

## APPENDIX G

### Operations and Management Plan

# Hounsfield Wind Farm Operations and Management Plan

Prepared by:  
American Consulting Professionals of New York  
70 Niagara Street, Suite 410  
Buffalo, NY 14202

Prepared for:  
Upstate NY Power Corp  
950 A Union Road  
West Seneca, NY 1424

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## **1.0 General Project Description**

The Project subject to this Operations & Management (O&M) Plan is the commercial scale wind farm project located on Galloo Island, in the Town of Hounsfield, Jefferson County, New York. The Project will be constructed and operated by the Upstate New York Power Corporation (Upstate Power) of West Seneca, New York.

The Project is located on Galloo Island in the Town of Hounsfield, Jefferson County, New York. Galloo Island is located in eastern basin of Lake Ontario near the head of the St. Lawrence River. Galloo Island is an isolated and uninhabited island, approximately 6 miles from the closest mainland shoreline (Stony Point in the Town of Henderson) and approximately 8 miles west of the Village of Sackets Harbor.

For the purposes of this O&M Plan, the Project consists of the post-construction operation of the of 84 wind turbine generators (WTG), capable of generating up to 252 megawatts (MW) of power at peak capacity, and related support facilities. The key Project elements more specifically include: 84 - 3.0 MW WTG having an 80 meter hub height and 90 meter blade rotor diameter; combined above ground and below ground 34.5 KV electrical collection system (ECS); an on-island electrical substation; private service roads (up to 36 feet wide); one permanent meteorological tower, 80 meters in height; and associated operation and maintenance facilities.

The operation of an approximately 50.6-mile transmission line (including approximately 9 miles under Lake Ontario), together with interconnection facilities (substations) and other related facilities, linking Galloo Island with the New York State power grid is not covered by this O&M Plan. The construction and operation of the transmission line is subject to the review jurisdiction of the New York State Public Service Commission (PSC) under Public Service Law Article VII and subsequently the operations and maintenance are addressed in the Environmental Management and Construction Plan (EM&CP) prepared as part of the Article VII filings.

## **2.0 Intent and Implementation of O&M Plan**

This Operations and Management (O&M) Plan has been prepared for the Hounsfield Wind Farm as part of the Draft Environmental Impact Statement (DEIS) prepared in accordance with the State Environmental Quality Review Act (SEQRA) Environmental Conservation Law (ECL § 8-0101 et seq.; 6 NYCRR Part 617).

The intent of the O&M Plan is to provide guidance, in the form of a long term environmental management strategy, which minimizes potential impacts to the environment during maintenance and repairs of Project facilities. The O&M Plan focuses on environmental based procedures and policies to follow during the ongoing maintenance and operation of the facility. The O&M Plan

also serves as a contingency plan to assess and minimize the potential for environmental impacts to result from major repairs and decommissioning.

It is the policy of the Project sponsor, Upstate Power to adhere to the procedures referenced in this O&M Plan. It will be the on-going responsibility of the Project personnel to implement the specific actions and procedure during operations, maintenance and repair activities. This plan will go into effect once construction activities are complete and the Project enters the operational phase.

### **3.0 Maintenance and Repair Activities**

The O&M Plan identifies the significant operational, maintenance and repair issues that potentially could cause negative environmental effects to the Project site, if not carefully overseen. The O&M Plan identifies the procedures to be followed that will limit the frequency and degree of these potential environmental impacts resulting from future Project maintenance and repairs. There are three major functional areas address in the O&M Plan: Routine Maintenance, Major Repairs and Decommissioning.

#### **3.1 Routine Maintenance Activities**

##### WTG Maintenance

The facility's maintenance schedule requires routine maintenance to be performed on every WTG twice per year. Routine maintenance procedures are estimated to take a two-man crew two days per WTG to complete. Nacelle access for routine maintenance will be facilitated by permanently installed interior tower ladders, internal service lifts, and internal service cranes. Access to the nacelle will be controlled by a locked door at the base of the tower. To support routine maintenance, Upstate Power will maintain several work (pickup) trucks, a workshop within the O&M building, an inventory of spare parts and supplies, and tool kits to be carried into nacelles to perform routine maintenance. Maintenance includes inspection of major WTG components, including, but not limited to: rotors, hub, electronic controls, gear box, generator, cooler systems, transformer, pitch mechanism, breaking system, bearings, fluids and obstruction lighting. During the bi-annual maintenance, fluids and oils will be inspected and replaced per the manufacture's specifications. Given the complexity of the equipment involved; variations are not possible to the specified fluids and service intervals. It is assumed that the Vestas Model V90-3.0MW will be utilized for the Project. However, it is possible that the WTG model may change depending upon timing and availability. For purposes of this O&M Plan, the types and general quantities of fluids involved do not differ significantly between manufactures and the conceptual protection measures remain the same.

##### Electrical Collection System and Substation Maintenance

Routine maintenance of the Electrical Collection System (ECS) corridor will primarily consist of vegetation maintenance.

