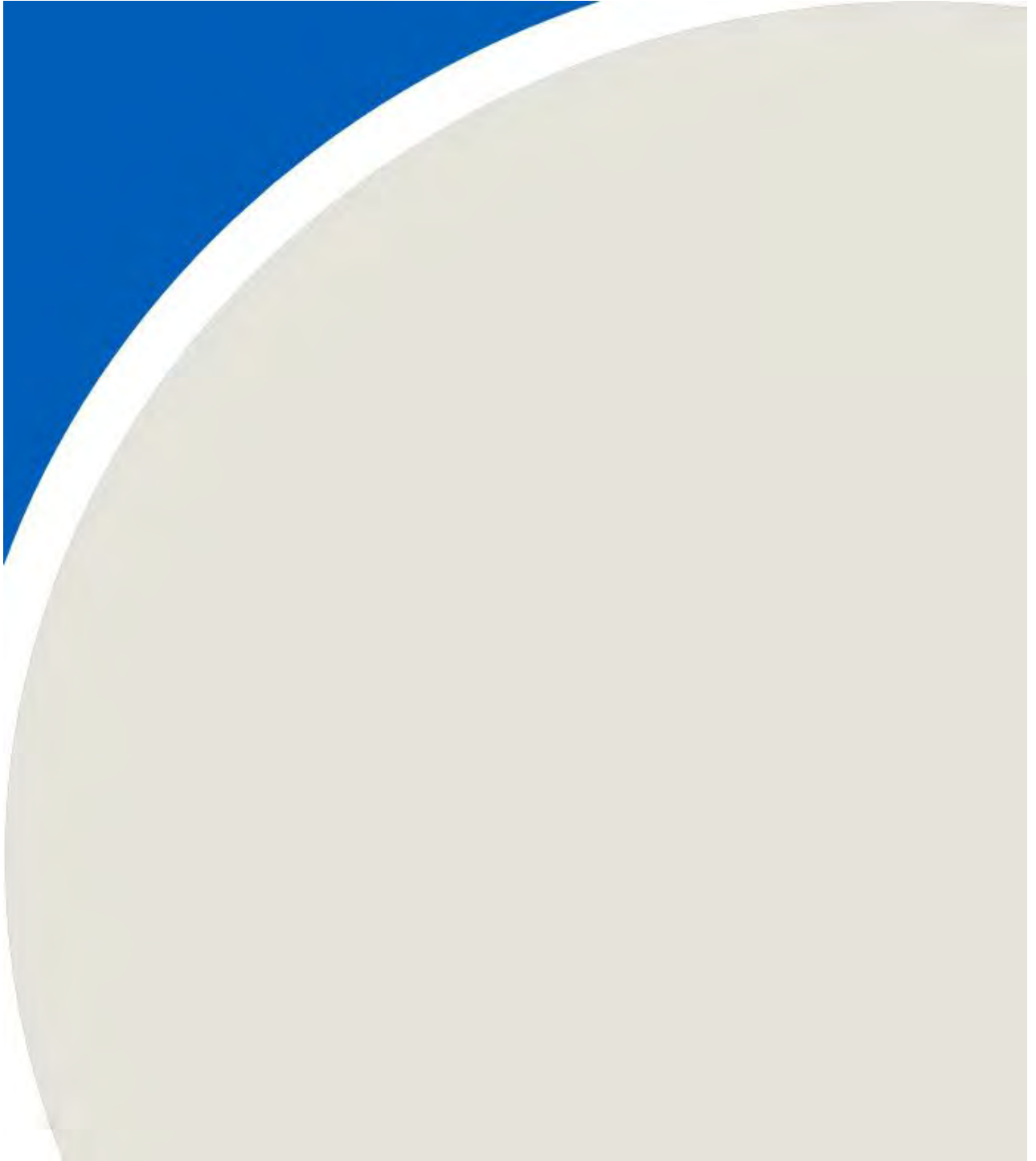


## APPENDIX A



- Legend**
- Wind Energy Centre Study Area
  - Transmission Line Study Area
  - 120m Area of Investigation
  - Municipal Division
  - Railway
  - Natural Features
    - Watercourse (SRCA, SCPCA)
    - Watercourse (DRR)
    - Waterbody
    - Cartographic Wetland
    - Wooded Area
    - Participating Recipient
    - Non-Participating Recipient
    - Vacant Lot Participating Recipient
    - Vacant Lot Non-participating Recipient
  - Other Nearby Turbines
    - Permanent Meteorological Tower
    - Access Road
    - Collection Line
    - Crane Path
    - Line Lias
    - Substation & Laydown Area
    - Disturbance Area
    - Existing 500kV Transmission Line
    - Proposed Turbine
    - Proposed Transformer
    - Bornish Turbines
    - Adelaide Turbines
    - Senior Adelaide Turbines
    - Coar Point Turbines
  - Parkhill Interconnect Infrastructure (See Addendum)
    - Parkhill Transformer Substation and Point of Interconnection
    - Proposed Transmission Line from Parkhill Transformer Substation to Mill Hill TS
    - Bornish Substation

Theftford (1:6,500)

