Emergency Response Plan
# Key Contact List for HAF Wind Energy Project Facility

<table>
<thead>
<tr>
<th>Agency</th>
<th>Area</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency Contacts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambulance/Fire/Police/Rescue</td>
<td></td>
<td>911</td>
</tr>
<tr>
<td>Niagara Regional Police</td>
<td>Grimsby</td>
<td>(905) 945-2211 Ext: 5400</td>
</tr>
<tr>
<td>Ontario Provincial Police (OPP)</td>
<td>Niagara Detachment</td>
<td>(905) 356-1311</td>
</tr>
<tr>
<td>Niagara Parks Police</td>
<td>Niagara Falls, ON</td>
<td>(905) 356-1338</td>
</tr>
<tr>
<td>Quantum Murray (High Angle Rescue)</td>
<td>Niagara</td>
<td>(877) 378-7745</td>
</tr>
<tr>
<td><strong>Environmental Emergencies &amp; Spills</strong></td>
<td></td>
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</tr>
<tr>
<td>Ministry of Environment, Spills Ctr.</td>
<td>Ontario</td>
<td>(800) 268-6060</td>
</tr>
<tr>
<td>Quantum Murray</td>
<td>Niagara</td>
<td>(877) 378-7745</td>
</tr>
<tr>
<td><strong>Local Hospitals with Emergency Services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Niagara Health System</td>
<td>West Lincoln Memorial</td>
<td>(905) 945-2253</td>
</tr>
<tr>
<td></td>
<td>Grimsby, ON</td>
<td></td>
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<tr>
<td></td>
<td>Hamilton, ON</td>
<td>(905) 521-2100</td>
</tr>
<tr>
<td></td>
<td>St Catharines, ON</td>
<td>(905) 378-4647</td>
</tr>
<tr>
<td><strong>Regulatory and Municipal Contacts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ministry of Natural Resources</td>
<td>Guelph District</td>
<td>(519) 826-4955</td>
</tr>
<tr>
<td>Ontario Ministry of Culture</td>
<td>St. Catharines, On</td>
<td>(800) 263-2441</td>
</tr>
<tr>
<td>Ministry of Environment</td>
<td>Niagara District</td>
<td>(800) 263-1035</td>
</tr>
<tr>
<td>Niagara Peninsula Conservation Authority</td>
<td></td>
<td>(905) 788-1121</td>
</tr>
<tr>
<td><strong>Utilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Niagara Peninsula Energy Inc.</td>
<td>NPEI Niagara Falls</td>
<td>(905) 356-2681</td>
</tr>
<tr>
<td>Enbridge Gas</td>
<td>24 Hour Emergency Hotline</td>
<td>(800) 461-0998 Ext. 4893</td>
</tr>
<tr>
<td><strong>Vineland Power Inc.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td><strong>Bryan Sharp</strong></td>
<td>(905) 380-2777</td>
</tr>
<tr>
<td></td>
<td>Rankin Construction</td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td><strong>Dave Gollwitzer</strong></td>
<td>(905) 512-6653</td>
</tr>
<tr>
<td></td>
<td>Rankin Construction</td>
<td></td>
</tr>
</tbody>
</table>
HAF Wind Project

Address of Project Trailer: 9260 16 Rd.
RR#1 Caister Centre
Township of West Lincoln

Phone: 905-684-1111

IN AN EMERGENCY, DIAL 911

When calling local emergency dispatcher, **remain calm, speak slowly and clearly.** Include the following information in your communication:

- State the facility address or turbine coordinates;
- State the type of emergency (fire, medical, etc.);
- Stay on the phone until the responding agency releases you, answer all questions; and
- Advise the dispatcher if you need to evacuate the turbine and temporarily clear the area around the turbine.

**For Emergencies requiring High Angle Rescue**

- Dial 911
- Remain calm, speak slowly and clearly
- Tell operator to notify Niagara Parks Police / NRP / Fire / Ambulance
- Call Quantum Murray for High Angle Rescue (877) 378-7745

*** EMERGENCY ROUTE MAPS ATTACHED ***
Critical Contact Information – Customer and Vestas Service Site

<table>
<thead>
<tr>
<th>Site/Construction Manager:</th>
<th>Area/Project Manager:</th>
<th>Site Tech Main Project Office:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bryan Sharp (905) 380-2777</td>
<td>Dave Gollwitzer (905) 512-6653</td>
<td>Dominick Branch (289) 407-7573</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vestas Construction Manager</th>
<th>Vestas Lead Technician:</th>
<th>Health &amp; Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Sterling (647) 531-6139</td>
<td>Corey Kemp (902) 223-9466</td>
<td>Jon Downing, BBE C.H.S.O (905) 401-7950</td>
</tr>
</tbody>
</table>

Specific Tower Siting

**HAF Wind Project:**

Table 1-A: Coordinates of Each Turbine (NAD 83, UTM Zone 17)

<table>
<thead>
<tr>
<th>Turbine</th>
<th>Latitude</th>
<th>Longitude</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>604718</td>
<td>4775553</td>
</tr>
<tr>
<td>2</td>
<td>604889</td>
<td>4775173</td>
</tr>
<tr>
<td>3</td>
<td>606291</td>
<td>4774905</td>
</tr>
<tr>
<td>4</td>
<td>604359</td>
<td>4774307</td>
</tr>
<tr>
<td>5</td>
<td>606233</td>
<td>4773420</td>
</tr>
</tbody>
</table>

**ERP Rally Points**

The Emergency Response Plan (ERP) Rally Points are the places where site employees will gather during an emergency or after a disaster to take roll call, organize rescue and first aid, and support teams.