- For the above ground portions of the ECS, corridors 50 feet in width will be maintained in order ensure there is adequate clearance between the conductors and vegetation. Vegetation in this area will be limited to low-lying scrub/shrubs plants and grasses.
- Danger trees along the corridors that pose a danger to the overhead conductors or that could fall and block access will be trimmed back.
- In the event collection or transmission lines must be restrung and additional clearing is required beyond the 50 foot maintenance corridor, clearing will be held to a minimal width to facilitate safe work corridor. If grading is necessary, the applicable erosion and sedimentation control measure(s) will be employed per Section 5.0 of the Stormwater Pollution Prevention Plan (SWPPP).
- For the below ground ECS corridors, a 15-20 wide corridor will be maintained (mowed) in order to ensure vehicular access for inspection and repairs.
- Trimmed trees and limbs will be mulched and used onsite; or in wooded areas, cut and left scattered.
- The electrical substation will be equipped with four transformers that each will have concrete secondary containment structures designed to hold 110% capacity of the entire contents of the transformer case cooling oil.
- Transformers will be informally inspected each week as part of routine maintenance. Visible leaks, which result in an accumulation of oil in the concrete containment structure or surrounding gravel, shall be reported to the Environmental Health and Safety (EHS) Coordinator will then be responsible for prompt repair.
- Transformers will be formally inspected monthly, and these inspections documented on the appropriate inspection form. (See Appendix A for sample Inspection Form found in SPCC).
- Dikes surrounding the transformers will be drained of surface water monthly, or immediately after a significant rain event.

Maintenance of the approximately 2.5 mile on-island portion of the 230kV transmission line will be conducted in accordance with the *Vegetation Management Plan for the Upstate NY Power Corporation Transmission Line* which is included as Appendix E of the Article VII filing.

### Service Roads

Maintenance of the service roads connecting WTG and other Project facilities will be performed by Project personnel utilizing wind farm equipment on site. Contractors may be utilized when the volume/length of road maintenance work planned is greater than can be efficiently completed

by Project personnel. When contract personnel are utilized for on-island maintenance or repairs, they shall be provided this O&M Plan and accompanying appendices or other referenced materials applicable to the work they will be performing.

Roads will be constructed with a gravel top surface and therefore routine maintenance will be limited to filling ruts and holes, regrading and compacting/rolling as necessary. Service roads will remain at their original 36 foot width in order to allow future crane access, minimizing the need for future construction or widening necessary to facilitate maintenance or repairs of the WTG or substation facilities. Road maintenance procedures will include keeping the 1 foot shoulders clear of trees and tall vegetation. This will be achieved by mechanical means, and will not require herbicide treatment.

Road maintenance materials will primarily include gravel. Gravel will be stored in a covered bunker area at the O&M facilities

Access to the WTG must be kept open year round. Snow will be plowed and minimal quantities of sand (for traction) will be used when necessary. Sand will be stored in a covered bunker area at the O&M facilities. Road salt or other snow melting compounds will not be used on the Project service roads.

#### Maintenance of Road Drainage

Two conceptual drainage methods are employed for the service roads. In areas where roads are constructed on bedrock with minimal excavations, drainage will be 'hydrologically invisible' using permeable stone fill or low water fords. Under either scenario, there are no routine maintenance activities related to the service road drainage. Where a culvert is required to convey storm water across a service road, routine maintenance activities will be limited to clearing debris from culvert and clearing and replacing, regrading and compacting disturbed gravel road material. Routine maintenance of road culverts will not require use of erosion and sediment controls.

### **3.2 Major Repairs:**

#### Major Repairs to WTG

In addition to performing routine WTG maintenance, there likely will be occasions when personnel must perform unscheduled maintenance or major repairs to the WTG components. If signals from WTG monitors stop or otherwise indicate a potential operational problem, Project personnel must be able to respond to in a timely fashion. Work crews will utilize the same on-island vehicles and equipment used for routine maintenance to conduct repairs. However, if major parts fail within the nacelle, or if a rotor blade needs to be replaced, additional equipment such as cranes will be required from the mainland.

While catastrophic damage or breakdowns are rare in WTG components, if and when such an event occurs, immediate attention is warranted. Nacelle repairs will require cranes for blade, hub, rotor assembly or generator repair. For that reason, the crane pads will remain accessible at each WTG site.

Although unanticipated, if the laydown area or WTG site does require grading in order to complete a major repair, soil erosion and sediment control measures will be implemented, as appropriate for the bedrock or vegetation conditions of the site. Any grading activities at the WTG sites will be conducted in accordance with the applicable erosion and sedimentation control measures presented in Section 5.0 of the SWPPP. Where vegetation is cleared, disturbed areas will be stabilized and re-seeded as soon as possible after the repair or construction activities are complete. Sediment control measures would be installed and monitored until the topsoil is stabilized and can support grassy vegetation. A silt fence will be placed at the limits of disturbance and a 75 foot vegetative buffer will be maintained in areas down slope of the WTG laydown area.

