The State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES

Thomas S. Burack, Commissioner

April 26, 2016

Pamela G. Monroe, Administrator
New Hampshire Site Evaluation Committee
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Application of Antrim Wind Energy, LLC
Site Evaluation Committee Docket No. 2015-02

Dear Ms. Monroe:

Please find enclosed the NH Department of Environmental Services (NHDES) progress report that outlines draft permit conditions and additional data requirements needed to make a final decision for the Alteration of Terrain permit, Wetland permit, Subsurface system permit, and the 401 Water Quality Certificate. Final permit decisions and conditions will be issued to the Site Evaluation Committee no later than July 28, 2016.

If you have any questions, please contact me at 271-2951 or email at:
Rene.Pelletier@des.nh.gov

Sincerely,

Rene Pelletier, PG
Assistant Director
Water Division

cc: Michael J. Iacopino, Counsel NHSEC
ec: John B. Kenworth, Applicant
Dana Valleau, TRC
Thomas Burack, Commissioner, NHDES
Clark Freise, Asst. Commissioner, NHDES
Eugene Forbes, Water Division Director, NHDES
David Keddell, ACOE

**ANTRIM WIND PARK, NHSEC DOCKET #2015-02**
**ALTERATION OF TERRAIN BUREAU**
**APRIL 26, 2016 PROGRESS REPORT**

ADDITIONAL DATA REQUIREMENTS:
In order for DES to render a decision on your application, the information below must be addressed in full. DES will make a final determination based upon the information provided in your response.

1. The pre and post-development drainage analysis did not include node listing summaries which totals the flows, areas, volumes, depths, etc. (note that HydroCAD can generate this report for you). Please submit pre and post-development node listing summaries for the 2, 10 and 50-year storm events that includes the summation of all nodes used in the model.
2. The application states that there will be an increase in impervious area by 495,292 square feet; however, the drainage analysis only accounts for an increase of 386,117 square feet of impervious area over the existing conditions. Please explain the discrepancy and revise the analysis if necessary.
3. Rainfall distribution data must be obtained from the Northeast Regional Climate Center and must be used in the drainage analysis (see http://precip.eas.cornell.edu/). Please include a copy of the extreme precipitation table as obtained from the above referenced website, and submit a revised drainage analysis and summary. Also, be sure that any revisions still meet the Channel Protection Requirements of NH Administrative Rule Env-Wq 1507.05, and the Peak Runoff Control Requirements of Env-Wq 1507.06.
4. The proposed bioretention ponds adjacent to the O&M facility do not appear to meet the treatment requirements of Env-Wq 1508.06. Specifically, pretreatment is not provided, the ponding area does not contain 100% of the water quality volume (WQV), and a planting plan was not provided. In addition, the design infiltration rate of the underlying soil shall be determined in accordance with Env-Wq 1504.14. Please include these criteria in the design of the ponds.
5. Provide test pit data in the location of the bioretention ponds to show the estimated seasonal high water table (SHWT) elevations.
6. It appears that some of the fill slopes adjacent to the roadway may require benching pursuant to Env-Wq 1508.19. Please revise the plans accordingly.
7. Due to concerns with blasting near public and private water supply wells, the following items are requested. For further clarification or discussion on these requirements, please contact Brandon Kernen with the DES Drinking Water & Groundwater Bureau at (603) 271-0660, or email at brandon.kernen@des.nh.gov:
   a) If greater than 5,000 cubic yards of blasting is required to complete the project, then please identify drinking water wells located within 2,000 feet of the proposed blasting activities, and develop a groundwater quality sampling program to monitor for nitrate and nitrite either in the drinking water supply wells or in other wells that are representative of the drinking water supply wells in the area.
   b) Please include the required blasting BMP notes on the plans as developed by DES in order to protect water quality. The blasting BMP notes can be found in Attachment A of the following document, which is posted on our website at: http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-10-12.pdf

8. The Natural Heritage Bureau's (NHB) review of the project indicated the presence of Ebony boghaunter and Marsh wren near the project area, which are considered a state species of concern and a rare species, respectively. Please contact Kim Tuttle from the NH Fish & Game Dept. for guidance on how to mitigate the potential project related impacts, and include their recommendations when responding to this letter. Kim can be reached at (603) 271-6544 or email at: Kim.A.Tuttle@wildlife.nh.gov

DRAFT PERMIT CONDITIONS:

PROJECT DESCRIPTION:
Construct an energy generation wind park that will include the construction of 9 wind turbines, a substation, 3.6 miles of gravel access roads with associated stormwater management facilities, an operations/maintenance building, and various crane pads. The total contiguous area of disturbance has been calculated to be 57.1 acres. In addition, approximately 45.8 acres of the disturbed areas will be restored and re-vegetated, including roadway shoulders, side slopes, and portions of the construction pads.