**Turbine 1 & 2**
Rally Point #2 on Sixteen Rd at access road

**Turbines 3**
Rally Point #3 half way down access road off of Sixteen Rd.

**Turbines 4**
Rally Point #1 at Maintenance Building at intersection of Burns Rd. and Concession 5 Rd.

**Turbine 5**
Rally Point #4 at bend of access road off of Sixteen Rd.
On-Site Supervisor
Once individuals are gathered at the ERP Rally Point, take a headcount and immediately report to management.

Emergency Routes and Equipment
Maps of ERP Rally Points, emergency exit routes, fire extinguisher points, first aid kits, and eye wash stations are attached.

Emergency Response Supplies
Emergency response supplies include: first aid, CPR/AED kits, fire extinguishers, eye wash stations, tower rescue devises, spill cleanup kits, etc. These kits, or parts of these kits, will be kept in each turbine and in service vehicles. Monthly inspections of these supplies will be conducted.

Emergency Notification System
Primary source of emergency communications will be cell phones with two-way radios as a secondary source.

Shelters for Severe Weather Events/Tornados/Lightning
In the case of severe weather tornados, lightning, earthquakes, employees should exit the turbine, and/or if in a location other than a turbine, move to an interior, windowless room on the main or lower floor as quickly as possible. See On-Site Emergency Shelter Location(s).

If in a turbine and evacuation is not possible, notify the site office, remote trip the main switchgear and take a position in the bottom of the tower. See instructions below in the case of Lightning.

If in a location other than a turbine and time does not allow for movement, cover should be taken away from glass and under protective items such as sturdy desks. Hallways and enclosed stairwells are also acceptable shelter areas.

Once individuals have reached the On-site Emergency Shelter Location(s), they should assume a seated position on the floor with their heads down and their hands over their heads or place themselves under a desk. If they are wearing heavy clothing or have access to heavy clothing, they should use these items to cover their upper bodies and heads. Once the disaster has stabilized, exit from the building and gather at the ERP Rally Point.
Quick Reference
1. If possible, proceed to the nearest On-Site Emergency Shelter Location(s) – assist others if possible.
2. Stay with other people in the area if you cannot get to one of the On-Site Emergency Shelter Locations.
3. Once the disaster has stabilized, report to the ERP Rally Point – DO NOT LEAVE THE ERP RALLY POINT unless it is unsafe to stay.
4. Check in the On-Site Supervisor or scene management.
5. Wait for further instruction or “All Clear” (clearance to re-enter)

On-Site Emergency Shelter Location #1: Maintenance Building (Burns & Conces. 5)
On-Site Emergency Shelter Location #2: Service Vehicles

Lightning
Notify site office and/or site supervisor of sighting, place the turbine in a safe condition and evacuate to service vehicles, other safe shelter, or site office as a general precaution, YOU SHOULD NOT RESUME OUTDOOR WORK ACTIVITIES UNTIL 30 MINUTES AFTER THE LAST AUDIBLE THUNDER OR VISIBLE FLASH OF LIGHTNING.

Site/Turbine Incidents
In the case of a site (injury, environmental) or turbine incident (fire, over-speed, or debris separation), during an emergency, the top priorities are to:
1. Ensure human health and safety;
2. Preserve the environment;
3. Minimize or prevent property and equipment damage; and
4. Secure the area/scene, including establishing a temporary clearance area if appropriate.

Emergency Management
Emergency management establishes safety practices in response to risks and hazards associated with injury to persons or damage; loss of property. Vineland Power’s Emergency Response Team will perform any High Angle, Confined Space, etc. when required, bringing the patient to the rally point so that local emergency services (Fire/Police/Ambulance) can medically assist while transporting the patient to the hospital. The emergency scene will be preserved to the best ability while rescue takes place. (See Appendix for Quantum Murray High Angle Rescue Services)

Prior to the start of this project we will make arrangements with local emergency responders to create, implement, and maintain pre emergency response planning. We will arrange to have the responders come to the site to familiarize themselves with the facilities.

This emergency Response plan covers a number of events that may occur at the Project site by natural causes, equipment failure or by human mistake. The following is a list of potential event:

- Minor Injuries
- Major Injuries
- Fire or Explosion
- Project Evacuation
- Suspension Trauma/Orthostatic Intolerance*

*Orthostatic Intolerance may be experienced by workers using fall arrest systems
Each work crew will have a trained first aid attendant as per Regulation 1101, First Aid Requirements under the Workplace Safety and Insurance Act, 1997 and will be supported by:

- The Quantum Murray Group, who specialize in high angle rescue and have qualified trained rescue personnel who are on call 24/7. Many of who live in Wainfleet / West Lincoln and throughout the Niagara Region are able to provide quick response (*See Appendix ‘The Quantum Murray Group’*).
- Niagara Helicopters, for situations that may involve the use of a helicopter and rescue personnel, when a high angle rescue is not suitable.
- Local EMS, The local fire, police, and ambulance service will assist once the patient has been brought to the rally point.