North Middlesex

Refer to Appendix B: Parkhill Interconnect Noise Impact Assessment Report

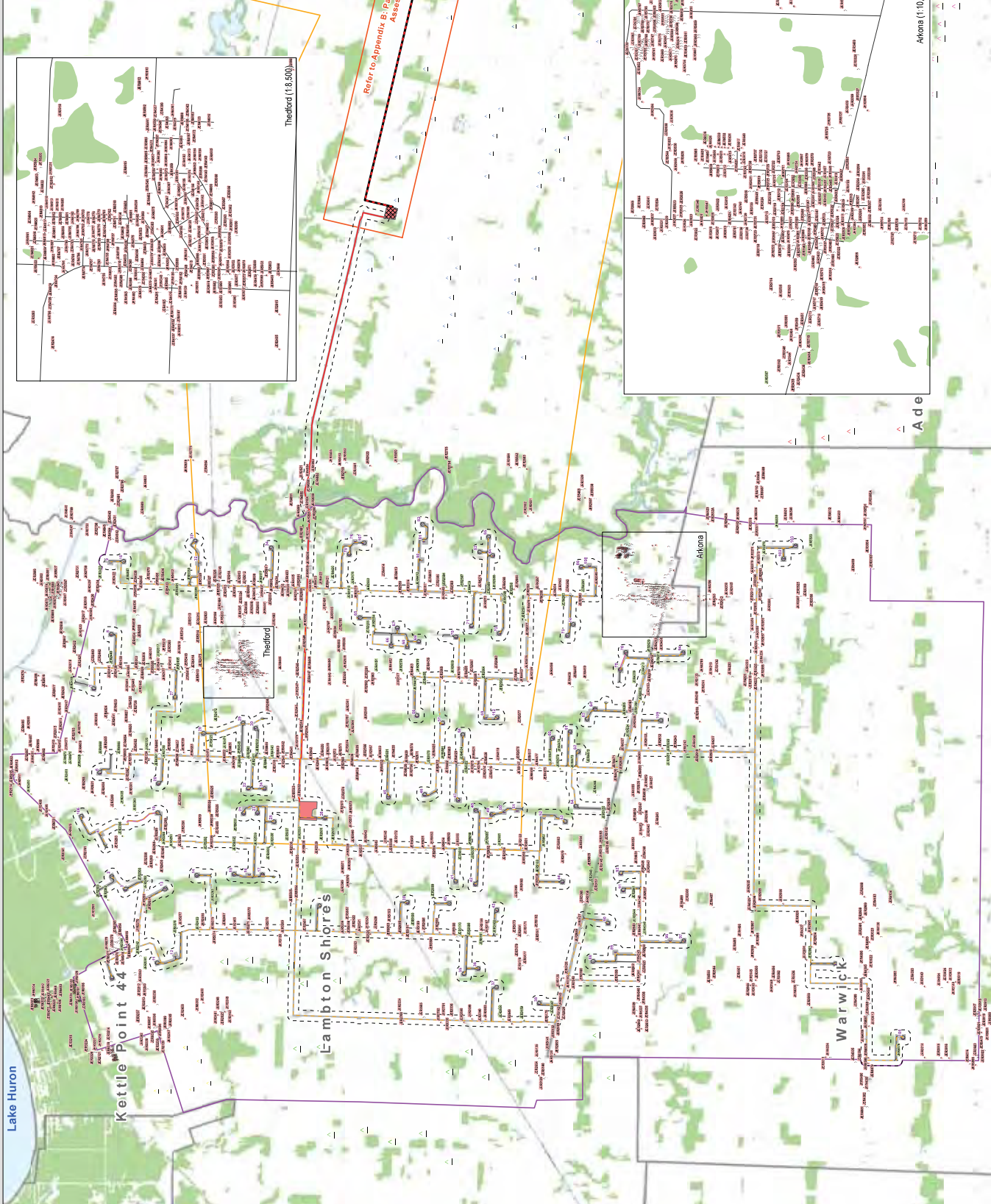
Scale: 0 600 1200 2400 Metres

UTM Zone 17N, NAD 83

Project: 65155032

Scale: 1:10,000

Alcona



**Index Wind Energy Centre Noise Modelling Assessment**

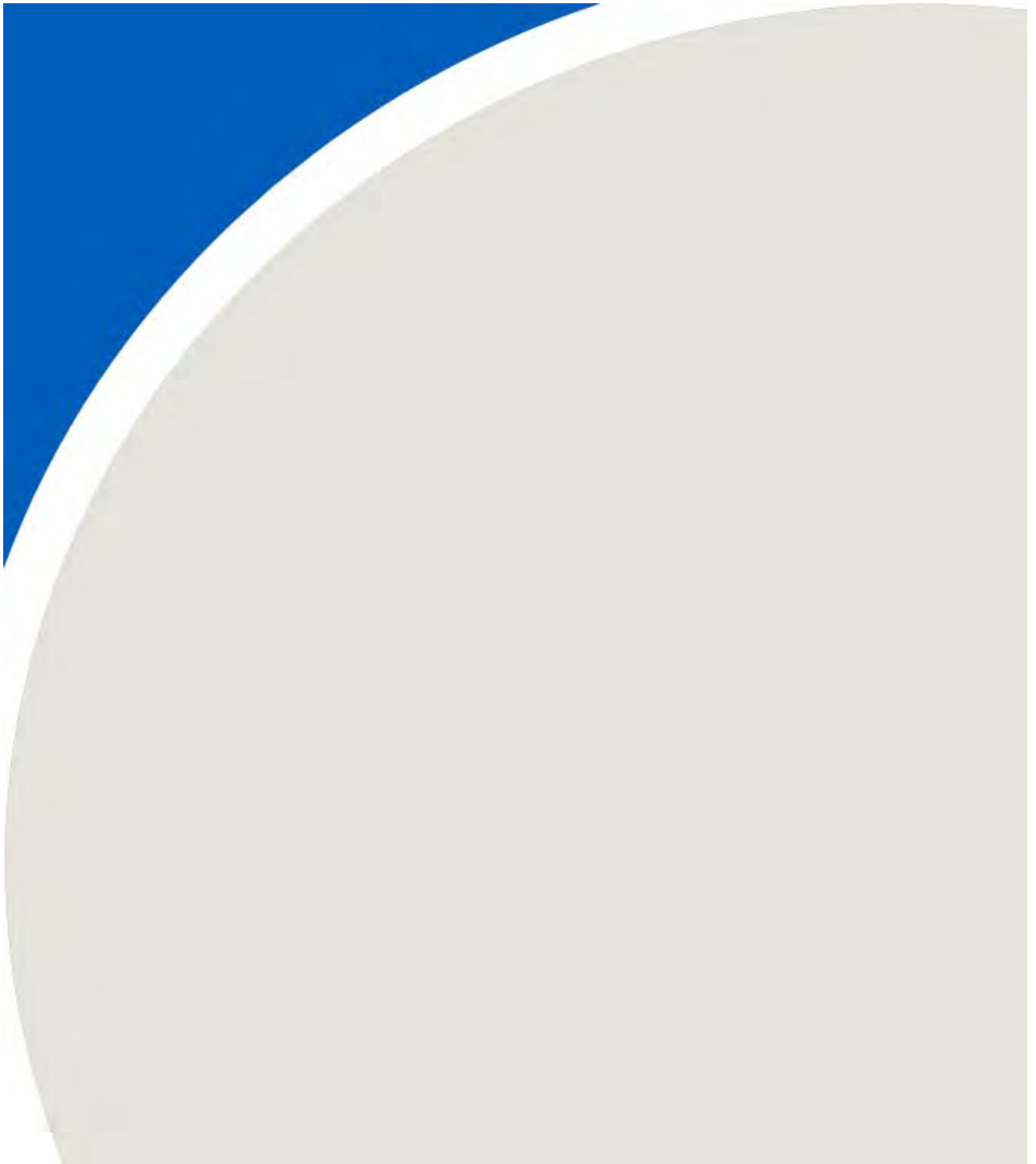
**Noise Modelling Site Plan**

File name: 65155032

Project: 65155032

**AECOM**

## APPENDIX B



**RENEWABLE ENERGY APPROVAL**NUMBER 5855-9HHGQR  
Issue Date: April 14, 2014

Jericho Wind, Inc.  
390 Bay Street, Suite 1720  
Toronto, Ontario  
M5H 2Y2

Project: Jericho Wind Energy Centre  
Location: Generally bounded by Lakeshore Road/Bog Line to the north, Egremont Road to the south, the Lambton Shores/North Middlesex municipal boundary to the east, and Rawlings Road/Elarton Road to the west, in Lambton County. Extends eastward into Middlesex County generally along and adjacent to Elginfield Road and Nairn Road between the Lambton Shores/North Middlesex municipal boundary and Cassidy Road.  
Municipality of Lambton Shores, Township of Warwick, County of Lambton, Municipality of North Middlesex, County of Middlesex

*You have applied in accordance with Section 47.4 of the Environmental Protection Act for approval to engage in a renewable energy project in respect of a Class 4 wind facility consisting of the following:*

- the construction, installation, operation, use and retiring of a 92 wind turbine generator, Class 4 wind facility with a total name plate capacity of 150 megawatts.

