

# Preliminary Health and Safety Plan

## Cassadaga Wind Farm

January 2016

Approved By \_\_\_\_\_

## Preface

The purpose of this document is to provide all personnel involved in wind farm operations information and regulations required to operate and maintain the wind farm in a safe and efficient manner. In the event of a conflict between this document and another, the more stringent document will prevail.

Any wind turbine specific procedures will be performed in accordance with the Turbine Supplier's associated manuals.

Revision Table:

REV#	Page(s)	Date	Reason

Revisions to:

All site personnel  
Emergency Services  
Turbine Supplier Health  
and Safety (H&S)

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## *Acronyms and Abbreviations*

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APP	Accident Prevention Plan
ACGIH	American Conference of Governmental Industrial Hygienists
ANSI	American National Standards Institute
DOT	Department of Transportation
EAP	Emergency Action Plan
GFCI	Ground Fault Circuit Interrupter
HSM	Health and Safety Manager
HSR	Health and Safety Representative
IDLH	Immediately Dangerous to Life or Health
JSA	Job Safety Analysis
LO/TO	Lockout/Tagout
MHR	Maximum Heart Rate
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PE	Professional Engineer PEL Permissible Exposure Limit
PO	Plant Operator
PPE	Personal Protective Equipment
REL	Recommended Exposure Limits
HSO	Site Health and Safety Officer
SM	Site Manager
SS	Site Supervisor
SSO	Site Safety Officer
SZ	Support Zone
TLV	Threshold Limit Values

**Table 1**  
**Emergency Phone Numbers\***

<b>Contact</b>	<b>Phone Number</b>
Ambulance	911
Fire	911
Police	911
Poison Control	800-222-1222
Hospital Name	Women's Christian Hospital
Hospital Address	207 Foote Ave Jamestown, NY 14702
Hospital Phone Number	(716) 487-0141
O&M Address	TBD
Plant Operator (PO)	TBD
Assistant Plant Operator (PO)	TBD
EverPower Regional Asset Manager	TBD
EverPower Chief Operating Officer	TBD
Site Supervisor (Turbine Supplier)	TBD

Regional HSE Manager (Turbine Supplier) TBD

*\*In the event of any emergency contact Plant Operator (PO) or the Health and Safety Representatives*



## **Figure 1 Hospital Map**

To be Provided

### ***Injury Management/Incident Notification***

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Observe the following injury management/incident notification procedures and practices:

#### ***Injury Management***

Observe the following injury management procedures and practices:

- Once a personal injury incident is discovered the first action will be to ensure the injured party receives appropriate medical attention.
- If it is safe to do so, the nearest workers will immediately assist a person who shows signs of medical distress or who is involved in an accident.
- The work crew supervisor will be summoned. The work crew supervisor will immediately make contact with the PO or other designated individual to alert them of the medical emergency. The work crew supervisor will advise and perform the incident report.
  - Location of the victim at the work site.
  - Nature of the emergency.
  - Whether the victim is conscious.
  - Specific conditions contributing to the injury, if known.
  - Escort the injured person to the occupational clinic or hospital or arrange for ambulance.

#### ***Notification Requirements***

Make the following notifications, in order:

- Contact the PO and H&S Manager
- PO will contact upper line management
- The H&S Manager will facilitate the incident investigation

All client requirements will also be adhered to pertinent to personal injury incident reporting.

#### ***Incident Other Than Personal Injury***

All incidents including fire, explosion, property damage, environmental release etc. will be responded in accordance with the site specific EAP. In general, this includes securing the site appropriate to the incident, turning control over to emergency responders, or securing the site and summoning appropriate remedial personnel or equipment. Cassadaga Wind will immediately notify the required entities of any major work related incident, fire, equipment/

property damage, and environmental incident with a preliminary report. A full report will be provided within 72 hours.

### ***Motor Vehicle Incidents***

All motor vehicle accidents will be reported to the PO, SS, and H&S. H&S will determine whether the motor vehicle incident requires the driver of the vehicle to obtain a drug and alcohol test. In general, all chargeable, at fault accidents will require the operator to submit to a drug and alcohol screening.

## ***1.0 Introduction***

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The policy of Cassadaga Wind is to provide a safe and healthy work environment for all employees. Cassadaga Wind considers no phase of operations or administration to be of greater importance than injury and illness prevention. Safety takes precedence over expediency and shortcuts. Cassadaga Wind believes that all accidents and injuries are preventable. Cassadaga Wind will take every reasonable step to reduce the possibility of injury, illness, or accident.

This Accident Prevention Plan's (APP) objective is to help establish safe working conditions at the site. Safety procedures and protective equipment are chosen according to potential hazards. Specific hazard control methods have been evaluated and selected to minimize the potential of accident or injury.

This Health and Safety Plan (HASP) prescribes the procedures that must be followed during specific site activities. Operational changes that could affect the health and safety of personnel, the community, or the environment will not be made without the prior approval of the Plant Operator (PO) and the Health and Safety Manager (HSM).

The provisions of this plan are mandatory for all personnel and subcontractors assigned to the project. All visitors to the work site must abide by the requirements of this plan. All project participants will attend a pre-job briefing where the contents of this APP will be discussed. Project staff assigned to this project must sign the Agreement and Acknowledgement Sheet (see Appendix A) to confirm that they understand and agree to abide by the provisions of this plan.

All work will comply with the Occupational Safety and Health Act (OSHA) standard and other federal, state, and local procedures that require the development and implementation of a HASP. Generation of this document certifies that the workplace has been evaluated for hazards. A hazard assessment has been performed and the adequacy of the personal protective equipment (PPE) selected was evaluated as required by 29 CFR 1910.132(d) and 1910.134 is duly noted by the signature(s) and date appearing on the cover page of this document.

### ***1.1 Site Description/Background Information***

The Cassadaga Wind Farm is located in the Towns of Stockton, Cherry Creek and Charlotte, Chautauqua County, state of New York. The proposed Wind Farm will consist of up to 62 turbines (WTG) and associated access roads, collection and transmission lines, laydown yards, met towers, and Operations and Maintenance Building

## 1.2 *Scope of Work*

This plan addresses health and safety issues involved with the following tasks:

- Operations and Maintenance of WTGs the associated infrastructure.

## 1.3 *Key Safety Personnel*

Cassadaga Wind will oversee and act accordingly during all phases of the project.

The specific duties of the technical advisors include:

- Providing technical input into the design and implementation of the site HASP
- Advising on potential for worker exposure to project hazards along with appropriate methods and/or controls to eliminate site hazards.

The following people share responsibility for health and safety at the site. See Section 1.3.1 for a description of the role and responsibility of each.

*Plant Operators (Cassadaga Wind)*  
*Operations Site Manager*

*TBD*

(office) TBD  
(cell) TBD

*Assistant Site Manager*

*TBD*

(office) TBD  
(cell) TBD

*Site Supervisor (Turbine*

*Supplier) TBD*

(office) TBD  
(cell) TBD

*Regional HSE Manager (Turbine Supplier)*

*TBD (Turbine Supplier)*

(office) TBD  
(cell) TBD

### *1.3.1 Responsibilities of Key Personnel*

#### *1.3.1.1 Plant Operator*

The PO has authority to direct response operations; the PO assumes total control over site activities. In addition, the PO:

- Prepares and organizes background review of the project, the work plan, and the field team.
- Obtains permission for site access and coordinates activities with appropriate officials.
- Sees that the work plan is properly carried out and on schedule.
- Together with the SS and HSO, sees that health and safety requirements are met.
- Consults with the Health Safety Representative (HSR) regarding unsafe conditions, incidents, or changes in site conditions or the scope of work.
- Ensures Accident/Incident report procedures are followed (see Appendix B).

#### *1.3.1.2 Site Supervisor (Turbine Supplier)*

The Site Supervisor (SS) Reports to the PO, has authority to direct response operations, and assumes control over on-site activities. In addition, the SS:

- Conducts site orientation for new employees
- Conducts weekly safety meetings.
- Executes the work plan and schedule.
- Manages the maintenance operations.
- Enforces safety procedures.
- Coordinates with the HSO in enforcing worker protection levels.
- Notifies, when necessary, local public emergency officials.
- In conjunction with the HSO, responsible for following-up on incident reports to the PO.

### *1.3.1.3 Health and Safety Officer (Turbine Supplier)*

The HSO advises the SS on all aspects of health and safety on site.

### *1.3.1.4 Work Team (Turbine Supplier)*

The Work Team reports to the SS for on-site activities. Work parties must comprise at least two people. In addition, the Work Team:

- Safely completes on-site tasks required to fulfill the work plan.
- Complies with the APP.
- Attends and participates in weekly safety meetings.
- Notifies the SS and HSO of suspected unsafe conditions.
- Reports all incidents to the SS and HSO.

## *1.4 Health and Safety Training Programs*

This Section describes the health and safety training programs that site personnel must comply with.

### *1.4.1 Medical Surveillance*

This program tracks the physical condition of the company's employees in compliance with Safety and Health Administration (OSHA) standards, and other customer requirements. Training

Training requirements and programs will comply with the OSHA General Industry 29 CFR 1910 and Best Management Practices of the craft / trade organization. Training requirements will consist of the following:

- Craft personnel assigned to the site shall be recognized as competent in their field of occupation through education, experience or combination of both.
- Field personnel shall have a minimum of six months' experience or be accompanied by a person with six months of experience.
- Field personnel assigned to site will have first aid/CPR training.
- Personnel involved with Wind Turbine operations will have a rescue from heights certification from an authorized instruction entity.
- If a visitor to the wind farm wishes to ascend a WTG they will only do so if they are accompanied by (2) personnel who are certified to perform rescue from heights operations. In addition, the visitor will review this manual and sign appendix A. They are also required to sign a release from liability wavier (appendix G).