Each working crew will have a designated First Aid responder

**Minor Injuries**

If a minor medical incident occurs (Small cuts, abrasions, etc.) personnel should:

- Perform first aid, as necessary; and
- Consult the accident/injury reporting procedure to report the incident to the Site Supervisor and Health and Safety Manager.

**Major Injuries**

If a medical emergency exists, including the need for hospitalization or emergency services, personnel Should: **When the Emergency has been identified:**

1. The Project Manager/Foreman/Health and Safety Representative will take control of the situation and call for help (911) or appoint someone to do so, Cell Phones or a phone at the site office can be used.
2. The certified first aider will perform first aid/ CPR , as needed
3. A horn will be made available on the site to alert all workers that another worker is in danger. For this project three – 2 second long blasts shall indicate that a worker is in danger. There is an air horn located at the site office trailer and a vehicle/equipment horn would also suffice.
4. Enough workers will be appointed to guide emergency vehicles from the public road to the ERP Rally Point.
5. All workers who are not a part of the rescue operation will gather at a pre-arranged location so as not to interfere with rescue
6. Once the worker has been removed from danger using emergency equipment available, the worker will be brought to the pre-arranged emergency pick-up location.
7. The accident site is to be secured as much as possible without interfering with rescue and safety of other workers.
8. The Project Manager and Health and Safety Manager must be notified of the accident as soon as possible.
9. The Project Manager/Foreman or someone appointed by him/her will accompany the injured worker to the hospital and make all necessary telephone calls and other arrangements as required. If applicable, they will coordinate with the local police and Senior Management who will notify next-of-kin.

**All or some of the following may investigate the accident:**
- Police
- Coroner
- Ministry of Labour
- Health and Safety Committee
- Safety Representative

In the case of a critical injury, the work at the site can only continue only if the Ministry of Labour has given permission. On site, the remaining work force shall meet to discuss the incident and not resume work or leave until each worker has come to terms with the accident in such a way that they can cope and go home safely. If not, a ride will be provided for any individuals.

As soon as possible, document all facts that pertain to the accident. Have names, phone numbers and addresses of all witnesses.

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**Turbine Incidents**

**Establishing a Temporary Clearance Area**

When establishing a temporary clearance area in the event of a wind turbine incident (i.e., fire, runaway or debris separation), rope off or otherwise temporarily clear an area with a minimum radius of 500 meters (1,640 feet) measured from the base of the turbine.

Best judgment and common sense should always be employed when establishing a temporary clearance area. If a turbine incident is identified, but the situation appears to be mitigated, the establishment of a temporary clearance area may not be required.

**Fire**

In case of fire in or near a turbine:
1. Push the emergency-stop button. If it is physically safe to do so and it will not delay your exit from the turbine, disconnect the turbine at the main high-voltage circuit breaker. Personnel outside the turbine should not approach the turbine to push the emergency-stop button.
2. Immediately exit the turbine, only using fire-fighting equipment to ensure a safe escape route from the wind turbine.
3. Establish a temporary clearance area and move upwind outside the clearance area, or seek shelter, if appropriate.
4. Notify the site office who can contact local emergency responders if assistance is required to extinguish the fire.
5. Allow the tower to ‘Burn-out’
6. If possible wet down the surrounding area to limit the possibility of the fire spreading to surrounding vegetation.
Runaway
In case of a runaway:
1. Push the emergency stop button. If it is physically safe to do so and it will not delay your exit from the turbine, disconnect the turbine at the main high voltage circuit breaker. Personnel outside the turbine should not approach the turbine to push the emergency stop button.
2. Immediately exit the turbine, and establish a temporary clearance area, if appropriate.
3. Move upwind outside the clearance area, or seek shelter, if appropriate.
4. Notify site office who can contact local emergency responders if assistance is required to address the situation.

Debris Separation
In case of debris separation:
1. Push the emergency-stop button. If it is physically safe to do so and it will not delay your exit from the turbine, disconnect the turbine at the main high-voltage circuit breaker. Personnel outside the turbine should not approach the turbine to push the emergency-stop button.
2. Immediately exit the turbine, and establish a temporary clearance area, if appropriate.
3. Move upwind outside the clearance area, or seek shelter, if appropriate.
4. Notify site office who can contact local emergency responders if assistance is required to address the situation.

NOTE: If debris separation is identified, but the situation appears to be mitigated, following the steps above may not be necessary. Best judgment and common sense should always be employed. Consult with your site manager for guidance.

Other Emergencies

Bomb Threat
1. Keep caller on the line and record call (if allowed by your local laws), if possible.
2. Notify the site office and evacuate the area.
3. Call local law enforcement or emergency dispatch, if appropriate.
4. Notify the customer, if appropriate.