*For the purpose of this renewable energy approval, the following definitions apply:*

1. "Acoustic Assessment Report" means the report included in the Application and entitled "Jericho Wind Energy Centre - Revised Noise Assessment Report", dated February 2014, prepared by AECOM and signed by Alex Dundon P.Eng. and Alan Oldfield P.Eng., and "Parkhill Interconnect - Noise Impact Assessment", dated April 2, 2013, prepared by GL Garrad Hassan and signed by A. Nercessian, S. Dokouzian, N. O'Blenes, M. Roberge and D. Eaton;

2. "Acoustic Audit - Emission" means an investigative procedure that is compliant with the CAN/CSA Standard C61400-11-07 and consisting of measurements and/or acoustic modelling of noise emissions produced by wind turbine generators, assessed to determine compliance with the manufacturer's noise (acoustic) equipment specifications and emission data of the wind turbine generators, included in the Acoustic Assessment Report;
3. "Acoustic Audit - Immission" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Equipment, assessed to determine compliance with the Noise Performance Limits set out in this Approval;
4. "Acoustic Audit Report-Emission" means a report presenting the results of the Acoustic Audit - Emission;
5. "Acoustic Audit Report-Immission" means a report presenting the results of the Acoustic Audit - Immission;
6. "Acoustic Audit - Transformer Substation" means an investigative procedure that is compliant with the IEEE Standard C57.12.90 consisting of measurements and/or acoustic modelling of all noise sources comprising the transformer substation assessed to determine compliance with the Sound Power Level specification of the transformer substation described in the Acoustic Assessment Report.
7. "Acoustic Audit Report - Transformer Substation" means a report presenting the results of the Acoustic Audit - Transformer Substation.
8. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is knowledgeable about Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from wind facilities;
9. "Act" means the *Environmental Protection Act*, R.S.O 1990, c.E.19, as amended;
10. "Adverse Effect" has the same meaning as in the Act;
11. "Application" means the application for a Renewable Energy Approval dated February 12, 2013, and signed by F. Allen Wiley, Jericho Wind, Inc., and all supporting documentation submitted with the application, including amended documentation submitted up to the date this Approval is issued;
12. "Approval" means this Renewable Energy Approval issued in accordance with Section 47.4 of the Act, including any schedules to it;
13. "A-weighting" means the frequency weighting characteristic as specified in the International Electrotechnical Commission (IEC) Standard 61672, and intended to approximate the relative sensitivity of the normal human ear to different frequencies (pitches) of sound. It is denoted as "A";
14. "A-weighted Sound Pressure Level" means the Sound Pressure Level modified by application of an A-weighting network. It is measured in decibels, A-weighted, and denoted "dBA";