### Major Repairs to ECS

#### *Excavation for Repair of Buried Cable*

Due to the extent of shallow soils and exposed bedrock, the ECS is designed to minimize the length of buried ECS cable. However, some underground ECS cable will be necessary, primarily in the immediate vicinity of the WTG. In the event that a section of buried ECS needs to be exposed for repair or replacement the following measures will be implemented:

- Fill material will be removed from ECS trench and side cast for reuse.
- If it is anticipated that the repair of an ECS section will take more than 48 hours, silt fence will be utilized on down slope side of the excavation.
- If the section of ECS repaired is located in a vegetated area, sediment control measures will be installed and monitored until the topsoil is stabilized and can support grassy vegetation.

#### *Replacement of Poles*

The majority of the ECS (34.5 kV) is above ground and installed on wooden poles installed into the bedrock. A rock drill is used to create a 2.5 wide foot hole. The pole will then be set in place and then backfilled with previously removed material.

In the event that an existing ECS pole(s) must be replaced, the existing pole(s) will be removed from the Project site. Because it is anticipated that the existing poles will have been treated with wood preservative, they will be removed from the Project site and disposed of in an appropriate solid waste management facility.

#### *Substation*

Possible equipment failures within the on-island substation are likely to require replacement of one or more transformers, rather than repair. The substation yard will have a permanent gravel access drive. It is likely that failed transformers will be loaded onto trailers and hauled out of the yard and eventually off-island for refurbishment or proper disposal. No electrical equipment will be permanently disposed of on Galloo Island.

In the event that the failure, repair or replacement of a transformer involves the release of transformer oil, the procedures set out in the SPCC plan will be implemented in order to properly contain and clean and report the spill. See Section 3.4 below.

#### Repairs to Service Roads

##### *Road Washouts*

Due to the relatively level terrain on the island, road washouts are not likely. However, if significant road degradation were to occur that would require reconstruction of a road section, standard site construction methods would apply. Specifically, standards, designs, methodologies and appropriate environmental controls identified in the initial engineering drawings and SWPPP will be utilized.

##### *Road Culvert Repair or Replacement*

As with road washouts, due to topography, there are few culverts anticipated for the Project. However, if culvert replacement is necessary, site protocols will follow the initial design and construction methods. These methods will include the stormwater and sediment control procedures presented in the SWPPP.

#### Procedures for access to project components that require major repair

Because the original roads installed for construction purposes will remain, it is not anticipated that new service roads or road widening would be necessary to accomplish major repairs to the WTG. The crane pads will also remain at each WTG site in order to provide access to the hub and nacelle.

After construction, the 300 foot diameter laydown area at each WTG site, if cleared, will be seeded. The laydown areas will be maintained by mowing as necessary to control trees and tall vegetation in order to retain a generally level and stable work area free of vertical obstacles.

### **3.3 Decommissioning**

At the end of their useful life the WTG, ECS and substation will be removed. A Decommissioning Plan has been prepared and appended to the DEIS. The Decommissioning Plan includes specific steps that will be taken in removing WTG and the overhead ECS. The decommissioning steps relevant to the environmental protections subject to this O&M Plan are summarized below. Where appropriate, additional environmental protection procedures are noted.

#### Tower Dismantling

Similar to assembly, disassembly of the nacelle, rotor and towers will necessitate the use of cranes and heavy equipment. If resold for use by another power producer, tower sections and rotors will be transported in the same manner as their delivery to the site. If sold for scrap, towers and rotors will first be cut down with heavy cutting equipment to facilitate transport. WTG materials will not be left on the Galloo site.

#### Removal of Tower Bases

Following removal of the WTG (rotor assembly, nacelle and tower) the tower pad, foundation and pedestal will be removed to a minimum depth equal to the top of surrounding bedrock or to a depth of three feet, whichever is less. It is anticipated that heavy construction equipment will be utilized to break up and remove foundations. It is not anticipated that blasting will be necessary.

It is anticipated that following disassembly of the rotor assembly, and tower, large cranes will no longer be needed on site and the gravel from the crane pad will be used to back fill the tower foundation.

#### Restoration and Monitoring

Once all of the above and below ground components designated for disposal or salvage have been removed, the disturbed WTG site will be graded and seeded, where appropriate. In areas having substantial soils, clean topsoil will be used to restore the WTG area to pre-construction conditions.

Permanent vegetation will be established to stabilize all disturbed areas that are not otherwise stabilized with permanent gravel paving. The mix of species will be initially selected from specifications for critical area plantings contained in New York State Standards for Soil Erosion and Sediment Control, or a site-specific seed mix specified by the NYSDEC in order to address any concerns regarding preservation of the existing flora present on Galloo Island.

A monitoring and remediation period of two years immediately following the decommissioning and restoration activities will be provided. The monitoring period allows for the Project area to experience seasonal changes and allow the Project sponsor to determine if additional restoration is required.