Civil Disturbance
1. Be courteous and do not provoke person or crowd.
2. Notify the site office and evacuate the area, if appropriate.
3. Call local law enforcement or emergency dispatch, if appropriate.
4. Notify the customer.
Environmental Policy

Environmental

In case of spill (release of chemicals to the environment):

1. Stop the spill;
2. Remove all ignition sources;
3. Contain the spill;
4. Notify the site office/site supervisor;
5. Clear area, if appropriate;
6. Initiate cleanup procedures

Any spills will be dealt with in accordance to O.Reg. 675/98 Classification and Exemption of Spills and Reporting of Discharges. In instance of a reportable spill call:

**Ministry of Environment Spill Action Center at 1-800-268-6060**

In instance where remediation is required, call:

**Quantum Murray at 1-877-378-7745**

It will be ensured that this policy is subject to a process of regular reviews so that account is taken of developments in legislation and technology as they affect the environment. The objective is to balance the need to achieve its business aims and to improve the quality of environment which may be affected by its operators.

The primary responsibility for implementation lies with the Project Manager who will assist in carrying out periodic environmental audits. He is responsible for ensuring that:

- A high standard of housekeeping is maintained and, where possible, take steps to reduce odour, noise, dust, atmospheric pollution and other impact thereby avoiding complaints and arising out of operations in the work place
- In planning the operations on the jobsite the social and environmental consequences are considered
- The site is kept in a clean and tidy manner and maintaining a high standard of appearance at the site
- All records of environmental monitoring are maintained and available for inspection in accordance with current legislation
- The workforce is regularly informed of the environmental conditions at the site and is trained to operate the equipment with proper regard for the environment and is involved in any proposed changes
- Any complaints regarding work operation are dealt with fairly and promptly; and that details of the investigation and the action taken are recorded and reported back to the complainant
- There is continual improvement in environmental performance
Emergency Response Team
Emergency Response Team – Trained in CPR/First Aid/Fire Safety/Spill Response/High Angle Rescue

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>24 Hour Contact #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantum Murray Group -</td>
<td>High Angle Rescue</td>
<td>1-877-378-7745</td>
</tr>
<tr>
<td>Dave Hill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bryan Sharp</td>
<td>Site Project Manager</td>
<td>(905) 380-2777 (c)</td>
</tr>
<tr>
<td>Dave Gollwitzer</td>
<td>Site Project Manager</td>
<td>(905) 512-6653 (c)</td>
</tr>
<tr>
<td>Jon Downing</td>
<td>Safety and Human Resource Manager</td>
<td>(905) 401-7950 (c)</td>
</tr>
</tbody>
</table>

Evacuation Signal: General Alarm Signal to Evacuate
When the emergency signal, consisting of three repeated long blasts of the job horn, is sounded, all employees shall immediately cease work, secure all equipment, and proceed directly to the nearest ERP Rally Point and remain there until further instructions are assigned by the supervisor or, it is not safe to stay in the area.

Emergency Drills
Semi-Annual drills will be practiced and documented so employees become better prepared for real emergencies and so that any deficiencies in the plan can be identified and corrected.

General Information
During the construction phase of the project, the project area will be monitored by security when work crews are not on site. Once turbines become operational, the SCADA (Supervisory Control and Data Acquisition) software will monitor all turbines for any variances in operation.
QUICK REFERENCE
EMERGENCY RESPONSE PLAN

Immediate Action

Notify Personnel in the Immediate Area
Via Cell Phone or Radio
Take actions necessary to protect yourself and others

Notify Site Manager or Designee
Via Cell Phone or Radio
Escalate using emergency contact list (as needed)

Dial 911
If emergency services are needed

Contact Health and Safety Preliminary Incident Report

Activate Incident Management Plan
Notify Incident Response Team

Site Incident
Injury
Near miss
Good Catch
Equipment Damage
Environmental

Fire
Site Office Vehicle
(Away from turbine)

Turbine Incident
Fire
Over speed
Debris Separation

Extreme Weather
Lightning
Tornado
Earthquake
Heat/Cold

Bomb Threat

Civil Disturbance

Injury
Stabilize injured and administer first aid if patient. If able to move, exit turbine. If unable to move, call site office

Turbin Incident
Evacuate affected area; perform personal accountability, establish a temporary clearance area with a minimum 500m radius

Priorities:
Ensure human health and safety
Preserve the environment
Minimize or prevent property damage
Minimize or prevent equipment damage
Secure the area/scene
**FIRE**
Site Office/ Vehicle

Priorities: If outside,
Stay outside, do not enter
Move objects and equipment away from fire
(if possible without endangering self)
Assemble at ERP rally points.

Priorities: If inside,
Evacuate the area and assemble at ERP rally points

**Turbine Incidents**

Priorities: If outside,
Notify office and activate ERP.
Push Emergency stop. If it is safe to do so,
disconnect the turbine at the main switchgear.
Do not approach the turbine.
Establish a temporary clearance area.
Move up wind, outside clearance area or seek shelter, if appropriate.

Priorities: If inside,
Push Emergency stop. If it is safe to do so,
disconnect the turbine at the main switchgear.
Evacuate the turbine.
Establish a temporary clearance area.
Move up wind, outside clearance area or seek shelter, if appropriate.

**Lightning**

Priorities: If outside,
Stay in your vehicle.
Move away from tall objects and equipment.
Don hard hats and shield yourself.

Priorities: If inside,
Push Emergency stop. If it is safe to do so,
disconnect the turbine at the main switchgear.
Evacuate the turbine.
Establish a temporary clearance area.
Move up wind, outside clearance area or seek shelter, if appropriate.