15. "Class 1 Area" means an area with an acoustical environment typical of a major population centre, where the background sound level is dominated by the activities of people, usually road traffic, often referred to as "urban hum";
16. "Class 2 Area" means an area with an acoustical environment that has qualities representative of both Class 1 and Class 3 Areas:
  1. sound levels characteristic of Class 1 during daytime (07:00 to 19:00 or to 23:00 hours);
  2. low evening and night background sound level defined by natural environment and infrequent human activity starting as early as 19:00 hours (19:00 or 23:00 to 07:00 hours);
  3. no clearly audible sound from stationary sources other than from those under impact assessment.
17. "Class 3 Area" means a rural area with an acoustical environment that is dominated by natural sounds having little or no road traffic, such as the following:
  1. a small community with less than 1000 population;
  2. agricultural area;
  3. a rural recreational area such as a cottage or a resort area; or
  4. a wilderness area.
18. "Company" means Jericho Wind, Inc. and includes its successors and assignees;
19. "Compliance Protocol for Wind Turbine Noise" means the Ministry document entitled, Compliance Protocol for Wind Turbine Noise, Guideline for Acoustic Assessment and Measurement, PIBS# 8540e;
20. "Decibel" means a dimensionless measure of Sound Level or Sound Pressure Level, denoted as dB;
21. "Director" means a person appointed in writing by the Minister of the Environment pursuant to section 5 of the Act as a Director for the purposes of section 47.5 of the Act;
22. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Facility is geographically located;
23. "Equipment" means the ninety two (92) wind turbine generators and one (1) transformer substation in the Jericho location and two(2) transformer substations in the Parkhill Interconnect location, identified in this Approval and as further described in the Application, to the extent approved by this Approval;

24. "Equivalent Sound Level" is the value of the constant sound level which would result in exposure to the same total A-weighted energy as would the specified time-varying sound, if the constant sound level persisted over an equal time interval. It is denoted  $L_{eq}$  and is measured in dB A-weighting (dBA);
25. "Facility" means the renewable energy generation facility, including the Equipment, as described in this Approval and as further described in the Application, to the extent approved by this Approval;
26. "IEEE Standard C57.12.90" means the IEEE Standard Test Code for Liquid-Immersed Distribution, Power, and Regulating Transformers, 2010.
27. CAN/CSA Standard C61400-11-07, "Wind Turbine Generator Systems – Part 11: Acoustic Noise Measurement Techniques", dated October 2007;
28. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment;
29. "Ministry" means the ministry of the government of Ontario responsible for the Act and includes all officials, employees or other persons acting on its behalf;
30. "Noise Guidelines for Wind Farms" means the Ministry document entitled, "Noise Guidelines for Wind Farms - Interpretation for Applying MOE NPC Publications to Wind Power Generation Facilities", dated October 2008;
31. "Noise Receptor" has the same meaning as in O. Reg. 359/09;
32. "Publication NPC-103" means the Ministry Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the Ministry as amended.
33. "Publication NPC-233" means Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October 1995;
34. "O. Reg. 359/09" means Ontario Regulation 359/09 "Renewable Energy Approvals under Part V.0.1 of the Act" made under the Act;
35. "Point of Reception" has the same meaning as in the Noise Guidelines for Wind Farms and is subject to the same qualifications described in that document;
36. "Sound Level" means the A-weighted Sound Pressure Level;
37. "Sound Level Limit" is the limiting value described in terms of the one hour A-weighted Equivalent Sound Level  $L_{eq}$  ;

38. "Sound Power Level" means ten times the logarithm to the base of 10 of the ratio of the sound power (Watts) of a noise source to standard reference power of  $10^{-12}$  Watts;
39. "Sound Pressure" means the instantaneous difference between the actual pressure and the average or barometric pressure at a given location. The unit of measurement is the micro pascal ( $\mu\text{Pa}$ );
40. "Sound Pressure Level" means twenty times the logarithm to the base 10 of the ratio of the effective pressure ( $\mu\text{Pa}$ ) of a sound to the reference pressure of 20  $\mu\text{Pa}$ ;
41. "UTM" means Universal Transverse Mercator coordinate system.

*You are hereby notified that this approval is issued to you subject to the terms and conditions outlined below:*

## **TERMS AND CONDITIONS**

### **A – GENERAL**

- A1. The Company shall construct, install, use, operate, maintain and retire the Facility in accordance with the terms and conditions of this Approval and the Application and in accordance with the following schedules attached hereto:  
  
Schedule A - Facility Description  
Schedule B - Coordinates of the Equipment and Noise Specifications  
Schedule C - Noise Control Measures
- A2. Where there is a conflict between a provision of this Approval and any document submitted by the Company, the conditions in this Approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Company, the document bearing the most recent date shall take precedence.
- A3. The Company shall ensure a copy of this Approval is:
  - (1) accessible, at all times, by Company staff operating the Facility and;
  - (2) submitted to the clerk of each local municipality and upper-tier municipality in which the Facility is situated.
- A4. If the Company has a publicly accessible website, the Company shall ensure that the Approval and the Application are posted on the Company's publicly accessible website within five (5) business days of receiving this Approval.