PROJECT SPECIFIC CONDITIONS *(DRAFT)*:
1. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700.
2. Revised plans shall be submitted for an amendment approval prior to any changes in construction details or sequences. The Department must be notified in writing within ten days of a change in ownership.
3. The Department must be notified in writing prior to the start of construction and upon completion of construction. Forms are available at: http://des.nh.gov/organization/divisions/water/aot/categories/forms.htm.
4. The approved plans dated May 1, 2015 and supporting documentation in the file are a part of this approval.
5. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Site Evaluation Committee (SEC).
6. This permit does not relieve the Applicant from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at: http://des.nh.gov/organization/divisions/water/stormwater/construction.htm.
7. All stormwater practices shall be inspected and maintained in accordance with Env-Wq 1507.08 and the project's approved Inspection and Maintenance (I&M) Manual. All record keeping required by the I&M Manual shall be maintained by the identified responsible party, and be made available to the department upon request.
8. The smallest practical area shall be disturbed during construction activities.
9. The permittee shall employ the services of an environmental monitor ("Monitor"). The Monitor shall be a Certified Professional in Erosion and Sediment Control or a Professional Engineer licensed in the State of New Hampshire and shall be employed to inspect the site from the start of alteration of terrain activities until the alteration of terrain activities are completed and the site is considered stable.
10. During this period, the Monitor shall inspect the subject site at least once a week, and if possible, during any ½ inch or greater rain event (i.e. ½ inch of precipitation or more within a

24 hour period). If unable to be present during such a storm, the Monitor shall inspect the site within 24 hours of this event.

11. The inspections shall be for the purposes of determining compliance with the permit. The Monitor shall submit a written report with photographs to the Department within 24 hours of the inspections. The reports shall describe, at a minimum, whether the project is being constructed in accordance with the approved sequence, shall identify any deviation from the conditions of this permit and the approved plans, and identify any other noted deficiencies.
12. The Monitor shall provide technical assistance and recommendations to the Contractor on the appropriate Best Management Practices for Erosion and Sediment Controls required to meet the requirements of RSA 485-A:17 and all applicable DES permit conditions.
13. Within 24 hours of each inspection, the Monitor shall submit a report with photographs to DES via email (to Craig Rennie at: craig.rennie@des.nh.gov and to Jennifer Drociak at: jennifer.drociak@des.nh.gov).
14. Unless otherwise authorized by DES, the contractor shall keep a sufficient quantity of erosion control supplies on the site at all times during construction to facilitate an expeditious (i.e., within 24 hour) response to any construction related erosion issues on the site.
15. For any blasting activities, the contractor shall follow the best management practices contained in Attachment A of the DES document *Rock Blasting and Water Quality Measures That Can Be Taken To Protect Water Quality and Mitigate Impacts*, which is available on the web at: http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-10-12.pdf
16. Unless otherwise authorized by NHDES the Applicant shall prepare a turbidity sampling plan to confirm that measures to control erosion during construction are not causing or contributing to surface water quality violations. The turbidity sampling plan shall include the turbidity monitoring elements specified in the August, 14, 2013 NHDES Inter-Department Communication entitled "Guidance for SWPPPs, BMP Inspection and Maintenance, Turbidity and Sediment Monitoring for NHDOT Projects with 401 Water Quality Certifications" which includes guidance regarding sampling station number and locations, sampling frequency, sampling duration, size of storms that need to be sampled, how soon after the start of precipitation sampling should begin, quality assurance quality control provisions, and turbidity meter specifications. The plan shall be submitted to NHDES for approval at least 90 days prior to construction. The Applicant shall then implement the approved plan. Unless otherwise authorized by DES, the turbidity sampling results along with station ID, date, time, other field notes, and a description of corrective actions taken when violations of state surface water quality criteria for turbidity are found, shall be submitted to NHDES via electronic mail within 48 hours of collection.
17. Unless otherwise authorized by NHDES, the Applicant shall develop and submit a monitoring plan to NHDES Watershed Management Bureau for approval at least 90 days prior to construction. The purpose of the plan is to confirm that operation of the Activity is not causing or contributing to violations of state surface water quality standards and may include pre and post construction monitoring. The plan shall include the parameters to be sampled, the location, timing and frequency of sampling, sampling and laboratory protocols, quality assurance / quality control provisions as well as when data will be submitted to NHDES. The applicant shall consult with NHDES and submit the monitoring data in a format that can be automatically uploaded into the NHDES Environmental Database. Once approved by NHDES, the Applicant shall implement the sampling plan.

