
3175	Participating	44	44
3176	Participating	45	45
3177	Non-participating	40	40

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3178	Non-participating	36	36
3179	Non-participating	37	37
3180	Non-participating	35	35
3181	Non-participating	33	33
3182	Non-participating	33	33
3183	Non-participating	34	34
3184	Non-participating	34	34
3185	Non-participating	33	34
3186	Non-participating	35	35
3187	Non-participating	35	35
3188	Non-participating	36	36
3189	Non-participating	40	40
3190	Non-participating	39	39
3191	Non-participating	38	38
3192	Non-participating	39	39
3193	Non-participating	38	38
3194	Non-participating	38	38
3195	Non-participating	36	37
3196	Non-participating	36	36
3197	Non-participating	36	36
3198	Non-participating	37	37
3199	Non-participating	36	36
3200	Non-participating	37	37
3201	Non-participating	36	36
3202	Non-participating	36	36
3203	Non-participating	33	34
3204	Non-participating	36	36
3205	Non-participating	36	36
3206	Non-participating	36	36
3207	Non-participating	36	36
3208	Non-participating	35	35
3209	Non-participating	36	36
3210	Non-participating	35	35
3211	Non-participating	36	36
3212	Participating	36	36
3213	Non-participating	36	36
3214	Non-participating	37	37
3215	Non-participating	36	35
3216	Non-participating	34	34

ID	Receiver Status	N149 5.5/5.7 MW, 105 meter hub height	N149 5.5/5.7 MW, 125 meter hub height
3217	Non-participating	34	34
3218	Non-participating	35	35
3219	Non-participating	35	35
3220	Non-participating	35	35
3221	Non-participating	34	34
3222	Non-participating	34	34
3223	Non-participating	34	35
3224	Non-participating	35	35
3225	Non-participating	34	34
3226	Non-participating	34	34
3227	Non-participating	37	37
3228	Non-participating	35	35
3229	Non-participating	36	36
3230	Non-participating	43	43
3231	Non-participating	38	38
3232	Non-participating	39	39
3233	Non-participating	39	39
3234	Participating	42	42
3235	Non-participating	37	37
3236	Non-participating	38	38

Attachment 5

Capitol Airspace Response to Ohio Department of Transportation Letter February 20, 2020

4814-8600-2869 v1 [59714-18]

/s/ Christine M.T. Pirik
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Capitol Airspace Review
Ohio Department of Transportation February 7, 2020 Letter
to the Ohio Power Siting Board
(Case No. 18-1607-EL-BGN)

On February 7, 2020, the Ohio Department of Transportation (ODOT) rendered a determination for 85 proposed wind turbines that will comprise the Emerson Creek Wind Project currently proposed to be constructed by Firelands Wind, LLC. This determination states that all 85 turbines would exceed 14 CFR Part 77.17 (a)(1) obstruction standards defined in the Code of Federal Regulations. Additionally, 18 turbines would exceed 14 CFR Part 77.17 (a)(2); one turbine would exceed 14 CFR Part 77.17 (a)(3); and 23 turbines would exceed 14 CFR Part 77.17 (a)(4).[1] Due to these exceedances in height, the identified turbines would be deemed obstructions by both ODOT and the Federal Aviation Administration (FAA).

ODOT's determination provides a condition that each of the 18 turbines that were found to be obstructions under 14 CFR Part 77.17 (a)(2) either be removed from the project or reduced in height to "*eliminate the obstruction and its impact to 8G1* [Willard Airport]". Further, ODOT's determination states that if the heights of these 18 turbines were reduced as indicated, "*compliance with the remaining obstruction standards may be waived provided the conditions of the FAA determination are complied with.*"

However, the Ohio Revised Code does not authorize ODOT to regulate structures located outside of the lateral boundaries defined in the civil airport imaginary surfaces and

[1] §77.17 Obstruction standards.
(a) An existing object, including a mobile object, is, and a future object would be, an obstruction to air navigation if it is of greater height than any of the following heights or surfaces:
(1) A height of 499 feet AGL at the site of the object.
(2) A height that is 200 feet AGL, or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport, excluding heliports, with its longest runway more than 3,200 feet in actual length, and that height increases in the proportion of 100 feet for each additional nautical mile from the airport up to a maximum of 499 feet.
(3) A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance.
(4) A height within an en route obstacle clearance area, including turn and termination areas, of a Federal Airway or approved off-airway route, that would increase the minimum obstacle clearance altitude.

specifically listed in §4561.32. These surfaces for the Willard Airport are depicted in Attachment 1 for reference. Attachment 1 also depicts the location of the 18 turbines that ODOT has identified that would need to be removed from the project or lowered in height. It is clear that none of the proposed turbines are located within the boundaries of the clear zone surface, horizontal surface, conical surface, primary surface, approach surface, or transitional surface, which are the surfaces ODOT has authority to regulate. As such, ODOT should have concluded that the proposed turbines would not be obstructions as specified in §4561.32 of the Revised Code.