- A5. The Company shall, at least six (6) months prior to the anticipated retirement date of the entire Facility, or part of the Facility, review its Decommissioning Plan Report to ensure that it is still accurate. If the Company determines that the Facility cannot be decommissioned in accordance with the Decommissioning Plan Report, the Company shall provide the Director and District Manager a written description of plans for the decommissioning of the Facility.
- A6. The Facility shall be retired in accordance with the Decommissioning Plan Report and any directions provided by the Director or District Manager.
- A7. The Company shall provide the Director and the District Manager at least ten (10) days written notice of the following:
  - (1) the commencement of any construction or installation activities at the project location; and
  - (2) the commencement of the operation of the Facility.
- A8. As described in Schedule A of the Approval the Company shall not construct or operate more than ninety two (92) out of the ninety nine (99) wind turbine generators identified in the Schedule B of the Approval;

**B – DURATION OF APPROVAL**

- B1. Construction and installation of the Facility must be completed within three (3) years of the later of:
  - (1) the date this Approval is issued; or
  - (2) if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
- B2. This Approval ceases to apply in respect of any portion of the Facility not constructed or installed before the later of the dates identified in Condition B1.

**C – NOISE PERFORMANCE LIMITS**

- C1. The Company shall ensure that:
  - (1) the Sound Levels from the Equipment, at the Points of Reception identified in the Acoustic Assessment Report, comply with the Sound Level Limits set in the Noise Guidelines for Wind Farms, as applicable, and specifically as stated in the table below:

| <b>Wind Speed (m/s) at 10 m height</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> |
|--|----------|----------|----------|----------|----------|----------|-----------|
| Sound Level Limits, dBA                | 40.0     | 40.0     | 40.0     | 43.0     | 45.0     | 49.0     | 51.0      |

- (2) the Equipment is constructed and installed at either of the following locations:
- a) at the locations identified in Schedule B of this Approval; or
  - b) at a location that does not vary by more than 10 metres from the locations identified in Schedule B of this Approval and provided that,
    - i) the Equipment will comply with Condition C1 (1); and
    - ii) all setback prohibitions established under O. Reg. 359/09 are complied with.
- (3) the Equipment complies with the noise specifications set out in Schedule B of this Approval.

- C2. If the Company determines that some or all of the Equipment cannot be constructed in accordance with Condition C1 (2), prior to the construction and installation of the Equipment in question, the Company shall apply to the Director for an amendment to the terms and conditions of the Approval.
- C3. Within three (3) months of the completion of the construction of the Facility, the Company shall submit to the Director a written confirmation signed by an individual who has the authority to bind the Company that the UTM coordinates of the “as constructed” Equipment comply with the requirements of Condition C1 (2).

#### **D – CONFIRMATION OF VACANT LOT NOISE RECEPTORS**

- D1. The locations identified in Noise Impact Summary Table of the Acoustic Assessment Report as JER\_VNP\_1 to JER\_VNP\_529 are specified as Noise Receptors for the purposes of subsection 54 (1.1) of O. Reg. 359/09 and subsection 35 (1.01) of O. Reg. 359/09”.

#### **E – ACOUSTIC AUDIT - IMMISSION**

- E1. The Company shall carry out an Acoustic Audit - Immission of the Sound Levels produced by the operation of the Equipment in accordance with the following:
- (1) the acoustic audit measurements shall be undertaken in accordance with Part D of the Compliance Protocol for Wind Turbine Noise;
  - (2) the acoustic audit measurements shall be performed by an Independent Acoustical Consultant on two (2) separate occasions at five (5) different Points of Reception;
  - (3) the Points of Reception shall be selected using the following criteria, subject to the constraints imposed by the location of the Points of Reception with respect to the location of the Equipment:
    - a) the selected Point(s) of Reception should represent the location of the greatest predicted noise impact, i.e., the highest predicted Sound Level(s); and

- b) the selected Point(s) of Reception should be located in the direction of prevailing winds from the Facility;