The following environmental procedures will apply to Project decommissioning:

- Wetlands
  - Where delineated wetlands are located within 500 feet of a WTG site, they shall be flagged prior to commencing decommissioning activities.
  - Movement of cranes and heavy construction equipment for decommissioning will be restricted to existing service roads, crane pads, WTG laydown areas and gravel ring surrounding tower base.
- Applicable procedures in the SPCC Plan with regard to:
  - Draining, handling, temporary storage, and movement of oils and hydraulic fluids from generator, and base transformer.
  - Fuel and operating oils for cranes and heavy equipment used in decommissioning.
- Applicable procedures in the Storm Water Pollution Prevention Plan with regard to:
  - Installation of perimeter erosion and sediment control measures (E&S) around disturbed areas greater than five (5) acres during decommissioning activities. Control measures include upslope diversion fence, or down slope silt fence (or stakeless measure where limited overburden soils are present);
  - Installation of temporary sediment traps where required;
  - Retention and maintenance of E&S controls until vegetation is established, where applicable.
  - Permanent vegetation, as applicable where pre-construction soils supported vegetation;
  - Diversion fences where necessary;
  - Silt fences at the downslope limit of disturbed areas except where shallow bedrock prevents silt fence construction and a stake-less E&S control measure can be used;
  - It is not anticipated that sediment basins or permanent Stormwater management structures will be required during decommissioning;

### **3.4 Petroleum Products Handling - SPCC Plan and Compliance with PBS regulations**

Routine operations and maintenance, as well as major repairs of Project facilities will involve the use and storage of hazardous materials, including petroleum-based materials. The amount of oil-base fluids stored on-site, including within the nacelles will exceed 1,320 gallons. Therefore, a Spill Prevention, Control and Countermeasures Plan (SPCC) Plan must be implemented for the site. A Conceptual SPCC Plan has been prepared in accordance with applicable NYSDEC regulations and guidance for the Project and is provided as a stand-alone document separate from this O&M Plan. In addition, the Project will require a Petroleum Bulk Storage Permit from the NYSDEC pursuant to 6 NYCRR Part 612-Part 614. This O&M Plan incorporates all of the applicable requirements of the PBS regulations and will ensure compliance as provided below.

This O&M Plan relies on implementation of the final SPCC Plan to minimize potential impacts from the release of petroleum products during operation, maintenance, repair and decommissioning of the Project. A conceptual SPCC Plan is incorporated into the O&M Plan by reference. Key environmental protections and procedures described in the SPCC Plan related to handling petroleum products and fluids include:

- The WTG will each contain approximately 66 gallons of gear oil, along with yaw and hydraulic oils. Internal collections systems will collect leaks prior to fluids spreading outside the nacelles. Each turbine and pad will be visually inspected on a weekly basis for evidence of leaks.
- The equipment internal to the nacelle will be inspected during bi-annual maintenance. Inspections will be documented on inspection forms (see Appendix A of this O&M Plan for sample form prepared for and appended to the SPCC).
- Visible oil leaks, which result in a loss of oil from the turbine gear box, hydraulic system or leaking fittings large enough to cause an accumulation of oil on the concrete pad, surrounding gravel/soil or tower, shall be reported to the Environmental Health and Safety (EHS) Coordinator, will then be responsible for prompt repair.
- A potential source of environmental impacts associated with routine operations and maintenance activities will be petroleum spills during unloading, transfer, and tank refilling activities. Therefore, the maintenance crew will follow procedures outlined in the SPCC Plan for handling bulk oils and fluids and applicable PBS regulations.
- Spill kits will be stored at the Operations and Maintenance facilities in the storage building. Spill kits will include with equipment to address the type and quantity of spill that may occur during maintenance and repair activities.
- All aboveground storage tanks (ASTs) will be of double walled construction. ASTs will be registered with the NYSDEC in accordance with the Petroleum Bulk Storage regulations. AST's must be inspected monthly, per 6 NYCRR 613.6(a). Registrations will be updated every five years pursuant to 6 NYCRR 612.2.
- Fill ports on all ASTs will be surrounded by spill buckets, which will be routinely inspected for liquids, and accumulated water and oils will be pumped out.

- Off loading of diesel fuel, lube oil, etc. at the permanent slip must be conducted in accordance with U.S. Coast Guard Regulation 33 CFR 126 (Handling of Dangerous Cargo at Waterfront Facilities).
- Oil transfer operations will be conducted at WTG sites or O&M Facilities, not at the waterfront off-loading facility. Facility personnel will be present throughout filling operations to monitor the product level in the tanks(s).
- All oil suppliers must meet the minimum requirements and regulations for tank truck loading/unloading established by the U.S. Department of Transportation. Transfer operations must be performed according to the minimum procedures outlined in Appendix A - Fuel Transfer Procedures.
- 55-gallon drums of petroleum products will be stored on secondary containment structures within the storage buildings at the O&M facility. Amounts less than 55 gallons will be stored in plastic containers on secondary containments structures as well. Leaks large enough to cause an accumulation on the floor or in the secondary containment structure will be reported to the EHS coordinator, who will be responsible for either repairing the leak, transferring the contents or moving the leaking drum to an over-pack drum.