- Other training may be required depending on the task to be performed (e.g., confined space, excavation/trenching, fall protection, and hazard communication). See the Job Safety Analyses (JSA) in Appendix C.

#### **1.4.2 Initial Orientation**

The Initial Health and Safety Orientation will consist of the following:

- All project participants engaged in site operations will attend an initial site orientation where this HASP and the EAP will be reviewed. Personnel will acknowledge having been given the orientation by signing the agreement and acknowledgement form in Appendix A.
- The HASP and EAP shall be provided to local first responders and they will be invited to an initial site orientation. Following the initial site orientation, local first responders shall be invited annually to training and drills on the HASP and EAP

## 2.0 Hazard Analysis

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Job Safety Analyses (JSAs) for specific work tasks will be developed in the field. They will be appropriate for site conditions and will be reviewed during weekly tailgate safety meetings. Any JSAs developed for ongoing operations will be included in Appendix C. See Section 3.1 for general guidelines that are common to most projects.

Any change in the scope of work will require an amendment to this APP. Any task conducted beyond the scope of work identified in this HASP must be evaluated using the JSA process. The Plant Operator (PO) and SS will be responsible for identifying conditions that are beyond the scope of work and communicating to the HSR. The HSRs will work with the PO and SS to develop JSAs or provide guidance in the development of JSAs. JSAs will be reviewed and approved by the HSR and SS by the APP amendment prior to initiating the task. See Appendix B for the JSA format. The completed JSAs must accompany the APP.

A JSA, according to Cassadaga Wind policy, will be completed daily of each tasks by the site supervisor or foreman responsible for the task(s). JSAs are completed in-depth at the beginning of each task identified herein, and for new tasks that develop. However, as the work progresses, the JSAs are modified each day to address changes in work practices, site conditions, process changes, or unusual occurrences. If no modifications are necessary, the JSAs must still be completed, noting such. As work changes can happen at any time, these JSAs may be necessary to be modified more than once a day per task.

The supervisor, foreman, and SSO share the responsibility to review these JSAs with the work crew each day and when JSAs are modified on such days. The JSA procedure allows for signature of work crews, who must sign the bottom form of the JSA for the task that they are working on, acknowledging that they have been briefed. The JSA process is actually the same as a “safe work permit,” where the supervisor or foreman grants permission to work only after the initial assessment of hazards has been made and proper work controls or injury minimization measures have been communicated and understood by affected workers.

Although daily JSAs capture the changes that may occur throughout the project, the changes that are made shall be used to update the initial JSA weekly or bi-weekly. This is important, especially for long-term projects, in that it serves to maintain an up-to-date JSA for reference and/or training/orientation purposes.



Although this APP contains the safety requirements for the identified work tasks, this process is critical to identifying changes in the hazard scenario or identifying new hazards that need to be addressed. If there are any questions regarding this process or assistance is required, contact the local health and safety manager.

## ***2.1 Operational Chemicals***

Hazardous chemicals will be brought on-site for use in activities supporting the planned work. These chemicals are used for fuels in operating equipment, glues for welding pipes, painting, etc. Contractors shall have MSDSs available for any chemical that they bring onsite. The use of operational chemicals is regulated by OSHA under the Hazard Communication Standard (29 CFR 1910.1200). For more detailed and specific information, always refer to the Material Safety Data Sheet (MSDS) or equivalent information for the compound

## ***2.2 Hazard Communication Procedures***

The purpose of hazard communication (Employee Right-to-Know) is to ensure that the hazards of all chemicals located at this field project site are communicated according to 29 CFR 1910.1200 to all Cassadaga Wind personnel and Cassadaga Wind subcontractors. Personnel must follow the hazard communication procedures listed in Section 2.2.1 when handling potentially hazardous chemicals.

### ***2.2.1 Hazard Communication Program***

#### ***2.2.1.1 Container Labeling***

Cassadaga Wind personnel will ensure that all containers are labeled according to contents. These container labels will include those from manufacturers and those produced on site by operations. All incoming and outgoing labels shall be checked for identity, hazard warning, and name and address of responsible party. If operational chemicals are transferred from the original container to a smaller temporary container, the smaller container shall not hold more than what is required for one shift.

#### ***2.2.1.2 Employee Information and Training***

An ongoing corporate training program will train employees on chemical hazards. In addition, chemical hazards will be communicated to employees through weekly safety meetings and by an initial site orientation program. At a minimum, Cassadaga Wind and related subcontractor employees will be instructed on the following:

- Chemicals and their hazards in the work area.
- How to prevent exposure to these hazardous chemicals.
- What the company has done to prevent workers' exposure to these chemicals.

- Procedures to follow if they are exposed to these chemicals.
- How to read and interpret labels and MSDS for hazardous substances found on Cassadaga Wind sites.
- Emergency spill procedures.
- Proper storage and labeling.

## ***3.0 Hazard Identification and Control***

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In addition to the Task-Specific JSAs, Section 3.1 lists the general procedures and practices common to most projects. For additional information, refer to Cassadaga Wind required health and safety procedures or consult with your health and safety professional. A copy of all required Cassadaga Wind Health and Safety Procedures are maintained at the O&M building or can be obtained from the Cassadaga Wind office managing this project. Cassadaga Wind Health and Safety Procedures shall be followed at all times.

### ***3.1 General Hazards and Controls***

#### ***3.1.1 General***

Observe the following general procedures and practices:

- An emergency eyewash unit shall be located at the O&M building and the Substation.
- All on-site activities will be conducted during daylight hours. If work after dusk becomes necessary adequate lighting must be provided.
- Hazardous work, such as handling hazardous materials and heavy loads, and equipment operation, etc., should not be conducted during severe storms.
- All temporary electrical power must have a ground fault circuit interrupter (GFCI) as part of its circuit if the circuit is not part of permanent wiring. All equipment must be suitable and approved for the class of hazard present.

#### ***3.1.2 Incident Reporting***

Observe the following incident reporting procedures and practices:

- All occupational injuries/illnesses, vehicle accidents, and near miss incidents must be reported promptly to the PO and SS and investigated (See Appendix B for incident forms).
- Immediately notify the PO and SS when an incident occurs.
- OSHA form 301 will be filled out within 5 days by the individual
- OSHA form 300 will be filled out with 2 days by the Plant Operator

### **3.1.3 Weekly Safety Meetings**

Weekly safety meetings make accident prevention a top priority for everyone and they make personnel aware of the importance of accident prevention techniques. Observe the following Weekly safety meetings procedures and practices:

- Weekly safety meetings will be held at a date TBD
- Direct Cassadaga Wind subcontractors are required to attend all tailgate meetings.
- The tailgate meeting form in Appendix B will be used to document the meeting.

### **3.1.4 Safety Inspections**

Observe the following safety inspection procedures and practices:

- The SS, with assistance from the HSO, will inspect the site as appropriate and interview one or two site workers regarding areas of safety concerns or ideas for safety improvement.
- Any personnel who identify safety and occupational health deficiencies and will bring them to the attention of the SS and HSO and will suggest corrective measures.
- Formal safety review inspections will be conducted as needed and recorded and filed for reference by project management (see Appendix B for Inspection Checklist). These inspections will be shared by the PO, SS, and HSO. Subcontractor supervisory personnel will be asked to participate in inspections.
- Any deficiencies in the effectiveness of this HASP will be immediately brought to the attention to the PO and HSR and corrected.

### **3.1.5 Slip/Trip/Fall**

Observe the following procedures and practices to prevent slips/trips/fall:

- Inspect each work area for slip/trip/fall potential prior to each work task.
- Slip/trip/fall hazards identified must be communicated to all personnel. Hazards identified shall be corrected or labeled with warning signs to be avoided.
- All personnel must be aware of their surroundings and maintain constant communication with each other at all times.

### **3.1.6 *Underground/Utility Line Contact***

Observe the following underground/utility line contact procedures and practices:

- Color Code yellow; gas, oil or petroleum, red; electric, orange; television, telephone, communication, blue; potable water, green; sanitary sewer, storm sewer, white; proposed area of excavation.
- Contact client or facility owner to have utility lines marked prior to excavation/trenching or drilling.
- Hire a private utility locating service for mark outs on private property. Site drawings or customer interviews provide assistance but should not be solely relied upon.
- Hand dig, probe or use geophysical methods 5 feet down and 5 feet to each side of utility marker to avoid breaking subsurface structures.

### **3.1.7 *Sites Containing Fiber Optic Cables***

Because of the sensitivity of fiber optic cables and the cost of damaging them, the following process, effective immediately, will be adopted as mandatory and as a minimum effort.

1. When a Cassadaga Wind, PO or staff person becomes aware that a site requiring subsurface work contains a fiber optic cable within 50 feet of the outside working boundary, he/she will develop a work plan capable of accomplishing site activities while ensuring that fiber optic cables will not be affected.
2. Any subsurface activities conducted at a site as described in item 1, will require the on-site presence of the PO or a designee as affirmed in writing by the PO.
3. No subsurface work will occur at a site as referred to in item 1, without the owner of the fiber optic cable being present.
4. The fiber optic cable will not be considered located unless a representative of the owner of the fiber optic cable has visited the site, confirmed the location of the cable, and signed the work plan which shall contain a site plan indicating the location(s) of the subsurface work and location of the fiber optic cable.
5. Deviation from any of the above points, items 1 through 4, must be approved by the Plant Operator.