18. The Applicant shall prepare and submit a Spill Prevention, Control, and Countermeasures plan (SPCC) for the Activity in accordance with federal regulations (40 CFR part 112). The plan shall include a certification by a Professional Engineer licensed in the State of New Hampshire. The Applicant shall submit the plan to NHDES Watershed Management Bureau for review and approval at least 90 days prior to the installation of the first turbine. The SPCC Plan shall include, but not be limited to, operating procedures to prevent oil spills, control measures installed to prevent oil from entering surface waters, countermeasures to contain, clean up and mitigate the effects of an oil spill, and facility inspections. The Applicant shall then implement the approved plan and maintain records demonstrating compliance with the plan. Such records shall be made available to NHDES within 30 days of receiving a written request by NHDES.
19. The Applicant shall submit a plan to prevent water quality violations due to discharges of concrete wash water during construction. The Applicant shall submit the plan to the NHDES Watershed Management Bureau for review and approval at least 90 days prior to placement of any concrete within the Activity area. The Applicant shall then implement the approved plan.
20. Herbicide use associated with the Activity shall be minimized to the maximum extent possible and shall only be allowed on a limited, as-needed basis in the switchyard and substation areas to control vegetation that could otherwise disrupt operation of the Activity. Herbicides shall only be applied in strict accordance with the manufacturer's recommendations. Unless otherwise authorized by NHDES, the Applicant shall maintain records of herbicide use, including the name and brand of herbicide used, the date herbicides where applied, where they were applied, and the amount used. Such records shall be provided to NHDES within 30 days of receiving a request from NHDES.
21. Unless otherwise authorized by NHDES, fertilizers shall only be applied once on soils disturbed during construction to support the initial establishment of vegetation. Prior to fertilizer application, soils shall be tested to determine the minimum amounts of lime, nitrogen (N), phosphorus (P) and potassium (K) needed to support vegetation. Lime application rates, fertilizer selection (in terms of N ,P and K content) and fertilizer application rates shall be consistent with the soil test results. Fertilizers shall not contain any pesticides. Where possible, fertilizer with slow release nitrogen shall be used.
22. To the maximum extent possible, winter access for maintenance or other purposes shall be accomplished using tracked equipment (i.e., snowmobiles and snowcats). Plowing and/or sanding of roads (including use of sands containing chloride) for winter access shall be minimized to the maximum extent possible, and shall only be allowed when over-snow transport using tracked equipment is not feasible (i.e., such as for the unscheduled maintenance of turbines that require large or heavy component replacement that cannot be transported over-snow). Unless otherwise authorized by NHDES, the Applicant shall maintain records of the dates when chloride was applied, the reason it was applied, and the estimated amount of chloride applied on each date. The Applicant shall submit such records to NHDES by May 1 of the first two years of operation and within 30 days of receiving a request from NHDES thereafter.

**ANTRIM WIND PARK, NHSEC DOCKET #2015-02**
**SUBSURFACE SYSTEMS BUREAU**
**APRIL 26, 2016 PROGRESS REPORT**

ADDITIONAL DATA REQUIREMENTS:
The Subsurface Systems Bureau has reviewed the above referenced Individual Sewage Disposal System (ISDS) application and has determined that the following additional information is needed to clarify and complete it:

1. Provide ledge probes down slope of the proposed system to prove adequate receiving area in accordance with Env-Wq 1006.04(c).
2. In accordance with Env-Wq 1004.14, if an ISDS requires state approvals or permits under other state statutes, DES shall not approve the application until the department receives information confirming other approvals have been obtained. Please provide a copy of the dredge and fill permit and alteration of terrain permit.