**Tornado**

Priorities: If outside,
Seek shelter below ground
Lie flat in a gully or ditch
Don hard hats and shield yourself

Priorities: If inside,
Go to a basement or inside room with no windows
Stay away from heavy objects.

**Earthquake**

Priorities: If outside,
Stay Outside
Move away from tall objects and equipment
Don hard hats and shield yourself

Priorities: If inside,
Choose shelter with air space. Should it collapse,
seek cover under desk or table.
If no cover, brace in a corner or door way.

**Extreme Heat or Cold**

Priorities: Heat;
Minimize exposure to direct sunlight.
Stay hydrated.
Know the warning signs of over exposure.
Take more frequent brakes

Priorities: Cold;
Minimize exposure to extreme cold and wind.
Keep gas tanks between half and full at all times.

**Bomb Threat**

Priorities: Keep the caller on the lines as long as possible.
Notify personnel and evacuate.

**Civil Disturbance**

Priorities: Be courteous and do not provoke.
Notify personnel not to return to Site Office.
Notify the customer(s).

**Call Local authorities**
Vineland Power Inc.
Emergency Response Route
Hamilton General (1 905-521-2100)

Sixteen Rd

1. Head northwest on Sixteen Rd toward Burns Rd
   - About 3 mins
   - go 1.9 km
   - total 1.9 km

2. Turn right onto Westbrook Rd
   - About 3 mins
   - go 2.7 km
   - total 4.6 km

3. Turn left onto RR 20 W
   - About 6 mins
   - go 6.0 km
   - total 10.6 km

4. Turn right onto Upper Centennial Pkwy (signs for Upper Centennial Parkway)
   - About 5 mins
   - go 5.1 km
   - total 15.7 km

5. Continue onto Centennial Pkwy S
   - About 2 mins
   - go 1.4 km
   - total 17.2 km

6. Slight left to stay on Centennial Pkwy S
   - About 2 mins
   - go 1.1 km
   - total 18.2 km

7. Turn left onto Barton St E
   - Destination will be on the right
   - About 15 mins
   - go 6.2 km
   - total 26.4 km

Hamilton General Hospital
237 Barton St E, Hamilton, ON L8L 2X2, Canada
Vineland Power Inc.
Emergency Response Route
Smithville Medical Centre (1 905-957-3328)

1. Head northwest on Sixteen Rd toward Burns Rd
   About 3 mins
   go 1.5 km
   total 1.5 km

2. Turn right onto Westbrook Rd
   About 3 mins
   go 2.7 km
   total 4.2 km

3. Turn right onto RR 20 E
   About 12 mins
   go 14.9 km
   total 19.2 km

4. Turn right onto Griffin St N (signs for ON-20)
   go 170 m
   total 19.4 km

5. Slight right onto Griffin St
   go 200 m
   total 19.6 km

6. Continue onto Canborough St
   Destination will be on the right
   go 64 m
   total 19.6 km

230 Canborough St, Smithville, ON L0R 2A0
Rankin Construction Inc.
222 Martindale Road
St Catherine's, Ontario
L2R 7A3


Re: High Angle Rope Rescue Support Operations

Quantum Murray LP is pleased to provide the following overview of the High Angle Rope Rescue Support Services. If you require any additional information regarding our company or the services we provide please visit our website at www.qmlp.ca, or call us at the numbers below.

Tentative Scope of work:

High Angle Assessments/Plan Development
- Provide specific high angle rescue assessments prior to the commencement of the project.
- Provide completed rescue plans based on the assessments prior to the commencement of this project.

Rescue services (required by legislation):
- Provide trained personnel on call to perform rescue operations as outlined to remove individuals from the wind Turbines should an unlikely incident occur.
- All equipment will be inspected and ready for immediate use.
- To oversee all equipment purchased by Rankin and provide complete inspections on an approved frequency of the equipment positioned for immediate and emergency use.
- Provide custom equipment if required to package and remove individuals from the wind Turbines in question.

Attending services (on-site):
- Provide trained personnel to be positioned on-site during any high risk operations upon request.
These individuals will:
- Monitor the safety of Wind Turbine work at heights
- Be in constant communication with all workers on the Wind Turbine, using the means of communication described in the relevant plan
- Be equipped with a device for summoning an additional rescue support (911)

Operational Scope:

Quantum Murray will provide complete Emergency High Angle Rope Rescue Response to specifically identified Wind Turbine sites in the Niagara Region. The area of concern at this time is the Wind Turbines located in Wainfleet Township.

Quantum Murray will provide Emergency Call Cards to all applicable parties that offer a 24/7 emergency call dispatch center contact number. This Call Center will be the "Hub" to dispatch On-Call Rescue Technicians to be summoned and directed immediately to the Wind Turbine site in question. Quantum Murray maintains a strong presence of employees in the Greater Niagara Area. Each of these staff carry a "Kit" for response to High Angle Emergencies at all times. Quantum Murray mandates 2 of these staff on call at all times.

Quantum Murray Capacity:

<table>
<thead>
<tr>
<th>Certified Rope Technicians</th>
<th>Currently 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified Support Staff</td>
<td>Currently 38</td>
</tr>
<tr>
<td>Niagara Based Staff</td>
<td>Currently 14</td>
</tr>
<tr>
<td>Hamilton Based Staff</td>
<td>Currently 22</td>
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</tbody>
</table>

Note:
The Rope Rescue Staff at Quantum Murray are dissected into two predominant rope rescue technologies:

- **NFPA 1006/1670 Trained Personnel**
- **IRATA/SPRAT Rope Access Trained Personnel**

Quantum Murray has broken down the scope into the following deliverables as below.