### **3.1.8 Hot Work Procedures**

Before any welding, cutting, grinding, or other hot work is permitted, the area shall be inspected by the SS to ensure that the following requirements have been met:

- Cutting and welding equipment to be used shall be in safe operating condition and in good repair
- Where practical, all combustible material shall be relocated at least 50 feet horizontally from the work site. Where relocation is impractical, combustibles shall be protected with flame-proofed covers or otherwise shielded.
- Remove flammable liquids from the area
- Wear proper PPE
- At a minimum, two fully charged and operable type ABC fire extinguishers.
- Fire watchers shall be required whenever hot work is performed. They will watch the area for 30 minutes after work is performed and follow up check after two hours has passed.
- Obtain a hot work permit from the Plant Operator.

### **3.1.9 Fire Control**

Observe the following fire control procedures and practices:

- Smoke only in designated areas.
- Keep flammable liquids in closed containers.
- Keep site clean; avoid accumulating combustible debris such as paper.
- Follow Hot Work Safety Procedures when welding or performing other activities requiring an open flame.
- Isolate flammable and combustible materials from ignition sources.
- Ensure fire safety integrity of equipment installations according to NEC specifications.

### 3.1.10 Crane Safety

If any type of crane is used for this project, the following guidelines must be adhered to:

- All cranes, cables, and hoists will be operated and maintained according to the manufactures specifications for maintenance, operation, and inspection
- All equipment used for crane operation will be inspected daily, before operations start. A qualified person will make inspections of cables, sleeves and pulleys, boom and boom stops on a regular basis.
- No load will be lifted which exceeds the rated capacity of the crane at the operating boom angle.
- Cranes operated on soft ground will employ the use of mats. Extreme caution should be used when operating near the edge of an excavation.
- Slings should be adequate for the load being lifted. A qualified person will ensure that the proper sling is being used and that it is correctly applied before the lift is made.
- Taglines or guide ropes will be used on loads that are liable to swing or must be guided through a restricted space. Care will be taken to guard against injury to workmen, structures, etc., from swinging loads.
- Cranes will be moved only when directed by a signalman.
- Only qualified crane operators will be allowed to operate cranes.
- The operator will never leave the machine while a load is suspended.
- Power will be cut off and all controls locked before the operator leaves the cab. The boom will be lowered to the ground when leaving the machine overnight.
- A qualified signalman alone gives hand signals to the crane operator to ensure safe and efficient operation, however, a STOP signal can be given by anyone. These signals will be reviewed prior to the site operations and periodically reviewed during this project. Standard hand signals will be used.
- Cranes & their loads must maintain a distance of 10-feet from overhead power lines up to 50 kV & for every kilovolt over an additional 0.4 foot is required
- Cranes will have swing radius protection in place where applicable
- Components will be inspected in accordance with manufacturer's specifications
- A lift plan will be submitted for all critical lifts performed
- Cranes used will have a current annual inspection

- When using a crane, do not use hands when the load is being lifted or lowered. Use non-conductive tag line to help direct and position the load.
- Loads will not be swung over the heads of personnel

### ***3.1.11 Rigging***

The following general rigging safety procedures shall be followed:

- Removal activities on standing vessels over 4 feet from ground execution will not be conducted during periods when the wind is gusting in excess of 20 mph. Wind speed will be obtained from the MET tower.
- Rigging equipment for material handling will be inspected on a daily basis, any equipment determined to be defective will be removed from service.
- Rigging equipment maintenance and use shall be in accordance with manufacturer specifications.
- A positive latching device will be used during hoisting to secure loads.
- Wire rope removed from service due to defects will be marked as unfit for rigging use.
- Safe working loads and classifications of steel wire rope and slings shall be determined by using the manufacturer's rating.
- All loads will be rigged by a Qualified Rigger and Signal Person who is certified per OSHA 29CFR 1926.1400 standards.

### ***3.1.12 Forklift Operations***

Observe the following forklift operation procedures and practices:

- Only qualified personnel may operate a forklift.
- Park the forklift with the forks placed on the ground.
- Do not leave the forklift running if you must get off. Personnel operating forklifts must be certified for the particular fork lift they are operating.
- Operators will be responsible to inspect fork lift before use.
- All powered industrial trucks must be maintained in safe condition.
- Manufacturer specifications will be followed & capacities will be adhered to.
- Alarms & other safety features must be functioning



- Forklifts will not be used to hoist personnel unless it is allowed by manufacturer
- Battery charging areas will be well ventilated to prevent buildup of hydrogen gas

### ***3.1.13 Overhead Utility Line Contact***

Observe the following overhead utility line contact procedures and practices:

- Maintain appropriate distance from overhead utilities:
  - Maintain at least 10 feet from overhead power lines, up to 50 kV. Refer to the site map for overhead collection system locations.
  - If voltage is unknown, remain at least 20 feet from overhead power lines.
- Conduct a daily site inspection to determine where activities will take place and the location of overhead utilities and overhead obstructions. Once identified, place warning tape on poles and/or guy wires and attempt to plan the work so that no contact will be made with the overhead utilities or obstructions. Share the information with the all site personnel. The Plant Operator performs the daily site inspection.
- As a precaution, a spotter will be used at all times during the maintenance phase when near overhead utilities or overhead obstructions. If contact is deemed unavoidable, consult with the plant operator and HSR to evaluate the area to determine if the particular overhead utility or obstruction can be removed prior to engaging in the activity.
- If equipment accidentally comes into contact with an energized overhead line, the equipment operator should stay inside the equipment until the line can be safely de-energized. If the equipment operator must evacuate the equipment (for example, due to fire), he must jump from the equipment and not make contact with the equipment and the ground at the same time.

### ***3.1.14 General Falls/Ladders***

- Assess work areas for fall hazards. A fall protection system is required if work is conducted four feet or over.
- Use construction grade fiberglass ladders rated for 300 pounds.
- Make sure ladder rungs are sturdy and free of cracks.
- Use ladders with secure safety feet.
- Pitch ladders at a 4:1 ratio (rule of thumb).

- Secure ladders at the top or have another person at the bottom to help stabilize it.
- Ladders used to access an upper landing surface shall extend at least three feet above the upper landing surface.
- Use non-conductive ladders near electrical wires.
- The top two steps of a stepladder should not be used as a step & brackets must be fully extended when using.
- Keep three points of contact on ladders.
- Do not carry any object or load that could cause a loss of balance or a fall. Never climb a raised platform or stand on the mid-rail or top-rail.
- Tools should always be hung or put into a belt whenever possible
- Ladders will be inspected for defects. Defective ladders will be removed from service
- Workers will be adequately trained on safe use of ladders, stepladders, etc
- All fall hazards of 4' or more in height must be adequately protected against falls. If possible the fall hazard should be guarded with a guardrail system that consists of a top rail located at 42" (+/- 3") & a mid-rail located at 21" or the approximate middle. The top rail must be capable of supporting a 200 lbs. load without deflecting more than 2". Where the potential for falling objects is present toe boards will be installed.

When work cannot be performed from a protected area or platform and workers are exposed to falls that are greater than four feet then workers must be protected through personal fall arrest or fall restraint. This section will outline the requirements that will be followed.

Workers who are exposed to falls must be properly trained on the requirements of the standard. Subcontractors will be responsible to train their own employees to comply with OSHA's Fall Protection Standard.

### **INSPECTION:**

Prior to each use all personal fall arrest systems must be inspected to assure that they are not defective. This applies to any equipment that is being used for fall restraint. (e.g., retractable lanyards). At minimum equipment must be inspected for:

- Cuts, tears, or abrasions
- Cracks
- Undue stretching
- Mold
- Deterioration
- Distorted hooks or faulty hook springs
- Nonfunctioning parts

- Loose or damaged mountings
- Tongues that don't fit the shoulder of buckles
- Contact with fire, acid, or other corrosives
- Alterations or additions that limit its effectiveness.

## **OTHER REQUIREMENTS FOR PERSONAL FALL ARREST SYSTEMS**

Body belts were prohibited for use after January 1, 1998. OSHA now requires the use of a personal fall arrest system.

Non-locking snap hooks were prohibited for use after January 1, 1998. All lanyards that are used must be equipped with a double-locking snap hook.

All anchor points must be able to **support at least 5,000 pounds per employee attached to it**. It isn't permissible to anchor personnel to a guardrail, hoist, or anything that cannot support 5000lbs per employee.

Anchorage points must be positioned so that the free fall distance is less than six feet.

When using retractable lanyards, the anchorage points must be positioned so that the anchorage point is behind the worker or above them. This will help avoid the pendulum effect.

### ***3.1.15 Heavy Equipment Operations***

Observe the following heavy equipment operations procedures and practices:

- Wear gloves while attaching support members to protect against pinching injuries.
- While working from elevated levels greater than four feet, ensure that all employees have 100% fall protection i.e. full body harnesses or guardrails.
- Do not stand under loads that are being raised or lowered with cranes.
- The subcontractor must conduct pre-operational inspections of all equipment. In addition, daily inspections will be conducted on the equipment prior to site activities.
- Always stay out of the swing radius of all heavy equipment. Always use a spotter during movement of equipment. The spotter and others, as appropriate, shall maintain constant communication with the operator.
- All operators must have adequate training and be qualified to operate the particular heavy equipment unit.
- Conduct site evaluation to determine proper positioning for the unit. Make sure surface is level. Cordon off holes, drop-offs, bumps or weak ground surfaces.