- E2. The Company shall submit to the Director and the District Manager an Acoustic Audit Report - Immission, prepared by an Independent Acoustical Consultant, at the following points in time:
  - (1) no later than twelve (12) months after the commencement of the operation of the Facility for the first of the two (2) acoustic audit measurements at the five (5) Points of Reception; and
  - (2) no later than eighteen (18) months after the commencement of the operation of the Facility for the second of the two (2) acoustic audit measurements at the five (5) Points of Reception.
- E3. The Company shall carry out an Acoustic Audit - Transformer Substation and shall submit to the District Manager and the Director an Acoustic Audit Report – Transformer Substation prepared by an Independent Acoustical Consultant, in accordance with the IEEE Standard C57.12.90 and Ministry Publication NPC-233 and no later than six (6) months after the commencement of the operation of the Facility.

#### **F – ACOUSTIC AUDIT- EMISSION**

- F1. The Company shall carry out an Acoustic Audit - Emission of the acoustic emissions produced by the operation of the wind turbine generators in accordance with the following:
  - (1) the acoustic emission measurements shall be undertaken in accordance with the CAN/CSA Standard C61400-11-07;
  - (2) the acoustic emission measurements shall be performed by an Independent Acoustical Consultant; and
  - (3) the acoustic emission measurements shall be performed on four (4) of the wind turbine generators used in the Facility.
- F2. The Company shall submit to the Director and the District Manager an Acoustic Audit Report-Emission, prepared in accordance with Section 9 of the CAN/CSA Standard C61400-11-07 by an Independent Acoustical Consultant, no later than twelve (12) months after the commencement of the operation of the Facility.

The Acoustic Audit Report-Emission must also provide a compliance summary of the measurements and the data in Acoustic Assessment Report. The following items must be included in the summary:

- (1) the sound power levels (octave and overall for each wind speed) ,and
- (2) tonal audibility values.

## **G – STORMWATER MANAGEMENT**

- G1. The Company shall employ best management practices for stormwater management and sediment and erosion control during construction, installation, use, operation, maintenance and retiring of the Facility, as described in the Application.
- G2. Within six (6) months of the completion of the construction of the Facility, the Company shall provide the District Manager with a written description of post-construction stormwater management conditions.

## **H – WATER TAKING ACTIVITIES**

- H1. The Company shall not take more than 50,000 litres of water per day per turbine construction site by any means during the construction and retiring of the Facility.
- H2. Notwithstanding Condition H1, at the construction sites for Turbines 8, 25, 32, 33, and 34, the Company is authorized to take a maximum of 400,000 litres of water per day, for the purpose of construction dewatering for foundation construction.
- H3. If the taking of water is observed to cause any negative impact to other water supplies obtained from any adequate sources that were in use prior to initial issuance of an approval for this water taking, the Company shall take such action necessary to make available to those affected, a supply of water equivalent in quantity and quality to their normal takings, or shall compensate such persons for their reasonable costs of so doing, or shall reduce the rate and amount of taking to prevent or alleviate the observed negative impact. Pending permanent restoration of the affected supplies, the Company shall provide, to those affected, temporary water supplies adequate to meet their normal requirements, or shall compensate such persons for their reasonable costs of doing so. If permanent interference is caused by the water taking, the Company shall restore the water supplies of those permanently affected.
- H4. On each day water is taken at a turbine foundation construction site for the purpose of construction dewatering, the Company shall record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter, or estimated based on the rate and duration of pumping. The Company shall keep all records required by this condition current, and shall make these records available for review by the Ministry upon request.
- H5. Sedimentation and erosion control measures, such as straw bales, silt fence barriers, sand bags, and/or turbidity curtains, shall be installed at the site of all construction dewatering activities during the construction phase, and remain until the site has been stabilized. The sedimentation and erosion control measures shall be sufficient to control the volumes of surface runoff. Continuous care shall be taken to properly maintain the sedimentation and erosion control devices.
- H6. The Company shall ensure that any water discharged to the natural environment does not result in scouring, erosion or physical alteration of stream channels or banks and that there is no flooding in the receiving area or water body, downstream water bodies, ditches or properties caused or worsened by this discharge.

- H7. The Company shall undertake, as necessary, any other proposed monitoring and mitigation measures described in the Final Construction Plan Report – Jericho Wind Energy Centre, dated February 2013, prepared by AECOM, and the Revision to the Construction Plan Report – Jericho Wind Energy Centre, dated October 2013, prepared by AECOM.