Even if ODOT had authority to render a determination, it failed to execute its review consistent with the direction provided in the Ohio Revised Code. Specifically, §4561.32 obligates ODOT to base its decision on whether to issue a waiver on sound aeronautical principals, *"as set out in FAA technical manuals, as amended, including advisory circular 150/5300-13, "airport design standards"; 7400.2 c, "airspace procedures handbook,"; and the U.S. terminal procedures handbook."*[2]

ODOT states in its January 7, 2020 letter that:

> *"Our office and the FAA have identified the same impacts of these structures. The difference is that the FAA makes their determination of no hazard based on a "no substantial adverse effect" standard whereas the ORC §4561.34 states "[T]he consideration of safety shall be paramount to considerations of economic or technical factors. In making a determination…the department may consider findings and recommendations of other governmental entities and interested persons…". Based on our independent analysis of the project with respect to 14 CFR Part 77 airspace and the input of the aviation stakeholders, ODOT provides the following determination:"*

The Ohio Revise Code clearly directs ODOT to use sound aeronautical principals in determining whether to issue a waiver from the obstruction standards. Sound aeronautical principals "*as set out in FAA technical manuals*…" is a reference to the rules, practices and regulatory guidelines used by the FAA in conducting its aeronautical study process. It is these

same aeronautical principals that the FAA uses to objectively assess proposed tall structures to determine whether they will pose a hazard to the safety and efficiency of air traffic operations, and used in this case by the FAA to issue Determinations of No Hazard for all 85 proposed turbine locations. ODOT is obligated to use these same aeronautical principals, which not only assess for penetrations of 14 CFR Part 77.17 and 77.19 surfaces, but also include assessing for adverse effect and then consulting with air traffic facilities, the public, FAA NAVAID and radar engineers, spectrum engineers, airport planners, instrument flight procedures design personnel and flight standards personnel. These aviation experts individually and collectively use mathematical models, assess flight trajectories, operational trends, air traffic procedures, and traffic counts to measure safety and efficiency impacts. These studies use standards and methods that are born from operational safety case analyses developed by generations of aviators, air traffic controllers, engineers and scientists.

ODOT's determination appears to rely, in part, on the objection from Willard Airport. However, Willard Airport focuses on potential economic effects of the project on potential expansions or improvements to the Airport. ODOT differentiates its determination from the FAA's determination by relying on the Ohio Revised Code placing safety as a paramount consideration over economic and technical factors, but contrary to the reliance on safety, the Willard Airport objection is solely based on economic factors.

The FAA must ensure that safety is maintained at all times and uses the aeronautical study process to measure and record the effect of obstructions. When the FAA determines that an obstruction will create an adverse effect, it then assesses the significance of the effect. If the effect is deemed to be less than substantial, the FAA will amend procedures to ensure that safety is maintained. When the effect is deemed significant, the FAA will issue a determination of hazard and rely upon local zoning authorities to deny construction permits. This is the "no substantial adverse effect" standard that is the FAA's method for ensuring safety. At no point are economic factors considered in this process.

Using Part 77 Obstruction standards, as ODOT did, as the sole criteria for maintaining safety is arbitrary. Absent a full aeronautical study, like the ones conducted by the FAA, limiting