- Equipment used must have functioning back-up alarms
- Cab glass will not be cracked or otherwise damaged

### **3.1.16 Electric Shock**

Observe following procedures and practices to prevent electric shock:

- Use ground-fault circuit interrupters as required i.e. wet locations.
- Perform lockout/tag out (LO/TO) procedures.
- Use three-pronged plugs and extension cords.
- Contact your local underground utility-locating service.
- Follow code requirements for electrical installations in hazardous locations.
- Always use qualified electricians to install electrical equipment and when conducting troubleshooting activities within 10 feet of exposed live wires.
- All live panels will have covers in place for protection against accidental contact
- Unused knock out openings or unused breaker openings will be protected with plugs or blanks
- Flexible cord assemblies will have proper strain relief

### **3.1.17 Hand and Power Tools**

Observe the following procedures and practices when working with hand and power tools:

- Keep hand tools in good working condition.
- Worn tools are dangerous: e.g., the “teeth” in a pipe wrench can slip if worn smooth; an adjustable wrench will slip if the jaws are sprung; hammer heads can fly off loose handles.
- Tools subject to impact (chisels, star drills, and caulking irons) tend to “mushroom.” Keep them dressed to avoid flying spalls. Use tool holders.
- Don't force tools beyond their capacity. No “homemade” handles or extensions (cheaters) are permitted!
- Flying objects can result from operating almost any power tool, so always warn people in the vicinity and use proper eye protection.
- Each power tool should be examined before use for damaged parts, loose fittings, and frayed or cut electric cords. Tag and return defective tools for repairs. Inspect also for adequate lighting, proper lubrication, and abandoned tools or material that could “vibrate into trouble.”

- LO/TO procedures must be followed prior to making tool adjustments.
- Proper guards or shields must be installed on all power tools before use. Do not use improper tools or tools without guards in place.
- Replace all guards before start-up. Remove cranks, key, or wrenches used in service work.

### **3.1.18 Physical Injury**

Observe the following procedures and practices to avoid physical injuries:

- Hard hats and safety glasses are required PPE. They will be on before you step out of your vehicle when on the wind farm.
- Maintain visual contact with the equipment operator and wear an orange safety vest when heavy equipment is used on-site or when adjacent to or in roadways.
- Avoid loose-fitting clothing.
- Prevent slips, trips and falls—keep work area uncluttered.
- Keep your hands away from moving parts.

### **3.1.19 Vehicular Traffic**

Observe the following procedures and practices regarding vehicular traffic:

- Wear traffic safety vest when vehicle hazard exists.
  - Use cones, flags, barricades, and caution tape to define work area.
  - Use vehicle to shield work area.
  - Engage police detail for high-traffic situations.
  - Always use a spotter in tight or congested areas for material deliveries. Certified flaggers will be used for traffic control & work zones will meet Manual on Uniform Traffic Control Devices MUTCD requirements
- **Vehicular Speed Limits**
    - Project personnel and visitors will strictly observe any speed limits posted within the Project boundaries. In the absence of posted speed limits all Project personnel and visitors will observe a speed limit of 20 mph. Wildlife is present throughout the site and roads are not fenced to exclude wildlife from crossing them. While driving, Project personnel and visitors should be alert for wildlife and extra attention and caution should be paid during low visibility conditions to avoid collisions with wildlife.

### 3.1.20 *Noise*

Observe the following procedures and practices regarding noise:

- Wear hearing protection whenever it is necessary to speak above normal conversational speech due to loud noise—this much noise indicates the need for protection.
- Hearing protection will be required when noise levels exceed 85 dBA

### 3.1.21 *Lifting and Material Handling*

Observe the lifting and material handling procedures and practices:

- Use gloves when handling metal, wire rope, sharp debris, or transporting materials (wood, piping, etc.).
- The size, shape, and weight of the object to be lifted must first be considered. No individual employee is permitted to lift any object that weights over 50 pounds. Multiple employees or mechanical lifting devices are required for objects over the 50-pound limit.
- Plan a lift before doing it. Bend at the knees and lift with the legs; keep the natural curves of the back; do not use back muscles.
- Check route for clearance.
- Use the buddy system when lifting heavy or awkward objects.
- Do not twist body while lifting.
- Know the capacity of any handling device (crane, forklift, chainfall, come-along) that you intend to use.
- Use tag lines to control loads.
- Ensure that your body, material, tools, and equipment are safe from such unexpected movement as falling, slipping, rolling, tripping, bowing, or any other uncontrolled motion.
- Trucks (i.e., flat beds) hauling equipment or materials must not be moved once rigging has been released.
- Chock all material and equipment (such as pipe, drums, tanks, reels, trailers, and wagons) as necessary to prevent rolling.
- Tie down all light, large-surface-area material that might be moved by the wind.
- When working at heights, secure tools, equipment, and wrenches against falling.
- Do not store materials or tools on lighting fixtures, beam flanges, or similar elevated locations.

- Fuel-powered tools (e.g., generators or pressure washers) used inside buildings or enclosures shall be vented and checked for excessive noise

### ***3.1.22 Static Electricity/Transfer of Flammable Liquids***

Observe the following procedures and practices regarding static electricity when transferring flammable liquids:

- Do not create static discharge in flammable atmosphere.
- Electrically bond and ground pumps, transfer vessels, tanks, drums, bailers, and probes when moving flammable liquids.
- Electrically bond and ground vacuum trucks and the tanks they are emptying.
- Do not splash fill containers with flammable liquids.
- Pour flammable liquids slowly and carefully.
- Two Class B - fire extinguishers must be available, charged, inspected, and ready.

### ***3.1.23 Equipment Maintenance***

Maintenance and repair activities should only be performed by qualified trained technicians. It is important to take a time out for safety with your maintenance personnel before commencing any routine maintenance or repair work on your project site. In addition, all equipment must have maintenance "manuals" on-site and are to be reviewed as part of the JSA.

At a minimum, consider the following bullet items<sup>1</sup>.

- A responsible or lead person should be designated if more than one individual is performing the maintenance activity.
- The lead person should be responsible for directing the activities, reviewing JSAs, retaining the lock out / tag out or ignition keys, and being aware of where people are at all times, etc.
- The owner's manual should be consulted to properly identify the problem and to ensure that the proper steps are included in the development of the JSA
- The lead person should involve all support personnel in the development of the JSA.

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<sup>1</sup> Things to consider when developing or reviewing the JSA: JSA's are provided in Appendix C

- Ensure that all hood, cowl or maintenance compartment doors have positive locking mechanisms for the open position.
- Observe all appropriate Cassadaga Wind and manufacturer lock out / tag out (LO/TO) procedures.
- Be aware that some equipment components may have substantial stored energy (springs, capacitors, pumps, etc.) that if not properly de-energized could cause serious injury
- Take the keys out of the ignition switch before commencing maintenance activities; they should be retained by the lead person
- Ensure that all persons are properly accounted for prior to closing any maintenance compartments, shifting loads, re-energizing, re-starting or moving the equipment
- Only use proper tools, cranes and lifting devices; a lift plan may be required
- Do not allow anyone to work under a suspended load; it should be blocked appropriately
- Inspect all slings and cables prior to performing the task
- Fall protection may be required on some equipment

### **3.1.24 Insects/Spiders**

Observe the following procedures and practices regarding insects/spiders:

- Tuck pants into socks.
- Wear long sleeves.
- Use insect repellent.
- Avoid contact by always looking ahead to where walking, standing, sitting, leaning, grabbing, lifting, or reaching into.
- Check for signs of insect/spider bites, such as redness, swelling, and flu-like symptoms.

### **3.1.25 Ticks**

Observe the following procedures and practices regarding ticks:

- Do not detach a tick with bare fingers—bacteria from a crushed tick may be able to penetrate even unbroken skin. Use fine-tipped tweezers.
- Grip the tick as close to skin as possible and gently pull it straight away from until it releases its hold.



- Do not twist the tick as when pulling; do not squeeze its bloated body. Doing so may inject bacteria into your skin.
- Thoroughly wash hands and the bite area with soap and water. Then apply an antiseptic to the bite area.
- Save the tick in a small container with the date, the location of the bite on your body, and the probable location of initial contact with the tick.
- Notify the SHO of any tick bites as soon as possible.

### **3.1.26 *Poisonous Snakes***

Observe the following procedures and practices regarding poisonous snakes:

- Avoid walking in areas where snakes may nest or hide. When walking, always look ahead for signs of snakes.
- Use extreme caution when moving or lifting objects that could be used by snakes as cover.
- Never reach under or behind objects or into other areas where snakes may hide.
- Poisonous snakebites are medical emergencies—seek immediate medical treatment.
- Wear sturdy leather boots.

### **3.1.27 *Poisonous Plants***

Poisonous plants include poison ivy, poison oak, and poison sumac. Observe the following procedures and practices regarding poisonous plants.

- Avoid entering areas infested with poisonous plants.
- Immediately wash any areas that come into contact with poisonous plants.
- Use PPE when there is possibility of contact with poisonous plants.

### **3.1.28 *Heat Stress***

Observe the following general procedures and practices regarding heat stress:

- Increase number of rest breaks and/or rotate workers in shorter work shifts.
- Watch for signs and symptoms of heat exhaustion and fatigue.
- During hot months, plan work for early morning or evening.
- Use ice vests when necessary.
- Rest in cool, dry areas.

### 3.1.28.1 *Signs, Symptoms, and Treatment*

Adverse climatic conditions are important considerations in planning and conducting site operations. High ambient temperature can result in health effects ranging from transient heat fatigue, physical discomfort, reduced efficiency, personal illness, increased accident probability, etc., to serious illness or death. Heat stress is of particular concern when chemical protective garments are worn since they prevent evaporative body cooling. Wearing personal protective equipment places employees at considerable risk of developing heat stress.

Heat stress is caused by a number of interacting factors, including environmental conditions, clothing, workload, and the individual characteristics of the worker. Because heat stress is probably one of the most common (and potentially serious) illnesses, regular monitoring and other preventive precautions are vital.

***Heat Rash.*** Heat rash can be caused by continuous exposure to hot and humid air and skin abrasion from sweat soaked clothing. The condition is characterized by a localized red skin rash and reduced sweating. Aside from being a nuisance, the ability to tolerate heat is reduced. To treat, keep skin hygienically clean and allow it to dry thoroughly after using chemical protective clothing.