#### **4.0 Environmental Protections**

In order to minimize environmental impacts during major repairs and decommissioning, the O&M Plan requires that the environmental procedures described in the following subsections be implemented as appropriate for those activities:

##### **4.1 Wetlands**

###### Maintenance of Wetland Mitigation Project

Wetland mitigation for the Project includes creation of a new wetland area as compensation for the unavoidable loss of about 0.81 total acres of wetland habitat. The mitigation has been designed in accordance with NYSDEC wetland mitigation guidelines, *Freshwater Wetlands Regulation Guidelines on Compensatory Mitigation* and the latest USACE-USEPA guidelines, *Final Rule on Compensatory Mitigation for Losses of Aquatic Resources*, April 10, 2008.

The proposed site for on-island wetlands mitigation is located in the south eastern portion of Galloo Island in the vicinity of WTG No. 25.

As part of the Section 404 Clean Waters permit application, Upstate New York Power will prepare a Wetland Maintenance Plan prior to construction. The Wetland Maintenance Plan will be prepared in accordance with the USACE *Mitigation and Monitoring Guidelines* Buffalo District, October 2004. The Wetland Maintenance Plan will include, but may not be limited to:

- Maintenance activities will include plant replacement, non-native plant control, measures to control predation/grazing of mitigation plantings, and temporary irrigation for plant establishment (if necessary).
- Plans for water structure inspection, fertilization, erosion control, herbivore protection, trash removal, and /or any other maintenance activities.
- Protective measures such as signs, fences and access control. (Because the Project site will be under singular land control and is located on an isolated island, legal instruments and land use management plans are not applicable.)
- A schedule for planned inspections and maintenance activities.

The procedures included in the Invasive Species Control Plan (see Section 4.4 below) will also apply in the wetlands mitigation area.

#### Avoidance of Future Wetland Impacts

Measures will be taken during general operations and maintenance activities that avoid future impacts on wetlands. The crossings of wetlands by service roads and ECS have been designed, wherever possible, to transect the wetlands at the narrowest possible points or at the peripheral edges in order to minimize habitat loss and impacts on wetland hydrology.

Where maintenance or repair activities must take place on ECS or service roads located in wetlands, specialized procedures and equipment will be used to reduce the impact on wetland soils and hydrology. Typical measures include:

- wetland boundaries will be clearly flagged in work areas to assist the Project personnel, contractors and environmental monitor in avoiding unplanned disturbances to the wetlands,
- use of high floatation tires/wide tires;
- working from wooden mats or working from the upland side where possible;
- minimize areas that must be temporarily cleared to what is necessary to accomplish the maintenance or repair work and restore areas as close as practicable to pre-repair condition;
- stockpile soils next to trench or cleared areas for reuse for reuse and limit time stored during repair;
- ensure the top 12 inches of the backfill is the topsoil layer of the material that was excavated from the wetland;
- repairs to road crossings in wetlands will utilize base layers of large stone to ensure a permeable media that allows proper movement of water;
- maintain minimal footprints for the roads necessary to accomplish the maintenance repair work;
- maintain profile of road crossing flush with grade to reduce hydrological impacts;

- ensure that trenching in wetlands does not create a french drain. Such precautions can include clay plugs within trenches where needed; and
- areas disturbed for maintenance or repairs will be seeded with appropriate grasses (facultative to facultative-wet or wetter species) and mulched to provide initial vegetation to stabilize disturbed soils

Measures to prevent and reduce the impact of soil erosion during maintenance and repair activities area are described in the draft SWPPP found in Appendix \_\_\_ of the DEIS. They include but are not limited to:

- temporary and permanent vegetation,
- sedimentation basins,
- sediment traps, diversion fences,
- silt fences,
- erosion control blankets,
- rock outlet stabilization, and
- permanent turf reinforcement mats.

To prevent the spread of invasive species during project construction, an Invasive Species Control Plan has been prepared and is included as Appendix \_\_\_ of the DEIS.

#### **4.2 Restoration Activities**

The following monitoring and management practices will ensure that restoration activities are successful:

- Any ground area that is altered during maintenance or repair activities will be restored to pre-disturbance contours as soon as practicable.
- An appropriate native seed mixture will be used based on plants that were in the area prior to disturbance. When possible, seed mix will be from a local source.
- For any wetland area that is impacted, an appropriate seed mixture, as determined in consultation with NYSDEC, will be used. This will likely be the same as required in the wetlands disturbance permit required for construction.
- Where the disturbance was minimal, a soil stabilization plant such as a rye grass will be planted and the natural vegetation of the Regulated Area will be allowed to revegetate the area.

#### **4.3 Ice Management**

Although the majority of Lake Ontario remains relatively ice-free, according to the National Oceanic and Atmospheric Administration “United States Coast Pilot 6” (2008), ice forms on the eastern part of Lake Ontario from Kingston to Oswego. In this area, ice formation generally begins in early January. Between 70 and 90 percent of the region is covered by thin (2 to 6

inches) to medium (6 to 12 inches) ice by the end of January. The ice reaches the thick category (12 to 28 inches) by early March. In-place melting of the ice pack occurs shortly thereafter, in early March. By the end of March, the ice has usually completely dissipated.