NO DRAFT CONDITIONS RECOMMENDED

**ANTRIM WIND PARK, NHSEC DOCKET #2015-02**
**WETLANDS BUREAU APRIL 26, 2016 PROGRESS REPORT**

ADDITIONAL DATA REQUIREMENTS:
In order for DES to render a decision on your application, all of the information requested below must be addressed in full. DES will make a final determination based upon the information provided in your response to this request.

1. Please label each wetland and stream impact on the grading plans in square feet (and linear feet for streams) and provide a distinct hatching or color-coding on the plans to clearly show all wetland impact areas. In addition, the stream ID numbers where not labeled.
2. The plans do not clearly show the location of all temporary erosion controls, particularly where proposed grading is in close proximity to wetlands and surface waters. Please demarcate the location of erosion controls in all locations where necessary to protect water quality and wetland resource areas.
3. The Natural Heritage Bureau's (NHB) review of the project indicated the presence of Ebony boghaunter and Marsh wren near the project area, which are considered a state species of concern and a rare species, respectively. Please contact Kim Tuttle from the NH Fish & Game Dept. for guidance on how to mitigate the potential project related impacts, and include their recommendations when responding to this letter. Kim can be reached at (603) 271-6544 or email at: Kim.A.Tuttle@wildlife.nh.gov
4. The Environmental Protection Agency's (EPA) preliminary review of the application indicated that the project is ineligible for the NH Programmatic General Permit (PGP) as additional information is needed regarding secondary impacts to wetlands. Please coordinate with the EPA and the Army Corps of Engineers regarding secondary impact assessments and provide an update to DES.

DRAFT PERMIT CONDITIONS:

PROJECT DESCRIPTION:
Dredge and fill 9,121 square feet of palustrine wetlands, dredge and fill 156 square feet within an intermittent stream (impacting 156 linear feet), and temporarily impact 60 square feet within a perennial stream (impacting 15 linear feet) to construct an energy generation wind park that will include the construction of 9 wind turbines, a substation, 3.6 miles of gravel access roads, an operations/maintenance building, and various crane pads. In addition, the project includes a proposal to protect 908 acres of undeveloped forestland through the execution of 6 distinct conservation easements, which includes the summit of Willard Mountain.

PROJECT SPECIFIC CONDITIONS *(DRAFT)*:
1. All work shall be in accordance with plans by TRC dated May 1, 2015, as received by the NH Department of Environmental Services (DES) on October 16, 2015.
2. Prior to construction, any plan revisions or changes in construction details or sequences shall be submitted to DES for review and approval.
3. Any further alteration of areas on this property that are within the jurisdiction of the DES Wetlands Bureau will require a new application and further permitting by the Bureau.
4. This permit is not valid unless an Alteration of Terrain permit or other method of compliance with RSA 485-A:17 and Env-Wq 1500 is achieved.