***Heat Cramps.*** Heat cramps are caused by profuse perspiration with inadequate electrolytic fluid replacement. This often robs the larger muscle groups (stomach and quadriceps) of blood which can cause painful muscle spasms and pain in the extremities and abdomen. To treat, remove employee to a cool place and give sips of water or an electrolytic drink. Watch for signs of heat exhaustion or stroke.

***Heat Exhaustion.*** Heat exhaustion is a mild form of shock caused by increased stress on various organs to meet increased demand to cool the body. Onset is gradual and symptoms should subside within one hour. Its symptoms include weak pulse; shallow breathing; pale, cool, moist skin; profuse sweating; dizziness; fatigue. To treat, remove employee to a cool place and remove as much clothing as feasible. Give sips of water or electrolytic solution and fan the person continuously to remove heat by convection. Do not allow the affected person to become chilled—treat for shock if necessary.

***Heat Stroke.*** Heat stroke is the most severe form of heat stress; the body must be cooled immediately to prevent severe injury or death. *This is a medical emergency!* Symptoms include red, hot, dry skin; body temperature of 105° Fahrenheit or higher; no perspiration; nausea; dizziness and confusion; strong, rapid pulse. Since heat stroke is a true medical emergency, transport the victim to a medical facility immediately. Prior to transport, remove as much clothing as feasible and wrap the victim in a sheet soaked with water. Fan

vigorously while transporting to help reduce body temperature. Apply cold packs, if available; place under the arms, around the neck, or any other place where they can cool large surface blood vessels. If transportation to a medical facility is delayed, reduce body temperature by immersing victim in a cool water bath (however, be careful not to over-chill the victim once body temperature is reduced below 102° F). If this is not possible, keep victim wrapped in a sheet and continuously douse with cool water and fan.

### ***3.1.28.2 Prevention***

The implementation of preventative measures is the most effective way to limit the effects of heat-related illnesses. During periods of high heat, adequate liquids must be provided to replace lost body fluids. Replacement fluids can be a 0.1 percent salt water solution, a commercial mix such as Gatorade, or a combination of these with fresh water. The replacement fluid temperature should be kept cool, 50° F to 60° F, and should be placed close to the work area. Employees must be encouraged to drink more than the amount required to satisfy thirst. Employees should also be encouraged to salt their foods more heavily during hot times of the year.

Cooling devices such as vortex tubes or cooling vests can be worn beneath impermeable clothing. If cooling devices are worn, only physiological monitoring will be used to determine work activity.

All workers are to rest when any symptoms of heat stress are noticed. Rest breaks are to be taken in a cool, shaded rest area. Employees shall remove chemical protective garments during rest periods and will not be assigned other tasks.

All employees shall be informed of the importance of adequate rest and proper diet including the harmful effects of excessive alcohol and caffeine consumption.

### ***3.1.29 Heavy Equipment Cleaning***

Observe the following heavy equipment cleaning procedures and practices:

- Wear modified Level D protection, including a face shield and safety goggles.
- Ensure that other personnel are out of the area prior to cleaning.
- Ensure that safe work practices and precautions are taken to minimize the potential for physical injury from high-pressure water spray.
- The pressure washer wand must be equipped with a safety release handle.
- Remove loose debris from heavy equipment prior shipping off site.

### **3.1.30 Ice Hazards**

Icing conditions are arguably one of the most hazardous situations encountered on the wind farm. Ice falling from the tower has the potential to be fatal and to cause serious damage to equipment underneath the tower.

Observe the following procedures when an icing condition is suspected.

Stay clear of the tower, especially in the downwind direction.

- Verify that no ice exists on the blades/tower with binoculars. If it is nighttime wait until daylight to verify. **DO NOT APPROACH THE TOWER AT NIGHT IF YOU ARE UNSURE ABOUT ICE ACCUMULATION.**

### **3.1.31 Bird/Bat Carcass**

You may encounter a bird or bat carcass in the vicinity of the wind turbine. The carcass should not be touched and its location must be reported to the site manager.

## ***4.1 Personal Protective Equipment (PPE)***

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The minimum level of PPE should be selected according to the hazards that may be encountered during site activities. Only PPE that meets the following American National Standards Institute (ANSI) standards are to be worn. At a minimum, all workers will wear the following protection while working on the site:

- Eye protection - ANSI Z87
- Head protection - ANSI Z89
- Foot protection - ANSI Z41
- Traffic vest in high traffic areas and around heavy equipment and roadways.

In addition, any work performed inside the Wind Turbine Generator requires the following:

- Fall Protection equipment - ANSI Z359

Perform Fall Protection PPE Inspection IAW checklist in appendix B

### ***4.1.1 Project Specific Equipment***

See Table 2 for PPE requirements for sites; see Table 3 for task-specific level requirements. Level D is the minimum acceptable level for sites. Upgrade to Modified Level D occurs when there is a possibility that contaminated media can contact the skin or work uniform. Wear hearing protection when there are high noise levels. Workers must maintain proficiency in the use and care of PPE that is to be worn.

### ***4.1.2 Arc Flash Required Equipment***

See Table 4 for Arc Flash required PPE; the ARC Flash study was performed by (to be determined). This was an in depth analysis of our specific site and related equipment. From this analysis each level of exposed potential danger was classified and subsequent protection was determined based on the NFPA 70e ratings and requirements. All personnel must adhere to these requirements if working or switching with-in the classified radius as indicated in Table 4.

### ***4.1.3 Lock Out / Tag Out (LO/TO)***

LO/TO procedures will be followed during all required activities. Turbine specific LO/TO procedures are available through Turbine Supplier. If work is to be performed in the down tower electrical cabinet and a suitable LO/TO point is not available, it is the Site Supervisors responsibility to notify the PO that the WTG transformer must be disconnected and grounded out. Refer to Appendix E for Switching checklists

**Table 2**  
**Personal Protection Equipment**

Level	Requirements
Category 2 (1.2 cal/cm <sup>2</sup> – 8 cal/cm <sup>2</sup> )	Arc-rated long-sleeve shirt and pants rated at 8 cal/cm <sup>2</sup> Safety glasses with side shields Class E or G hard hat Electrical gloves EH rated safety boots Balaclava Arc-rated face shield Hearing protection
Category 3 (8.1 cal/cm <sup>2</sup> – 25 cal/cm <sup>2</sup> )	Category 2 PPE, plus: Arc-rated PPE 3 equipment (arc-rated hood, pants and jacket, no balaclava required)
Category 4 (25.1 cal/cm <sup>2</sup> – 40 cal/cm <sup>2</sup> )	Category 2 PPE, plus: Arc-rated PPE 4 equipment (arc-rated hood, pants and jacket, no balaclava required)

Face shield, goggles, metatarsal/leg guards for high pressure washing.

*Prior to using, all equipment must be inspected to ensure proper working condition.*

**Table 3**  
**Task Specific PPE Summary**

**Job Task**

Maintenance operations of Wind Turbine generators\*

\*Fall protection equipment required

Table 4

**Arc Flash Personal Protection Equipment Required (to be determined)**

<b>Location / Device</b>	<b>Device Voltage</b>	<b>Based on the NFPA 70e ARC Flash Category</b>	<b>ARC Flash Boundary (IN)</b>

## **5.0 Site Control/Communications**

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### **5.1 Site Control**

To prevent the public or unauthorized personnel from entering turbine areas, each work area will be clearly identified using signs or physical barriers.

A log of all personnel visiting, entering, or working on the site shall be maintained by the PO. Visitors will attend a site orientation given by the PO or SS.

The following are standard safe work practices that apply to all site personnel; they will be discussed in the safety briefing prior to initiating work on the site:

- During site operations, each worker will consider himself as a safety backup to his partner. Off-site personnel will provide emergency assistance.
- A positive means of communication must be maintained between buddies on-site when performing hazardous duties. i.e. radio, cell phone, tapping hub cage
- All personnel must comply with established safety procedures. Any staff member who does not comply with safety policy, as established by the PO, will be immediately dismissed from the site.

At the conclusion of the workday the SS shall update Cassadaga Wind via e-mail the status of personnel. i.e. on site with turbine # or off site.

### **5.2 Field Communications**

Communications between all Cassadaga Wind employees and subcontractors at the work site can be verbal and/or non-verbal. Verbal communication can be affected by the on-site background noise and various PPE. Communication equipment must be checked daily to ensure proper operation. All project personnel must be initially briefed on the communication methods prior to starting work; communication methods should be reviewed in Weekly Tailgate Safety Meetings.