<table>
<thead>
<tr>
<th>Pre-Site Inspections and Assessments</th>
<th>Quantum Murray will provide Rope Rescue Leadership the opportunity to peruse and prepare specific site rescue plans</th>
<th>Duration: 1-day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide Emergency Phone Numbers</td>
<td>Quantum Murray will provide Emergency Call cards identifying our 24/7 emergency phone number to reach our Call Center to</td>
<td>Duration: Immediately</td>
</tr>
</tbody>
</table>
Rescue Services
Quantum Murray staff will provide rescue services as outlined.
Duration: 24/7

Debrief and Follow-up process
Quantum Murray will provide complete debriefs for all incidents.
Duration: 2-4 hours post incident

Report Generation
Quantum Murray will provide a complete report to be generated for response to all incidents.
Duration: within 2 Days of incident

Rescue Process Methodology:

In the event of a Wind Turbine Emergency,

1. Contact 911 immediately
2. The initiator of witness of a Wind Turbine incident will contact the Quantum Murray Emergency Response Call Center number as provided. And identified on the Wind Turbines.
3. Quantum Murray will dispatch no less than 2 Rope Rescue Technicians to site
4. QM Technicians will utilize the customized equipment caches on site to prepare to provide emergency raise or lowering of patients involved in an incident.
5. Provide emergency care and first aid including immobilization to all impacted patients of the incident.
6. QM will provide emergency isolation of the area with emergency tape until appropriate parties arrive.
7. QM staff will provide a complete update to all arriving emergency staff and regulators including Fire, EMS, MOL, etc.
8. QM will participate in debriefing events post incident.
9. QM will generate a intensive report on the event for submission to Rankin Renewable Power/ Rankin Construction Inc.

Special Notes:

- Quantum Murray will assist Rankin’s Construction Inc. in the acquisition of the appropriate and approved rescue equipment for cache positioning.
- Quantum Murray will provide response within minutes of activation notification
- Mock practice opportunities can/will be provided
- Quantum Murray would be pleased to interface with local regulators to ensure comforts and compliancy.
If there are any additional questions please contact me at the following numbers.

Regards,

[Signature]

Dave Hill  
General Manager, Ontario Operations  
Quantum Murray LP  

Demolition | Emergency Response | HazMat | Remediation | Thomon Metals & Disposal | Training  
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"Safe for Life – Zero Incidents"
Stand-By Rescue Services
Confined Space/ High angle

When you are planning tomorrow’s projects and the work has to be performed in a confined space there are a number of things you must consider...

Have all workers who will enter the space been trained in confined space operations?
Do you have trained confined space entry attendants and rescue personnel?
Do you have a confined space rescue plan?
Do you have the equipment needed for confined space entry and rescue operations?
Has the equipment been inspected, tested and calibrated?

Quantum Murray LP can help

Quantum Murray LP (QMLP) can help you by supplying trained confined space entry attendants and rescue teams as required by legislation (Occupational Health & Safety Act/Canada Labour Code Part II).

With proven capacity and expertise, QMLP’s highly trained teams, equipped with a wide array of equipment, are fully certified and accredited to solve your diverse and challenging project needs. Our cost effective services will ensure compliance with the legislation and complete safety for your staff during confined space operations.

Scope of Confined Space / High Angle Services:
- Rescue team response services for confined space, high angle fall rescue
- Confined space attendant services
- Confined space plans/programs/documentation
- Confined space site management programs
- Rescue plan development
- Complete Training Services
Quantum Murray LP has launched our own 24 hour call center working out of the Stoney Creek Office. The service allows QMLP to provide advanced communications for our clients during an emergency response activation and data distribution for all information provided by the client.

The three levels of service offerings are outlined as follows:

**Level 1**
- 24/7/365 Service
- Bilingual service (in-house and real-time translation service)
- Call logging and recording
- Live patching to meet the criteria for technical advice (TDG - ERAP program)

**Level 2**
- All level 1 offerings
- Customized information gathering
- Distribution of technical information, response plans, MSDS and other as required
- Multiple caller conferencing and meeting facilitation
- Direct communication and information distribution to QMLP responders in the field
- Active situation board facilitating client information retrieval including but not limited to:
  - Communication Plan
  - Scope of Incident
  - Resource Allocations
  - Site Contact Information

**Level 3**
- All Level 1 and 2 offerings
- Testing and Reporting of client dependant response individuals such as:
  - Managers
  - Home Coordinators
  - Technical Advisors
- On-call management and update distribution (client dependant)

Client account implementation is provided at no additional cost. Implementation information gathering will include:

Information distribution may include, any and all of the information above and may be distributed in the following formats: Text (.doc, .pdf, email), Fax, .wav file
Evacuation Instruction
1.8/2.0 MW Mk 7, 7.1 and 7.2
History of this Document