5. This permit is not valid unless a septic system construction approval or other method of compliance with RSA 485-A:29-44 and Env-Wq 1000 is achieved.
6. No construction activities shall occur on the project after expiration of the approval unless the approval has been extended by the New Hampshire Energy Facility Site Evaluation Committee (SEC).
7. Appropriate siltation/erosion/turbidity controls shall be in place prior to construction, shall be maintained during construction, and remain in place until the area is stabilized. Silt fence(s) must be removed once the area is stabilized.
8. Work shall be conducted in a manner so as to minimize turbidity and sedimentation to surface waters and wetlands.
9. Discharge from dewatering of work areas shall be to sediment basins that are: a) located in uplands; b) lined with hay bales or other acceptable sediment trapping liners; c) set back as far as possible from wetlands and surface waters, in all cases with a minimum of 20 feet of undisturbed vegetated buffer.
10. Dredged material shall be placed outside of the jurisdiction of the DES Wetlands Bureau.
11. Stream work shall be done during low flow conditions.
12. Culvert outlets shall be protected in accordance with the DES Best Management Practices for Urban Stormwater Runoff Manual (January 1996) and the Stormwater Management and Erosion and Sediment Control Handbook for Urban and Developing Areas in New Hampshire (August 1992).
13. Proper headwalls shall be constructed within seven days of culvert installation.
14. Within three days of final grading or temporary suspension of work in an area that is in or adjacent to wetlands or surface waters, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tackifiers on slopes less than 3:1 or netting and pinning on slopes steeper than 3:1.
15. Where construction activities occur between November 30 and May 1, all exposed soil areas shall be stabilized within 1 day of establishing the grade that is final or that otherwise will exist for more than 5 days. Stabilization shall include placing 3 inches of base course gravels, or loaming and mulching with tack or netting and pinning on slopes steeper than 3:1.
16. The contractor responsible for completion of the work shall utilize techniques described in the New Hampshire Stormwater Manual, Volume 3, Erosion and Sediment Controls During Construction (December 2008).
17. This project includes the conservation of six parcels for preservation which shall have deeds written for the conservation to run with the land, and both existing and future property owners shall be subject to the conservation restrictions.
18. The plans noting the six conservation parcels with a copy of the final deed language shall be recorded with the Registry of Deeds Office for each appropriate lot. A copy of the recording from the County Registry of Deeds Office shall be submitted to the DES Wetlands Bureau.
19. The six conservation areas shall be surveyed by a licensed surveyor, and marked by permanent monuments.
20. The Wetlands Bureau shall be notified of the placement of the easement monuments to coordinate on-site review of their location.
21. There shall be no removal of the existing vegetative undergrowth within the easement area and the placement of fill, construction of structures, and storage of vehicles or hazardous materials is prohibited.

**ANTRIM WIND PARK, NHSEC DOCKET #2015-02**
**WATERSHED MANAGEMENT BUREAU 401 WATER QUALITY CERTIFICATION**
**APRIL 26, 2016 PROGRESS REPORT**

ADDITIONAL DATA REQUIREMENTS:

None at this time.

DRAFT 401 WATER QUALITY CERTIFICATION CONDITIONS:

The proposed Activity involves the discharge of dredge or fill material into surface waters of the U.S. and, therefore, requires a federal Clean Water Act (CWA) Section 404 (33 U.S.C. 1344) permit from the U.S. Army Corps of Engineers (Corps). In accordance with Section 401 of the CWA (33 U.S.C. 1341) and New Hampshire (NH) statute RSA 485-A: 12, III, the Activity therefore requires a Section 401 Water Quality Certification from the NH Department of Environmental Services (NHDES).

On February 24, 2016, the Corps indicated that the Section 404 general permit (i.e., the New Hampshire Programmatic General Permit or PGP) applies to the proposed Activity. The Corps issues PGPs every five years; the last PGP was issued in 2012. A 401 Water Quality Certification (WQC # 2012-404P-002) for the current PGP was issued by NHDES on August 2, 2012. WQC # 2012-404P-002 is applicable to all activities covered by the PGP. Since the proposed Activity is covered by the PGP, the Applicant for the proposed Activity must comply with the conditions of WQC #2012-404P-002, which are provided below:

> "E-1. Construction or operation of all projects included under the PGP shall meet NH surface water quality standards.
>
> E-2. Applications for projects included under the PGP shall be subject to DES review to determine whether additional conditions or an individual 401 Certification application is necessary to ensure compliance with surface water quality standards.
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> E-3. If DES determines that surface water quality standards are being violated by the specific project or there is reasonable potential to expect that water quality standards will be violated if more project specific conditions are not included in the 401 Certification, DES may modify this 401 Certification for the specific project to include additional conditions to ensure compliance with surface water quality standards.
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> E-4. Construction on any specific project permitted under the PGP shall not commence until all other applicable permits and approvals have been granted, including those permits issued through DES Wetlands Bureau and, if necessary, DES Alteration of Terrain Program.
>
> E-5. All applicable conditions in the NH PGP shall be followed.

E-6. DES reserves the right to inspect any project permitted under the PGP and the effects of the project on affected surface waters at any time to monitor compliance with the NH surface water quality standards."

NHDES has reviewed the information provided by the Applicant and has determined that compliance with WQC #2012-404P-002 issued in 2012, and the conditions for the Alteration of Terrain and Wetlands permits, provides reasonable assurance that construction and operation of the Activity will not violate surface water quality standards[1] .

[1] New Hampshire surface water quality standards are included in statute (RSA 485-A:8) and regulation (Env-Wq 1700).