**Table 5**  
**Field Communication Methods**

Communication Device	Type of Communications	Signal
Telephone On-Site or Cellular Telephone	Emergency notification	Initiate phone call using applicable emergency numbers
Two-way Radio	Emergency notification among site personnel	Initiate radio communication with Code Red message
Visual	Hailing site personnel for distress, need help	Arms waved in circle overhead
Visual	Hailing site personnel for emergency evacuation	Arms waved in criss-cross over head

## ***6.0 Emergency Response and Contingency Plan***

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### ***6.1.1 EAP***

- Refer to Cassadaga Wind EAP for emergency situations

### ***6.1.2 Spill or Release of Hazardous Materials***

A contingency plan should exist for the following situations related to a spill or release of hazardous materials:

- Refer to Cassadaga Wind SPCC plan

*Appendix A*  
*Safety Plan Acknowledgement Form*



***Appendix B***  
***H&S Site Logs and Forms***

# Cassadaga Wind FALL PROTECTION INSPECTION SHEET

Employee Name:

Cor. J. > any:

(!) OK- No Defects Found      (X) Defects Found      (N/A) Not Applicable

DATE

<b>Lanvards</b>	<b>Serial Number:</b>
Number of Tag(s)	
Excessive Wear of	
Reduction of Rope Diameter	
Heat Damage	
Corrosion	
Stitching	
1 hooks/links	
Shock absorber	
Broken cut fibers or stitches	
Rotting or	
<b>Serial Number:</b>	
Number of Tag(s)	
Excessive Wear D-Rings	
Heat Damage	
Corrosion	
Stitching	
Lea Strap Buckles	
Chest strap Buckle	
Broken cut fibers or stitches	
Rotting or	
<b>Serial Number:</b>	
Number of Tag(s)	
Excessive Wear of	
Reduction of Rope Diameter	
Heat Damage	
Corrosion	
1 hooks/ links	
Broken cut fibers or stitches	
Rotting or	
<b>Serial Number:</b>	
Number of Tag(s)	
Corrosion	
1 hooks/links	

APPROVED CONTINUED SERVICE Y/N

COMMENTS:

*Project Safety Inspection Report*

YES NO N/A

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

FIRST AID

- 1. Are first aid kit locations identified and accessible? \_\_\_\_\_
- 2. Are emergency eye wash/safety showers available and inspected monthly? \_\_\_\_\_
- 3. Is a qualified first aid/CPR provider on site? \_\_\_\_\_

PERSONAL PROTECTIVE EQUIPOENT

- 1. Have levels of personnel protection been established? \_\_\_\_\_
- 2. Is defective personal protective equipment tagged and taken out of service? \_\_\_\_\_
- 3. Are there sufficient sizes and quantities of protective equipment? \_\_\_\_\_
- 4. At a minimum, are employees utilizing safety glasses, hard hats, and steel toe boots? \_\_\_\_\_

FIRE PREVENTION

- 1. Are employees smoking only in designated outdoor areas? \_\_\_\_\_
- 2. Are fire lanes established and maintained? \_\_\_\_\_
- 3. Are approved safety cans available for storage of flammable liquids? \_\_\_\_\_
- 4. Has the local fire department been contacted? \_\_\_\_\_
- 5. Are fire extinguishers available and inspected monthly? \_\_\_\_\_
- 6. Are flammables and combustibles properly stored? \_\_\_\_\_
- 7. Are flammable storage cabinets available and used when needed? \_\_\_\_\_

HAND AND POWER TOOLS

- 1. Are defective hand and power tools tagged and taken out of service? \_\_\_\_\_
- 2. Is eye protection available and used when operating power tools? \_\_\_\_\_
- 3. Are guards and safety devices in place on power tools? \_\_\_\_\_
- 4. Are power tools inspected before each use? \_\_\_\_\_
- 5. Are nonsparking tools available when necessary? \_\_\_\_\_
- 6. Is the correct tool being used for the job? \_\_\_\_\_

MOTOR VEHICLES

- 1. Are vehicles regularly inspected? \_\_\_\_\_
- 2. Are personnel licensed for the vehicles they operate? \_\_\_\_\_
- 3. Are unsafe vehicles tagged and reported to supervision? \_\_\_\_\_
- 4. Is vehicles safety equipment operating properly? \_\_\_\_\_

*Project Safety Inspection Report*

YES NO N/A

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

- 5. Are loads secure? \_\_\_\_\_
- 6. Are vehicle occupants using safety belts? \_\_\_\_\_
- 7. Are current insurance cards and blank accident report forms located in vehicles? \_\_\_\_\_

EMERGENCY PLANS

- 1. Are emergency telephone numbers posted? \_\_\_\_\_
- 2. Have emergency escape routes been designated? \_\_\_\_\_
- 3. Are employees familiar with the emergency signal? \_\_\_\_\_
- 4. Has the emergency route to the hospital been established and posted? \_\_\_\_\_
- 5. Is a vehicle on site that can transport injured employees to the hospital? \_\_\_\_\_

FIRE PROTECTION

- 1. Do employees know the location and use of all fire extinguishers? \_\_\_\_\_
- 2. Are fire extinguisher locations posted? \_\_\_\_\_
- 3. Are combustible materials segregated from open flames? \_\_\_\_\_
- 4. Have fire extinguishers been professionally inspected during the last year? \_\_\_\_\_
- 5. Are fire extinguishers visually inspected monthly? \_\_\_\_\_

ELECTRICAL

- 1. Is electrical equipment and wiring properly guarded and maintained in good condition? \_\_\_\_\_
- 2. Are extension cords kept out of wet areas? \_\_\_\_\_
- 3. Is damaged electrical equipment tagged and taken out of service? \_\_\_\_\_
- 4. Have underground electrical lines been identified by proper authorities? \_\_\_\_\_
- 5. Has a lockout/tagout system been established? \_\_\_\_\_
- 6. Are GFCIs being used on all temporary electrical systems and as needed? \_\_\_\_\_
- 7. Are extension cords being inspected daily (i.e., group in place, no unapproved splices)? \_\_\_\_\_
- 8. Are warning signs exhibited on high voltage equipment (250V or greater)? \_\_\_\_\_
- 9. Is adequate distance maintained from overhead electrical lines? \_\_\_\_\_
- 10. Are switches, circuit breakers, and switchboards installed in wet locations enclosed \_\_\_\_\_  
\_\_\_\_\_ in  
weatherproof enclosures?

CRANES AND RIGGING

- 1. Are cranes inspected daily prior to use? \_\_\_\_\_



*Project Safety Inspection Report*

YES NO N/A

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

- 2. Are crane swing areas barricaded or demarked? \_\_\_\_\_
- 3. Is all rigging equipment tagged with an identification number and rated capacity? \_\_\_\_\_
- 4. Is rigging equipment inspection documented? \_\_\_\_\_
- 5. Are slings, chains, and rigging inspected before each use? \_\_\_\_\_
- 6. Are damaged slings, chains, and rigging tagged and taken out of service? \_\_\_\_\_
- 7. Are slings padded or protected from sharp corners? \_\_\_\_\_
- 8. Do employees keep clear of suspended loads? \_\_\_\_\_
- 9. Are rated load capacities and special hazard warnings posted on crane? \_\_\_\_\_
- 10. Are the records of annual crane inspection available? \_\_\_\_\_
- 11. Has accessible areas within the swing radius of the rear of the crane been barricaded? \_\_\_\_\_
- 12. Do crane operators have required training/certification? \_\_\_\_\_

COMPRESSED GAS CYLINDERS

- 1. Are breathing air cylinders charged only to prescribed pressures? \_\_\_\_\_
- 2. Are like cylinders segregated and stored in well ventilated areas? \_\_\_\_\_
- 3. Is smoking prohibited in cylinder storage areas? \_\_\_\_\_
- 4. Are cylinders stored secure and upright? \_\_\_\_\_
- 5. Are cylinders protected from snow, rain, etc.? \_\_\_\_\_
- 6. Are cylinder caps in place before cylinders are moved? \_\_\_\_\_
- 7. Are fuel gas and oxygen cylinders stored a minimum of 20 feet apart? \_\_\_\_\_
- 8. Are propane cylinders stored and used only outside of buildings? \_\_\_\_\_

WALKING AND WORKING SURFACES

- 1. Are ladders regularly inspected? \_\_\_\_\_
- 2. Are accessways, stairways, ramps, and ladders clean of ice, mud, snow, or debris? \_\_\_\_\_
- 3. Are ladders being used in a safe manner? \_\_\_\_\_
- 4. Are ladders kept out of passageways, doors, or driveways? \_\_\_\_\_
- 5. Are broken or damaged ladders tagged and taken out of service? \_\_\_\_\_
- 6. Are metal ladders prohibited in electrical service? \_\_\_\_\_
- 7. Are stairways and floor openings guarded? \_\_\_\_\_
- 8. Are safety feet installed on straight and extension ladders? \_\_\_\_\_
- 9. Is general housekeeping being maintained? \_\_\_\_\_

*Project Safety Inspection Report*

YES NO N/A

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

- 10. Are ladders tied off? \_\_\_\_\_
- 11. Are handrails and siderails installed along the unprotected sides of stairways having 4 or more risers or rising more than 30 inches? \_\_\_\_\_

SITE SAFETY PLAN

- 1. Is a site safety plan available on site or accessible to all employees? \_\_\_\_\_
- 2. Does the safety plan accurately reflect site conditions and tasks? \_\_\_\_\_
- 3. Have potential hazards been described to employees on site? \_\_\_\_\_
- 4. Is there a designated safety official on site? \_\_\_\_\_
- 5. Have all employees signed the safety plan acknowledgment form? \_\_\_\_\_

SITE POSTERS

- 1. Are the following posters displayed in a prominent and accessible area?
  - A. Minimum Wage \_\_\_\_\_
  - B. OSHA Job Protection \_\_\_\_\_
  - C. Equal Employment Opportunity \_\_\_\_\_
- 2. Are all required state-specific posters displayed? \_\_\_\_\_

HEAVY EQUIPMENT

- 1. Is heavy equipment inspected as prescribed by the manufacturer? \_\_\_\_\_
- 2. Is defective heavy equipment tagged and taken out of service? \_\_\_\_\_
- 3. Are project roads and structures inspected for load capacities and proper clearances? \_\_\_\_\_
- 4. Is heavy equipment shut down for fueling and maintenance? \_\_\_\_\_
- 5. Are backup alarms installed and working on mobile equipment? \_\_\_\_\_
- 6. Have qualified equipment operators been designated? \_\_\_\_\_
- 7. Are riders prohibited on heavy equipment? \_\_\_\_\_
- 8. Are guards and safety appliances in place and used? \_\_\_\_\_
- 9. Are operators using the "three point" system when mounting/dismounting equipment? \_\_\_\_\_

TRAINING

- 1. Are tailgate safety meetings being conducted weekly? \_\_\_\_\_
- 2. Are current training/medical records maintained on site? \_\_\_\_\_