<table>
<thead>
<tr>
<th>Version no.</th>
<th>Date</th>
<th>Description of changes</th>
<th>Technical approver</th>
</tr>
</thead>
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<tr>
<td>00</td>
<td>2009-11-10</td>
<td>First edition.</td>
<td>FLEPE</td>
</tr>
<tr>
<td>01</td>
<td>2010-03-08</td>
<td>Turbine application on front page changed to include all 1.8/2.0 Mk 7 turbines.</td>
<td>FLEPE</td>
</tr>
<tr>
<td>02</td>
<td>2012-04-04</td>
<td>Added Mk 7.1 and Mk 7.2 to the ‘Title’ and updated the footer.</td>
<td>HUAMA</td>
</tr>
<tr>
<td>03</td>
<td>2012-05-29</td>
<td>Added notes in section 10 ‘Fire Fighting Equipment’ and section 11 ‘Diagram of Emergency Equipment’.</td>
<td>WSHAO PAGAN</td>
</tr>
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</table>

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1 General Provisions

This evacuation procedure must always be kept in the wind turbine.
In the event of an accident, the alarm must be raised quickly and correctly.

Identification: WTG ID No: _______________________

Location: _______________________

Emergency telephone no.: _______________________

1.1 Administering of First Aid

In the event of a serious accident, lifesaving first aid must always be offered first before evacuating or waiting for the arrival of medical/rescue services.

In the event of lesser injuries where the patient is mobile, an effort must be made to use the normal ascent and descent methods. The person administering first aid must be especially attentive.

In case of doubt, operate on the worst-case principle.

It can be difficult to evacuate an unconscious person with a suspected vertebral fracture, shock or a similar severe condition, so it is vital that a medically qualified person or trained rescue worker is present in the wind turbine before starting evacuation. Life-saving first aid must be administered until evacuation can proceed.

Efforts must be made to put the person administering first aid in contact by mobile phone with a doctor or a person who is able to provide medical advice and/or guidance so that the correct procedure can be followed.

The doctor or rescue personnel will assume responsibility for evacuation when they arrive at the wind turbine, and their instructions must be followed. Vestas workers will thereafter act as helpers/advisers in the purely practical work of lowering/evacuating.

1.2 Fire

Fire in the wind turbine must be immediately reported to the operating control room and to the relevant rescue services.

Fight the fire if possible, but follow the ‘rescue persons rather than equipment’ principle.

Activate the wind turbine’s emergency stop button and the F60.

In the event of lowering during a fire, beware of the risk of objects falling from the wind turbine.

1.3 General

The ‘always down and always inside’ principle must always be followed in the event of accidents inside the WTG.
In the event of an accident on a ladder or between two platforms, use the emergency descent device to lower a person to the nearest platform.

Vestas workers must ensure that platforms and other wind turbine parts are dismantled if the doctor/rescue personnel consider this to be necessary.

The correct rescue equipment must be used to horizontally evacuate severely injured persons. Efforts must also be made to ensure that the person is lying horizontally or as directed by the doctor/rescue personnel.

Evacuation instructions must be made for each site and be tested and evaluated once every two years.

Vestas recommends holding evacuation drills in conjunction with local rescue authorities. For further information see Vestas Corporate OH&S Manual.

The stretcher illustrated in section 7.2, p. 15 is optional and can be ordered as item no: 260774.

2  Implementation of Evacuation

2.1  Definition of Horizontal and Vertical Evacuation

Horizontal evacuation is used when the patient has an injury that could be life-threatening if the patient is evacuated vertically (fractured vertebra – shock).

The patient must lie in a horizontal position during the entire operation.

Vertical evacuation is used when the patient has an injury and is able to use the normal ascent and descent methods, either alone or with help, or when the patient may be lowered vertically from the nacelle or from the tower ladder.

NOTE  Horizontal evacuation cannot be performed from Zone 2 (see section 2.2 Rescue Zones) as a shaft for a service lift is not present in these areas. Evacuation must, therefore, be performed vertically through the ladder access in the platform.
2.2 Rescue Zones

Zone 1: Nacelle

Figure 2-1: Zone 1: nacelle.
Zone 2:
- Oscillation damper platform

Zone 3:
- Service lift top
- Resting and safety platform
- Platform

Zone 4:
- Tower/base

Figure 2-2: Rescue zones in tower.
Evacuating Injured Personnel from Hub to Nacelle in Zone 1

Figure 3-1: Emergency evacuation exits.

1. Hub to nacelle
2. Tower
3. Hatch in nacelle floor

3.1 When to Use

- High winds.
- Injuries and illnesses which have resulted in the loss of the ability to crawl or walk.
- Conscious persons.
- On doctor’s orders.
- Only injuries which do not require a stretcher.
3.2 Rescue Procedure

1. Activate the emergency stop button and lock the rotor.
2. Pull out the person from inside the hub.
3. Attach an emergency descent device to the front of the full-body harness.
4. Attach the sling with the emergency descent device to one of the approved anchor points on the gearbox.
5. Turn the handle on the emergency descent device to pull out the person.

NOTE
Remember to support the injured person during the rescue.
4 Evacuating Injured Personnel from Nacelle to Tower, Zone 1 to Zone 2

4.1 When to Use

- High winds.
- Injuries and illnesses which have resulted in the loss of the ability to crawl or walk.
- Conscious persons.
- On doctor's orders.
- Only injuries which do not require stretcher.