Based on the available data, the presence of ice in January, February and March will likely be a limiting factor for transportation to and from the island via the slip channel and off-loading facilities located at the southeast end of the island. Due to cost and potential environmental impact from ice breaking activities, it is not feasible to keep the slip free of ice between January and March. Therefore, there will be no active ice management activities for the Project. Once the ice in eastern Lake Ontario prevents water access to the island, shipping will cease for the season. During these months, Project personnel and supplies will be transported to and from Galloo Island via helicopter. Access to the helicopter pad at the western end of the island will be maintained year-round.

The Operations and Maintenance facilities will be stocked with all the materials, parts, and equipment to conduct routine maintenance and repairs through the winter months. In the event major repairs require parts or equipment larger than can be flown to the island by helicopter, those repairs will be postponed until the slip is ice free in March.

#### **4.4 Invasive Species Management Plan**

The operation, maintenance and repair of the Project may potentially disturb both riparian and wetland areas. One threat to both habitat environments is the introduction and spread of invasive species. Invasive Species of particular concern are purple loosestrife (*Lythrum salicaria*), phragmites (*Phragmites australis*), and Eurasian water milfoil (*Myriophyllum spicatum*). These may be introduced through the movement or use of topsoil, fill or construction materials.

An Invasive Species Control Plan has been prepared for the Project and appended to the DEIS and will be implemented as part of the on-going operation and environmental management procedures for the Project.

##### Control/Prevention of Invasive Species on the Island

The Invasive Species Control Plan describes the procedures to ensure that the invasive species mentioned above do not expand their aerial coverage on the island due to the construction or operation of the Project. Construction related procedures also apply to maintenance and repair activities that require ground disturbances. Particular care will be taken to prevent expansion into federal and New York State Department of Environmental Conservation (NYSDEC) regulated wetlands, riparian areas and NYSDEC regulated areas i.e., wetland setback areas (buffer zone) on

the island. These areas will collectively be called Regulated Areas. A baseline survey will be conducted to document the presence, or lack of the invasive species listed above.

These procedures summarized below are described in more detail in the Invasive Species Control Plan.

The procedures listed below will be taken to remove invasive species from regulated areas on Galloo Island:

- When invasive species are identified in the Regulated Areas, herbicides approved by NYSDEC will be applied to the plant.
- All dead plant material will be placed in a covered container prior to being transported to a collection area for disposal in a container fitted with a black cover to facilitate in composting or liquefying material. Once the contents of the container have broken down, the material will be securely transported to the mainland and disposed of in an approved landfill.
- If the coverage of the invasive species of a Regulated Area is greater than 75% of its area, and if the invasive species cannot be identified as individuals, then removal of topsoil may be warranted. If topsoil is removed it will be done to a depth of 16" or as site characteristics require. The topsoil would then be replaced with topsoil from an on-island source determined to be free of invasive species and from a similar ecological community where possible. The area will then be reseeded with a seeding mix determined in consultation with NYSDEC. The topsoil that is removed will be disposed of on-site in a location determined to be an acceptable distance from a Regulated Area.

The following measures will be taken to ensure proper sanitation of equipment used on the island:

- All machinery will be inspected and cleaned prior to going onto or leaving the island. Equipment will be cleaned as required to prevent the spread of invasive species plant seeds or propagates. Any soil or debris will be removed and the equipment will be inspected to ensure it does not contain any of the invasive species described above.
- Any earth moving or excavation equipment used in Regulated Areas known to contain invasive species will be cleaned in a nearby upland area. Excess soil will be removed and the equipment will be washed with a mobile power washer.
- If workers walked through the Regulated Area known to contain invasive species their boots will also be washed as near the point of origin as practically possible.

#### Prevention of Invasive Species Spreading to Mainland

Invasive Species monitoring will take place for five years following construction by Project personnel. Inspections of Regulated Areas will occur twice a year between the months of April and November using the Baseline Study staff will review Regulated Areas and document any

changes to Invasive Species coverage. Any increase in coverage will be reported to USACE and NYSDEC.

It is assumed that if the procedures detailed in the Invasive Species Control Plan are followed for removal of invasive species found in Regulated Areas, and for equipment sanitation, no invasive species related to the operation, maintenance or repair of Project facilities will be exported from Gallo Island.

## **Appendix A**

### **Sample Forms from Spill Prevention, Control and Countermeasures Plan**



<b>Part B: Notification Checklist</b>		
	Date and time	Name of person receiving call
<b>Discharge in any amount</b>		
Thomas L. Hagner, Spill Response Coordinator (716) 675-0751 / (716) 863-5331		
<b>Discharge in amount exceeding 5 gallons and <i>not affecting a waterbody or groundwater</i></b>		
Local Fire Department Fire Chief: John Taylor (315) 938-5688 or 911		
New York State Department of Environmental Conservation (800) 457-7362 or (518) 457-7362		
<b>Discharge in any amount and affecting (or threatening to affect) a waterbody</b>		
Local Fire Department Fire Chief: John Taylor (315) 938-5688 or 911		
New York State Department of Environmental Conservation (800) 457-7362 or (518) 457-7362		
National Response Center (800) 424-8802		
Op-Tech (315) 437-2065		

## AGENCY NOTIFICATION STANDARD REPORT

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 2 Regional Administrator, and to the NYSDEC, within 60 days of the qualifying discharge incident.