*Project Safety Inspection Report*

YES NO N/A

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

DOCUMENTATION

- 1. Is an OSHA 300 Log maintained on site and posted during the month of February? \_\_\_\_\_
- 2. Are accident report forms available? \_\_\_\_\_
- 3. Is a copy of health and safety policy and procedures available on site? \_\_\_\_\_



## TAILGATE SAFETY MEETING FORM

<b>DATE:</b>	<b>TIME:</b>	<b>TOPIC:</b>
<b>PROJECT SAFETY CONTACT:</b>		
<b>SITE:</b>		
<b>SCOPE OF WORK:</b>		
<b>LEAD MAN:</b>		
<b>PERSONNEL ATTENDING MEETING:</b>		
<b>NAME:</b>	<b>SIGNATURE:</b>	
<b>Safety Concerns / Deficiencies / Problems (Prior Day, Week):</b>		
<b>Corrective Actions Taken:</b>		
<b>Name, Title of Person Conducting Tailgate Safety Meeting:</b>		
<b>Signature, Date</b>		

*Appendix C*  
*Job Safety Analyses (JSAs)*

## JOB SAFETY ANALYSIS (JSA) FOR GENERAL WORK AREAS AND PROCESSES AND SPECIFIC JOB SAFETY CLASSES

LOCATION: CASSADAGA WIND FARM WTG # \_\_\_\_\_ DATE: \_\_\_\_\_

### AREAS OF WORK PERFORMED

GND CONTROL / TOP CONTROL / HUB CONTROL / TRANSFORMER / LOW TEMP / GEN  
YAW SYS / GEAR BOX / HYDRAULIC / PITCH SYS / PREVENTATIVE / SWITCH GEAR

		POTENTIAL SAFETY & HEALTH HAZARDS	
PARTS PREP	<input type="checkbox"/>	SLIP	<input type="checkbox"/>
DRIVE TO W.T.	<input type="checkbox"/>	TRIP	<input type="checkbox"/>
RESET W.T.	<input type="checkbox"/>	PINCH POINTS	<input type="checkbox"/>
REM. W.T. FROM SERVICE	<input type="checkbox"/>	ROAD HAZARDS	<input type="checkbox"/>
GND SW. GEAR	<input type="checkbox"/>	ELECTRICAL	<input type="checkbox"/>
CLIMB W.T.	<input type="checkbox"/>	MECHANICAL	<input type="checkbox"/>
WINCH OPERATION	<input type="checkbox"/>	HYDRAULICAL	<input type="checkbox"/>
TROUBLESHOOT W.T.	<input type="checkbox"/>	FALLS	<input type="checkbox"/>
ISOLATE ELEC.SYS.	<input type="checkbox"/>	FALLING OBJECTS	<input type="checkbox"/>
ISOLATE HYD. SYS.	<input type="checkbox"/>	OVERHEAD	<input type="checkbox"/>
ISOLATE MECH. SYS	<input type="checkbox"/>	EXTREME TEMPS.	<input type="checkbox"/>
R&R ELEC.PART	<input type="checkbox"/>	TOOL USE	<input type="checkbox"/>
R&R HYD. PART	<input type="checkbox"/>	ENVIRONMENTAL	<input type="checkbox"/>
R&R MECH. PART	<input type="checkbox"/>	FIRE HAZARD	<input type="checkbox"/>
OPEN TRANSFORMER	<input type="checkbox"/>	CHEMICAL	<input type="checkbox"/>
ENTER HUB	<input type="checkbox"/>		
ACCESS W.T. TOP	<input type="checkbox"/>		
SERVICE HYD & LUB. SYS.	<input type="checkbox"/>		

### PREVENTATIVE SAFE WORK CONDITIONS, PRACTICES, & OR PROTECTIVE EQUIP. NEEDED

REFERENCE ALL APPLICABLE MAINTENANCE MANUALS	<input type="checkbox"/>	AWARENESS OF TEMP.	<input type="checkbox"/>
WEARING OF PROPER PPE	<input type="checkbox"/>	VEHICLE SAFETY	<input type="checkbox"/>
AWARENESS OF SURROUNDINGS	<input type="checkbox"/>	LOTO PROCEDURES	<input type="checkbox"/>
PROPER CLIMBING PROCEDURES	<input type="checkbox"/>	PROPER TOOLING	<input type="checkbox"/>
WEARING OF PROPER CLOTHING	<input type="checkbox"/>	PROPER PAPERWORK	<input type="checkbox"/>
ISOLATED ELECTRICAL POWER	<input type="checkbox"/>	CHECK WEATHER	<input type="checkbox"/>
ISOLATED MECHANICAL POWER	<input type="checkbox"/>	CHECK WIND SPEED	<input type="checkbox"/>
ISOLATED HYDRAULICAL POWER	<input type="checkbox"/>		
INSTALL PROPER GROUNDING EQUIP.	<input type="checkbox"/>		
PROPER TOUCH SCREEN PROCEDURES	<input type="checkbox"/>		
FIRE EXTINGUISHER KEPT CLOSE TO WORK AREA	<input type="checkbox"/>		
COMMUNICATION W/CO-WORKER	<input type="checkbox"/>		
TESTED FOR ELECTRICAL POWER	<input type="checkbox"/>		
REFERENCE ALL APPLICABLE MSD'S	<input type="checkbox"/>		

**TECH. SIGNATURE:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*Appendix D*  
**ACCIDENT REPORTING AND  
INVESTIGATION PROCEDURES**



# **REPORTING AND INVESTIGATING ACCIDENTS**

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## **INCIDENT REPORTING**

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All incidents, however minor they may be, must be reported to the Workers' Compensation insurance company. Sometimes minor injuries can develop into serious injuries. If a minor injury is reported, and will not be submitted as a claim, then that report should read "FOR REPORTING PURPOSES ONLY."

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## **HOME INJURIES**

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When an employee arrives for work with an injury that occurred outside of work, a "HOME INJURY STATUS REPORT" must be completed. Home injuries can prevent employees from performing the essential functions of their jobs and working with a home injury may result in an aggravation of such an injury.

If such a situation occurs, the employee should be sent home and directed to see a physician who can complete the "HOME INJURY STATUS REPORT." Employees should not be allowed to return to work until they have a full release from their physician based on the essential functions of their job.

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## **INCIDENT INVESTIGATION**

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The Incident Investigation must be completed as soon as possible after the scene is secured and all injured parties are treated. By completing the investigation as soon as possible, you are ensuring that the facts gathered are as accurate as possible.

Incident investigation must be fact-finding, not fault finding. The purpose is to learn the true cause so that similar incidents can be prevented and determine facts bearing on legal liability. Another purpose of the investigation or fact-finding is to prepare accurate documentation in case of possible litigation. From the investigation, a written report will be completed for all serious incidents. The report should be completed by the Supervisor who has investigated the incident. The report should contain the following:

1. Detailed description of the incident, including answers to the following:
  - a. What happened?
  - b. Who (individuals and companies) was involved?
  - c. When did the incident occur?
  - d. What injuries/property damage resulted?
2. Photographs taken.
3. Diagrams drawn of the scene.
4. Statement(s) from witness(es).
5. Conclusions should be developed regarding the physical cause of the incident, but should not deal with the placement of legal liability upon any party.

ONLY SUPERVISORY EMPLOYEES TRAINED IN INCIDENT INVESTIGATION PROCEDURES SHOULD TAKE WITNESS STATEMENTS AS PART OF THE INVESTIGATION.

NO PART OF THE REPORT SHALL BE GIVEN TO ANY PARTY, INCLUDING THE INJURED EMPLOYEE UNLESS AUTHORIZED BY CASSADAGA WIND MANAGEMENT OR LEGAL COUNSEL.

**KEY POINTS TO REMEMBER**

1. Get medical attention for all injured parties and notify the management office immediately.
2. Protect the scene's physical evidence.
3. Confiscate all faulty equipment or materials.
4. Take photographs of incident scene.
5. Obtain the names, addresses, and phone numbers of all witnesses.
6. Discourage all personnel from making any statements to the media.

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**EMPLOYEE ACCIDENT FORM REQUIREMENTS**

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The employee accident form (Employer's First Report) shall be prepared by the Supervisor or his designee the day of the accident. The following information is of the greatest value:

1. The employee's full name
2. The employee's complete address
  - a. Street
  - b. City
  - c. Zip Code
  - d. Telephone Number
3. Whether the accident resulted in lost time from work

# HOME INJURY STATUS REPORT

DATE: \_\_\_\_\_ NAME: \_\_\_\_\_ COMPANY: \_\_\_\_\_

INITIAL VISIT: \_\_\_\_\_ FOLLOW-UP VISIT: \_\_\_\_\_

## **WORK STATUS**

\_\_\_\_\_ Return to work - NO  
restriction on \_\_\_\_\_

\_\_\_\_\_ Unable to return to work  
(See below)

\_\_\_\_\_ Return to work on \_\_\_\_\_  
with the following restriction:

\_\_\_\_\_ No frequent lifting, bending, or twisting of  
the trunk.

\_\_\_\_\_ Lifting restriction of \_\_\_\_\_ lbs.

\_\_\_\_\_ Keep wound clean and dry.

\_\_\_\_\_ Must use protective device.

\_\_\_\_\_ No repetitive motion of affected area.

\_\_\_\_\_ No prolonged standing or walking limit to  
\_\_\_\_\_ hours per day.

\_\_\_\_\_ No overhead work.

\_\_\_\_\_ Other \_\_\_\_\_

\_\_\_\_\_ No use of ladders.

\_\_\_\_\_ No kneeling.

## **ESTIMATED DURATION OF RESTRICTED DUTY**

\_\_\_\_\_ At least until visit when we will reevaluate and notify of changes in restrictions.