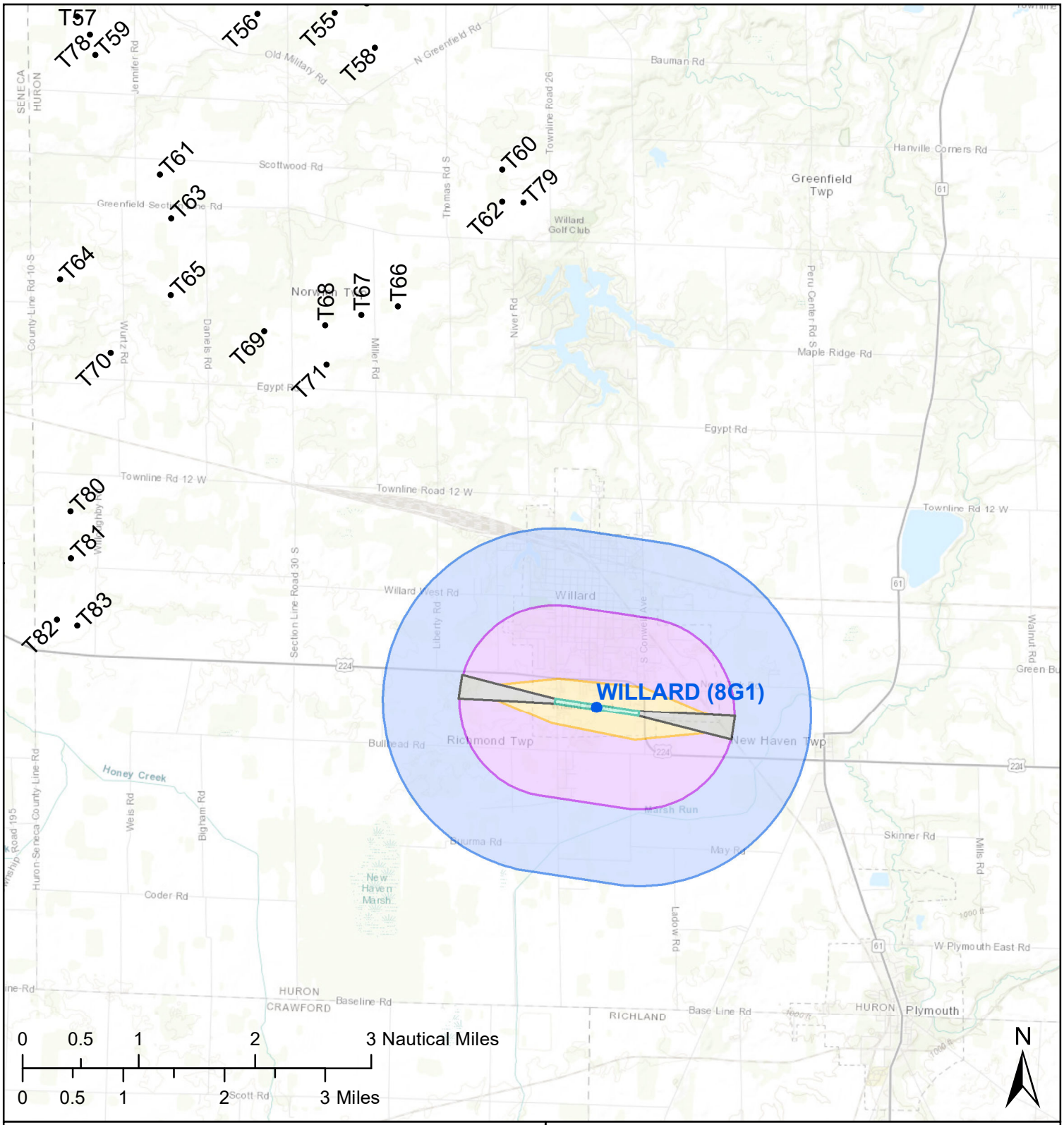
these turbines based on a single obstruction standard does not protect for safety of flight. As the FAA stated in its Determination of No Hazard for the Emerson Creek Project, the exceedance of a 14 CFR Part 77 surface alone does not constitute impact to safety.

A review of the FAA's Determinations of No Hazard shows that consideration was taken by the FAA to ensure the preservation of flight operations while preserving a standard of safety that is not negotiable.

> *"Study for possible VFR effect disclosed that the proposed structures would have no substantial effect on any existing or proposed arrival or departure VFR operations or procedures. Aeronautical study found that the proposed structures would not conflict with airspace required to conduct normal VFR traffic pattern operations at any other known public use or military airport. At 659 feet above ground level, the proposed structures would not have a substantial adverse effect on VFR en route flight operations as a significant volume of VFR operations was not found to be affected and no information was received to indicate they would be located within any known regularly and continuously used VFR routes. There will be no IFR effects as the affected airspace will be adjusted to mitigate the height of the structures and FAA Air Traffic determined this would not have a substantial adverse effect to their operations."*[3]

As outlined in the FAA Determinations, the proposed structures adhere to FAA and ODOT codes, thereby ensuring the project is designed to preserve the continued safe and efficient use of airspace.

[3] Emerson Creek FAA Determination of No Hazard ASN 2018-WTE-11906-OE (Corrected) dated 2/12/2020



Willard (8G1) 14 CFR Part 77.19 Imaginary Surfaces

- Primary Surface
- Transitional Surface
- Approach Surface
- Horizontal Surface
- Conical Surface
- Turbine Location (Labeled with ID)

Emerson Creek Wind Project
14 CFR Part 77.19 Imaginary Surfaces

Plot Date:
20 February 2020

Coordinate System:
NAD 1983 UTM Zone 17N

Nick Lee

Attachment 1

Capitol Airspace Group

This foregoing document was electronically filed with the Public Utilities

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Case No(s). 18-1607-EL-BGN

Summary: Response - Supplemental Response to Seventh Data Request from Staff of the Ohio Power Siting Board electronically filed by Christine M.T. Pirik on behalf of Firelands Wind, LLC