<b>Facility:</b>	<i>Hounsfield Wind Farm</i>
<b>Owner/operator:</b>	<i>Upstate New York Power Corporation 950-A Union Road, Suite 20 West Seneca, NY 14224-3454</i>
<b>Name of person filing report:</b>	
<b>Location:</b>	<i>Galloo Island Hounsfield, NY 13685</i>
<b>Maximum storage capacity:</b>	<i>64,000 gallons</i>
<b>Daily throughput:</b>	<i>&lt;600 gallons</i>
<b>Nature of qualifying incident(s):</b>	
<input type="checkbox"/> Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons <input type="checkbox"/> Second discharge exceeding 42 gallons within a 12-month period.	
<b>Description of facility (attach maps, flow diagrams, and topographical maps):</b>	
<p><i>The Hounsfield Wind Farm handles, stores and uses petroleum products in the form of diesel fuel, transformer oil, lubricants, and used oil. The transformer oil is stored in one power transformer, and the lubricants are stored within the wind turbines and in the Storage Building. Diesel fuel is stored in aboveground storage tanks (ASTs) located at Operation and Maintenance (O&amp;M) portion of the facility, and adjacent to the concrete batch plant. No other refueling is done at the facility. Drums and other break-bulk containers (containers with capacities of less than 110 gallons) are stored in the Storage Building located at the O&amp;M portion of facility.</i></p> <p><i>The Hounsfield Wind Farm is located on Galloo Island in the town of Hounsfield, New York. The site is comprised of approximately 2,200 acres of land and is bordered on all sides by Lake Ontario.</i></p> <p><i>Site improvements include 84 wind turbines, helipad, meteorological towers, a temporary concrete batch plant, off-loading facilities (permanent/temporary), O&amp;M structures, housing and an electrical substation.</i></p>	

**Agency Notification Standard Report (cont'd)**

**Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:**

**Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:**

**Additional preventive measures taken or contemplated to minimize possibility of recurrence:**

**Other pertinent information:**



## STORAGE AREA INSPECTION LOG SHEET

<b>Location (Building Number or Map Reference Code):</b>	
<b>Inspected by:</b>	<b>Title:</b>
<b>Signature:</b>	<b>Date of Inspection:</b>

### Drums

<b>1. Any evidence of faulty seals or missing plugs?</b>	<b>Yes</b>	<b>No</b>
<b>2. Any labels missing?</b>	<b>Yes</b>	<b>No</b>
<b>3. Any evidence of corrosion, cracks, or bulges?</b>	<b>Yes</b>	<b>No</b>
<b>4. Any drums inadequately secured from tipping or rolling?</b>	<b>Yes</b>	<b>No</b>
<b>5. Any evidence of spills or leaks?</b>	<b>Yes</b>	<b>No</b>

### Transformers and Wind Turbines

<b>6. Any evidence of transformer overheating or malfunction?</b>	<b>Yes</b>	<b>No</b>
<b>7. Any labels missing?</b>	<b>Yes</b>	<b>No</b>
<b>8. Any evidence of transformer corrosion, cracks, or bulges?</b>	<b>Yes</b>	<b>No</b>
<b>9. Any evidence of turbine hydraulic/gear/yaw oil or transformer oil spills or leaks?</b>	<b>Yes</b>	<b>No</b>

### Indoor Containment Area

<b>10. Any spills or leaks?</b>	<b>Yes</b>	<b>No</b>
<b>11. Excessive debris accumulation?</b>	<b>Yes</b>	<b>No</b>

**For any items above which "Yes" was checked, please complete the back of this form.**



**ABOVEGROUND TANK INSPECTION LOG SHEET**  
(IF AND WHEN NEEDED)

<b>Tank Identification Number:</b>			
<b>Inspected by:</b>		<b>Signature:</b>	
<b>Title:</b>			
<b>Date of Inspection:</b>		<b>Day:</b>	<b>Night:</b>
<b>Weather:</b>	<b>Clear</b>	<b>Rain</b>	<b>Snow</b>
<b>Temperature:</b>	<b>&lt; 0°F</b>	<b>0° - 32°F</b>	<b>33 ° - 80°F &gt; 80°F</b>
<b>Tank Heated:</b>	<b>Yes No</b>	<b>Tank Insulated:</b>	<b>Yes No</b>