4.2 Rescue Procedure

A descent should be carried out with great care and while using fall arrest equipment at all times.

An injured person can be lowered from the nacelle through the tower down to the base of the tower.

1. Activate the emergency stop button.
2. Attach the sling to the approved anchor point on the generator.
3. Attach the emergency descent device to the front of the full-body harness of the injured person.

4. Attach the emergency descent device to the approved anchor point on the generator with the sling.

5. Use the emergency descent device to hoist the person.

6. By hand, guide the injured person into place over the access way.

7. Lower the injured person to the yaw deck, controlling the speed with the emergency descent device.

8. Stabilise the injured person on the yaw deck.
9. Move the emergency descent device to the yaw deck.
10. Attach the emergency descent device to the bracket for the upper cable loop.
11. Guide the injured person through the access hole in the yaw deck to the service lift platform.
12. Stabilise the injured person on the platform.
5 Horizontal Evacuation, Zone 3

5.1 When to Use

- All unconscious patients.
- When a fractured vertebra is suspected.
- Injuries and illnesses which have resulted in loss of the ability to crawl or walk.
- On doctor’s orders.

5.2 Rescue Procedure

1. Activate the emergency stop button.
2. Secure the injured person.
3. Lower the tiller rope through the shaft for the service lift.
4. Attach the emergency descent device and sling to the approved anchor points, which are placed on the tower flange.
5. Attach the emergency descent device to the injured person.

6. Position the injured person for lowering.
7. Lower the injured person down the shaft for the service lift while following down the ladder (if possible).

Figure 5-1: Emergency descent device attached to front of harness.
Figure 5-2: Emergency descent device and tiller rope.
6 Evacuating Injured Personnel from Nacelle, Zone 1 to Ground (Outside Tower)

6.1 When to Use

- If escape route through tower is blocked.
- If the patient is conscious with minor injuries/illnesses and still has the ability to crawl or walk.
- On doctor's orders.

6.2 Rescue Procedure

NOTE

The emergency descent device can also be mounted on the traverse of the crane.

1. Activate the emergency stop button.
2. Prepare the emergency descent device.
3. Ensure that the full-body harness is properly secured to the approved anchor points before opening the hatch.
4. Wrap the sling around the beam to be used as an anchor point.
5. Attach the emergency descent device to the anchor point.

6. Attach the emergency descent device to the back of the injured person’s full-body harness.

7. Open the hatch and position the person over the hatch.

8. Lower the injured person to the ground, controlling the speed with the emergency descent device.
7 Horizontal Evacuation Using Stretcher, Zone 1

7.1 When to Use

- Evacuate through the nacelle hatch if no other options are possible.
- When a fractured vertebra is suspected.
- Injuries or illnesses which have resulted in the loss of the ability to crawl or walk.
- On doctor’s orders.

7.2 Rescue Procedure

1. Activate the emergency stop button.
2. Lock the rotor.
3. Prepare the emergency descent device.
4. Make sure that the full-body harness is properly attached to the approved anchor points before opening the hatch.
5. Attach the emergency descent device to the fix point for descent equipment.
6. Mount the snatch block on the sling and attach the pulley wheel to the post for the member.

7. Lead the rope from the pulley wheel through the snatch block and then attach it to the stretcher.

Figure 7-1: Snatch block.  Figure 7-2: Pulley wheel.
8. Lower a guiding rope to the ground.

9. Lift the stretcher slightly and open the bottom hatch.

10. Guide the stretcher out of the service hatch.
8 First Aid Equipment

8.1 First-aid Box

The first-aid box contains various items for minor injuries and everyday treatment of wounds. The box does not contain advanced emergency equipment, but many useful items for effective first aid, e.g., a mask for artificial respiration, burn spray and a thermal blanket.

The box is mounted in a quick lock fitting and can be carried around in the wind turbine.

8.2 Location

The first-aid boxes are located at the rear of the nacelle on the transformer wall and at the control cabinet at the base of the tower by the entrance.

9 Rescue Equipment

9.1 Emergency Descent Equipment

The emergency descent equipment is a Res-Q model as normally used by Vestas and is a fixed part of the inventory in the MW wind turbines.

9.2 Location

The emergency descent equipment is located in the nacelle, at the rear against the transformer bulwark on the left side, in a box marked with a rescue sign.

10 Fire Fighting Equipment

NOTE

The following text may or may not be applicable to all V90-1.8/2.0 MW Mk 7 and later turbines. If the text is not applicable and fire extinguishers are not available, remember to carry fire extinguisher.

The location of the fire extinguishers must be confirmed by the local SBU.

There are two 5–6 kg CO₂ fire extinguishers in the wind turbine.

10.1 Location

- **Top**
  A CO₂ fire extinguisher is placed in the nacelle on the crane pillar by the rear left-side yaw gear.

- **Base**
  A CO₂ fire extinguisher is placed on the cable ladder in the base of the tower by the entrance.
11 Diagram of Emergency Equipment

NOTE

The illustrations in this section show the locations of fire extinguishers that may or may not be present in all V90-1.8/2.0 MW Mk 7 and later turbines. If fire extinguishers are not present, remember to carry fire extinguishers.

The location of the fire extinguishers must be confirmed by the local SBU.

Figure 11-1: Placement of emergency resources in the nacelle.