PRELIMINARY BLASTING PLAN
Copenhagen Wind Farm
Town of Denmark, Lewis County, and Towns of Rutland, Champion, and Watertown, Jefferson County, New York

Assuming bedrock is not ripable with an excavator or able to be broken by pneumatic hammer, blasting of near surface exposed rock and rock removal may then be required for construction of the Copenhagen Wind Farm when bedrock is encountered at depths less than 10 feet below ground surface. Blasted rock or boulders may be broken into a wellgraded mixture of the size recommended by the geotechnical engineer, and utilized in the nearest appropriate location (e.g., access roads).

Although not anticipated, in the event that blasting is necessary, the procedure shall consist of implementing line control to full depth and then the use of controlled blasting techniques in one or more benches to create minimum breakage outside the line control but create maximum rock fragmentation within the target area.

Blasting: If it is determined that blasting is necessary, the final blasting plan shall be submitted to (and approved by) the County, in writing. Blasting shall be performed by a New York State Department of Labor licensed blasting contractor only after approval has been given for such operations and must comply with the following provisions, as well as others established by the appropriate regulatory agencies as set forth below.

A. The contractor or its subcontractor shall use sufficient stemming, matting or natural protective cover to prevent fly rock from leaving property owned or under control of the permittee or operator or from entering protected natural resources or natural buffer strips. Crushed rock or other suitable material must be used for stemming when available. Native gravel, drill cuttings or other material may be used for stemming if no other suitable material is available.

B. The maximum allowable air-blast at any inhabited building not owned or controlled by the developer may not exceed 128 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz.

C. The maximum allowable air-blast at an uninhabited building not owned or controlled by the developer may not exceed 128 decibels peak when measured by an instrument having a flat response (+ or - 3 decibels) over the range of 5 to 200 hertz. Depending on building use (or lack thereof), the allowable air-blast may increase to 140 decibels peak.

D. If a blast is to be initiated by detonating cord, the detonating cord must be covered by crushed rock or other suitable cover to reduce noise and concussion effects.

E. Prior to blasting at each site, a pre-blast survey will be conducted. The pre-blast survey will inspect the blast area, and adjacent areas. The survey will document existing conditions and will include, but not be limited to buildings/structures, water supply wells, utilities (above and below ground). The survey will include written documentation as well as photographic documentation of existing conditions.

F. All blasting shall be monitored with a properly calibrated seismograph. Seismographs shall be installed at the nearest inhabited structure and any other senstive structure agreed to by the County.

G. Storage of explosives, if necessary, shall conform to applicable regulatory requirements, including those contained in Department of Labor Industrial Code Rule 39 (12 NYCRR Part 39)

H. Blasting may not occur in the period between sundown and sunrise of the following day or in the period from 7:00 p.m. to 7:00 a.m., whichever is greater. Blasting shall not be conducted on Sundays or recognized holidays.

I. A record of each blast, including seismographic data, must be kept for at least one year from the date of the last blast by the general contractor, its subcontractor (if appropriate) and developer, and must be available for inspection during normal business hours. The blast record shall contain, at a minimum, the following data:

- Name of blasting company or blasting contractor;
- Location, date and time of blast;
- Name and signature of blaster;
- Type of material blasted;
- Number and spacing of holes and depth of burden or stemming;
- Diameter and depth of holes;
- Type of explosives used;
- Total amount of explosives used;
- Maximum amount of explosives used per delay period of 8 milliseconds or greater;
- Maximum number of holes per delay period of 8 milliseconds or greater;
- Method of firing and type of circuit;
- Direction and distance in feet to the nearest structure (both owned and not owned) by the project developer;

- Weather conditions, including such factors as wind direction and cloud cover;
- Height or length of stemming;
- Amount of mats or other protection used;
- Type of detonators used and delay periods used;
- The exact location of each geophone and the distance of each geophone from the blast;
- Seismographic readings, including peak particle velocity and frequency measured in the horizontal, vertical and longitudinal directions, and air-blast data;
- Name and signature of the person operating each seismograph;
- Names of the person and the firm analyzing the seismographic data, and
- The stratum or structure on which the geophone is located during each blast.

J. At the completion of blasting, a post-blast survey will be conducted of the same facilities (structures, foundations, water supply wells, utilities, etc.) as documented during the pre-blast survey. Findings inconsistent with those reported during the pre-blast survey will immediately be provided to the contractor/subcontractor/developer, and will be documented in writing and photographed. Depending on the nature (and source) of the inconsistency, specific corrective actions will be developed in consultation with the affected party, and will set forth the method, procedures, and timing of implementation.