\_\_\_\_\_ Until \_\_\_\_\_

\*\*\*NOTE: These restrictions are based on medical criteria only. If such restricted duty is not available, the company may at their option send the employee home until the next evaluation at our office.

\_\_\_\_\_  
Physician's Signature

# SUPERVISOR'S INCIDENT INVESTIGATION REPORT

1. COMPANY OR BRANCH	2. DEPARTMENT		
3. EXACT LOCATION	4. DATE OF OCCURRENCE	5. TIME <input type="checkbox"/> AM <input type="checkbox"/> PM	6. DATE REPORTED

INJURY OR ILLNESS		PROPERTY DAMAGE		OTHER INCIDENT	
7. INJURED'S NAME		13. PROPERTY DAMAGED		19. PERSON REPORTING INCIDENT	
8. OCCUPATION	9. PART OF BODY AFFECTED?	14. ESTIMATED COSTS \$	15. ACTUAL COSTS \$	20. OCCUPATION	21. COST (if applicable) \$
10. NATURE OF INJURY/ILLNESS		16. NATURE OF DAMAGE		22. NATURE OF INCIDENT	
11. OBJECT/EQUIPMENT/SUBSTANCE INFLECTING INJURY/ILLNESS		17. OBJECT/EQUIPMENT/SUBSTANCE INFLECTING DAMAGE		23. OBJECT/EQUIPMENT/SUBSTANCE RELATED	
12. PERSON WITH MOST CONTROL OF ITEM 11.		18. PERSON WITH MOST CONTROL OF ITEM 17.		24. PERSON WITH MOST CONTROL OF ITEM 23.	

D	25. DESCRIBE CLEARLY HOW THE INCIDENT OCCURRED.	
E		
S		
C		
R		
I		
P		
T		
I		
O		
N		
Date:	Supervisor:	Reviewed by:

EVALUATION:	26. LOSS SEVERITY POTENTIAL <input type="checkbox"/> Major <input type="checkbox"/> Serious <input type="checkbox"/> Minor	27. PROBABLE RECURRENCE RATE <input type="checkbox"/> Frequent <input type="checkbox"/> Occasional <input type="checkbox"/> Rare
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28. WHAT ACTS, FAILURES TO ACT, AND/OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS INCIDENT?

A  
N  
A  
L  
Y  
S  
I  
S

29. WHAT ARE THE BASIC OR FUNDAMENTAL REASONS FOR THE EXISTENCE OF THESE ACTS AND/OR CONDITIONS?

Date:

Supervisor:

Reviewed by:

# WITNESS/INJURED INCIDENT REPORT

Cassadaga Wind is vitally interested in the health and safety of all employees. We, therefore, request your assistance in completing this report to help us prevent future incidents to yourself or your fellow employees.

Name of Injured Person: \_\_\_\_\_

Date of Incident: \_\_\_\_\_ Hour: \_\_\_\_\_

Witness: \_\_\_\_\_ Job Title: \_\_\_\_\_

Department: \_\_\_\_\_ Supervisor: \_\_\_\_\_

How Did You First Learn of This Incident: \_\_\_\_\_

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\_\_\_\_\_

(Date)

\_\_\_\_\_

(Witness/Injured Signature)

All reports must be signed.

## EMPLOYEE ACCIDENT/INCIDENT REPORT FORM

Cassadaga Wind is committed to safety. Your cooperation in providing an accurate description of the event helps the safety department to prevent future incidents. Your cooperation in filling out and signing this form is required under the Cassadaga Wind's Safety Policy you have signed.

Name		Date of Occurrence	Time AM PM	Date Reported	Exact Location	
Nature of Incident <input type="checkbox"/> Personal injury <input type="checkbox"/> Personal injury and property damage		Please indicate with a (✓) <input type="checkbox"/> Property damage only <input type="checkbox"/> Near accident—Could have resulted in personal injury or property damage	Witnesses	Nature of Injury	Part of Body	Source of Injury
			Nature of Damage	Source of Damage (object/equipment causing damage)	Equipment #	
Describe the event:						
Names of persons/places/objects in diagram: (mark on the diagram) (note your location)				Draw a diagram of the event:		
A.						
B.						
C.						
D.						
E.						
F.						
G.						
H.						
I.						
Reasons you refuse to complete this form:						
Signature	Date	Reviewed by	Date	Reviewed by	Date	

# PHOTO MOUNT DISPLAY

Insured	Claimant	Claim #
		Date Taken
		Time
		By
		Location
Description		
		Date Taken
		Time
		By
		Location
Description		



*Appendix E*  
*Switching Forms*

*Appendix F*  
*Site Map*

TBD

*Appendix G*  
*Waiver for Wind Farm Access*

CASSADAGA WIND  
CASSADAGA WIND  
FARM

VISITOR - Release and Waiver of Liability

The undersigned wishes to enter upon property owned, leased, controlled or operated by Cassadaga Wind, a Delaware Limited Liability Company, on which Wind Farm operations are being conducted. The Wind Farm is located at TBD and is known as "Cassadaga Wind Farm".

In consideration of the permission extended to me by Cassadaga Wind to enter and remain upon said property, I HEREBY FOREVER WAIVE, REMISE, RELEASE AND DISCHARGE Cassadaga Wind, Turbine Supplier USA, their parents and affiliates, as well as any subsidiaries or divisions thereof, their agents, landlords and tenants, representatives, employees, directors and officers, contractors, sub-contractors, and assigns, past, present and future, from all and any liability, claims, demands, actions, causes of action in law and equity of any kind whatsoever, judgments, and executions, known or unknown, which the undersigned ever had, or now has, or may have, or which the undersigned's heirs, executors, administrators, or assigns may have on account of personal injury (including death) or on account of any injury to my property which may occur from any cause during either my visit to or my work at said wind farm property.

THE UNDERSIGNED REALIZES THAT ENTRANCE UPON AND WITHIN WIND FARM PROPERTY AND OPERATIONS POSES CERTAIN RISKS OF PERSONAL INJURY AND INJURY TO PROPERTY AND THE UNDERSIGNED HEREBY EXPRESSELY ASSUMES ANY AND ALL SAID RISKS.

The undersigned hereby agrees to abide by the requirements of all applicable federal and state laws and regulations, and all rules and regulations of Cassadaga Wind.

This Release and Waiver shall not be a bar to or release of any valid claim I may have under any applicable Workers' Compensation statute or for any wages and/or benefits owing to me by my employer.

The undersigned agrees that this Release and Waiver of Liability is intended to be as broad and inclusive as is permitted by the law of the State of New York and that if any portion of this Release is held invalid, the undersigned agrees that the remainder shall continue in full legal force and effect.

The undersigned has read this Release and Waiver and understands all its terms and hereby executes it voluntarily and with full knowledge of its significance.

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Releasor (Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Releasor (Please Print Name)

\_\_\_\_\_  
Address

*Appendix H*  
*Hot Work Permit*

**Cassadaga Wind HOT  
WORK PERMIT**

For

**Wind Farm and Turbine**

DATE ISSUED \_\_\_\_\_ VALID UNTIL \_\_\_\_\_

BUILDING/TURBINE \_\_\_\_\_ BUILDING/TURBINE # \_\_\_\_\_

LOCATION OF WORK \_\_\_\_\_

PLANT OPERATOR/PHONE # \_\_\_\_\_

WORKER/PHONE # \_\_\_\_\_

The location where this work will take place will be examined before the start of cutting/welding operations and all the appropriate precautions (**including any that exceed those outlined below**) will be taken.

Signed (at issue of permit) \_\_\_\_\_ Date \_\_\_\_\_

Print name \_\_\_\_\_

+++++

**FIRE SAFETY PRECAUTIONS**

**BEFORE THE WORK** - *All* of the following precautions must be taken:

- Cutting and/or welding equipment must be thoroughly inspected and found to be in good repair, free of damage or defects.
- A multi-purpose dry chemical, portable fire extinguisher must be located such that it is immediately available to the work and is fully charged and ready for use.
- At least one fire alarm pull station or means of contacting the fire department (i.e. site telephone) must be available and accessible to person(s) conducting the cutting/welding operation.
- Floor areas under and at least 35 feet around the cutting/welding operation must be swept clean of combustible and flammable materials.
- All construction equipment fueling activities and fuel storage must be relocated at least 35 feet away from the cutting/welding operation.

*Where applicable*, the following precautions will also be taken before the work begins:

- ❑ Fire resistant shields (fire retardant plywood, flameproof tarpaulin, metal, etc.), must cover combustible floors.
- ❑ Spark/slag catchers (fire retardant plywood, flameproof tarpaulins, metal, etc.) must be suspended below any elevated cutting/welding operation.
- ❑ All floor and wall openings must be covered to prevent sparks/slag from traveling to other, unprotected areas.
- ❑ Containers in or on which cutting/welding will take place must be purged of flammable vapors.

**DURING / AFTER THE WORK** - The following precautions will be taken:

- ❑ Person(s) must be assigned to a fire watch during and for at least 30 minutes after all cutting/welding ceases.
- ❑ Fire watch person(s) are to be supplied with multi purpose dry chemical, portable fire extinguisher and trained in its use.
- ❑ A fire alarm pull station or means of contacting the fire department (i.e. site telephone) available and accessible to fire watch person(s).

+++++

The location where this work will take place has been **examined before the start** of cutting/welding operations and all the appropriate precautions have been taken. *Responsible party to sign under Signature 1 for each date.*

The work area and all adjacent areas to which sparks and heat might have spread (including floor levels above and below and on opposite side of walls) were **inspected 30 minutes after** the cutting and or welding operations ceased for the day and were found to be fire safe. *Responsible party to sign under Signature 2 for each date.*

Signature 1

Signature 2

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_

Date \_\_\_\_\_ Before \_\_\_\_\_ After \_\_\_\_\_