**Tank Inspection**

<b>1. Drip Marks</b>	<b>Yes</b>	<b>No</b>	
<b>2. Discoloration of tank wall.</b>	<b>Yes</b>	<b>No</b>	
<b>3. Puddles of material stored in tank.</b>	<b>Yes</b>	<b>No</b>	
<b>4. Corrosion</b>	<b>Yes</b>	<b>No</b>	
<b>5. Localized dead vegetation.</b>	<b>Yes</b>	<b>No</b>	
<b>6. Tank foundation cracks or discoloration.</b>	<b>Yes</b>	<b>No</b>	
<b>7. Foundation settling or gaps between tank and foundation.</b>	<b>Yes</b>	<b>No</b>	
<b>8. Foundation damage caused by vegetation roots.</b>	<b>Yes</b>	<b>No</b>	
<b>9. Evidence of product seepage at valves, fittings, or piping.</b>	<b>Yes</b>	<b>No</b>	
<b>10. Piping corrosion or deflection of pipe between supports.</b>	<b>Yes</b>	<b>No</b>	
<b>11. Drain valves unlocked or line caps missing.</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>12. Other problems</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>

**Secondary Containment Inspection**

<b>11. Condition of containment - any cracks or erosion damage.</b>	<b>Yes</b>	<b>No</b>	
<b>12. Excessive rain water in containment.</b>	<b>Yes</b>	<b>No</b>	
<b>13. Open or damaged containment drainage valves.</b>	<b>Yes</b>	<b>No</b>	
<b>14. Any discoloration or presence of free product.</b>	<b>Yes</b>	<b>No</b>	
<b>15. Presence of debris.</b>	<b>Yes</b>	<b>No</b>	
<b>16. Any evidence of stressed vegetation.</b>	<b>Yes</b>	<b>No</b>	
<b>17. Lighting inadequate.</b>	<b>Yes</b>	<b>No</b>	

**For any items above which "Yes" was checked, please complete the back of this form.**



**SPILL RESPONSE KIT INSPECTION CHECKLIST**

<b>Location (Building Number or Map Reference Code):</b>	
<b>Inspected by:</b>	<b>Title:</b>
<b>Signature:</b>	<b>Date of Inspection:</b>

<b>1. Is the spill kit label missing?</b>	<b>Yes</b>	<b>No</b>	
<b>2. Is the spill kit hard to find?</b>	<b>Yes</b>	<b>No</b>	
<b>3. Is the spill kit missing:</b>			<b># if no</b>
<b>Gloves?</b>	<b>Yes</b>	<b>No</b>	<b>_____.</b>
<b>Goggles?</b>			
<b>Absorbent material?</b>	<b>Yes</b>	<b>No</b>	<b>_____.</b>
	<b>Yes</b>	<b>No</b>	<b>_____.</b>
<b>4. Is the spill kit open?</b>	<b>Yes</b>	<b>No</b>	

**For any items above which "Yes" was checked, please complete the back of this form.**



## **Appendix B**

### **Fuel Transfer Procedures**

## Fuel Transfer Procedures

Stage	Tasks
Prior to Unloading	<ul style="list-style-type: none"> <li>• Visually check all hoses for leaks and wet spots.</li> <li>• Verify that sufficient volume (ullage) is available in the storage tank or truck.</li> <li>• Lock in the closed position all drainage valves of the secondary containment structure.</li> <li>• Secure the tank vehicle with wheel chocks and interlocks.</li> <li>• Ensure that the vehicle's parking brakes are set.</li> <li>• Verify proper alignment of valves and proper functioning of the pumping system.</li> <li>• If filling a tank truck, inspect the lowermost drain and all outlets.</li> <li>• Establish adequate bonding/grounding prior to connecting to the fuel transfer point.</li> <li>• Turn off cell phone.</li> </ul>
During Unloading	<ul style="list-style-type: none"> <li>• Driver must stay with the vehicle at all times during loading/unloading activities.</li> <li>• Periodically inspect all systems, hoses and connections.</li> <li>• When loading, keep internal and external valves on the receiving tank open along with the pressure relief valves.</li> <li>• When making a connection, shut off the vehicle engine. When transferring Class 3 materials, shut off the vehicle engine unless it is used to operate a pump.</li> <li>• Maintain communication with the pumping and receiving stations.</li> <li>• Monitor the liquid level in the receiving tank to prevent overflow.</li> <li>• Monitor flow meters to determine rate of flow.</li> <li>• When topping off the tank, reduce flow rate to prevent overflow.</li> </ul>
After Unloading	<ul style="list-style-type: none"> <li>• Make sure the transfer operation is completed.</li> <li>• Close all tank and loading valves before disconnecting.</li> <li>• Securely close all vehicle internal, external, and dome cover valves before disconnecting.</li> <li>• Secure all hatches.</li> <li>• Disconnect grounding/bonding wires.</li> <li>• Make sure the hoses are drained to remove the remaining oil before moving them away from the connection. Use a drip pan.</li> <li>• Cap the end of the hose and other connecting devices before moving them to prevent uncontrolled leakage.</li> <li>• Remove wheel chocks and interlocks.</li> <li>• Inspect the lowermost drain and all outlets on tank truck prior to departure. If necessary, tighten, adjust, or replace caps, valves, or other equipment to prevent oil leaking while in transit.</li> </ul>