## **I – SEWAGE WORKS OF THE TRANSFORMER SUBSTATION SPILL CONTAINMENT FACILITY**

- I1. The Company shall design and construct a transformer substation oil spill containment facility which meets the following requirements:
- (1) the spill containment facility serving the transformer substation shall have a minimum volume equal to the volume of transformer oil and lubricants plus the volume equivalent to providing a minimum 24-hour duration, 50-year return storm capacity for the stormwater drainage area around the transformer under normal operating conditions. This containment area shall have:
    - (a) an impervious floor with walls usually of reinforced concrete or impervious plastic liners, sloped toward an outlet / oil control device, allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility shall have a minimum of 300mm layer of crushed stoned (19mm to 38mm in diameter) within, all as needed in accordance to site specific conditions and final design parameters; or
    - (b) a permeable floor with impervious plastic walls and around the transformer pad; equipped with subsurface drainage with a minimum 50mm diameter drain installed on a sand layer sloped toward an outlet for sample collection purposes; designed with an oil absorbent material on floor and walls, and allowing for a freeboard of 0.25 metres terminating approximately 0.30 metres above grade to prevent external stormwater flows from entering the facility. The facility's berm shall be designed as needed in accordance to site specific conditions and the facility shall have a minimum 300mm layer of crushed stoned (19mm to 38mm in diameter) on top of the system, as needed in accordance to site specific conditions and final design parameters.
  - (2) the spill containment facility shall be equipped with an oil detection system; it also shall have a minimum of two (2) PVC pipes (or equivalent material) 50mm diameter to allow for visual inspection of water accumulation. One pipe has to be installed half way from the transformer pad to the vehicle access route;
  - (3) the spill containment facility shall have appropriate sewage appurtenances as necessary, such as but not limited to: sump, oil/grit separator, pumpout manhole, level controllers, floating oil sensors, etc., that allows for batch discharges or direct discharges and for proper implementation of the monitoring program described under Condition I4; and
  - (4) the Company shall have a qualified person on-site during construction to ensure that the system is installed in accordance with the approved design and specifications.

I2. The Company shall:

- (1) within six (6) months after the completion of the construction of the transformer substation spill containment facility, provide to the District Manager an engineering report and as-built design drawings of the sewage works for the spill containment facility and any stormwater management works required for it, signed and stamped by an independent Professional Engineer licensed in Ontario and competent in electrical and environmental engineering. The engineering report shall include the following:
  - (a) as-built drawings of the sewage works for the spill containment facility and any stormwater management works required for it;
  - (b) a written report signed by a qualified person confirming the following:
    - (i) on-site supervision during construction
    - (ii) in case of a permeable floor systems: type of oil absorbent material used (for mineral-based transformer oil or vegetable-based transformer oil, make and material's specifications)
    - (iii) use of stormwater best management practices applied to prevent external surface water runoff from entering the spill containment facility, and
    - (iv) confirm adequacy of the installation in accordance with specifications.
  - (c) confirmation of the adequacy of the operating procedures and the emergency procedures manuals as it pertains to the installed sewage works.
  - (d) procedures to provide emergency response to the site in the form of pumping and clean-up equipment within 24 hours after an emergency has been identified. Such response shall be provided even under adverse weather conditions to prevent further danger of material loss to the environment.
- (2) as a minimum, the Company shall check the oil detection systems on a monthly basis and create a written record of the inspections;
- (3) ensure that the effluent is essentially free of floating and settle-able solids and does not contain oil or any other substance in amounts sufficient to create a visible film, sheen or foam on the receiving waters;
- (4) immediately identify and clean-up all losses of oil from the transformer;
- (5) upon identification of oil in the spill containment facility, take immediate action to prevent the further occurrence of such loss;
- (6) ensure that equipment and material for the containment, clean-up and disposal of oil and materials contaminated with oil are kept within easy access and in good repair for immediate use in the event of:

- (a) loss of oil from the transformer,
- (b) a spill within the meaning of Part X of the Act, or
- (c) the identification of an abnormal amount of oil in the effluent.

- (7) in the event of finding water accumulation in the PVC pipes at the time of inspection, as per Condition I4, the Company shall: (a) for impervious floors, inspect the sewage appurtenances that allow drainage of the concrete pit; or (b) for permeable systems, replace the oil absorbent material to ensure integrity of the system performance and design objectives.
- (8) for permeable floor systems, the Company shall only use the type of oil specified in the design, i.e. mineral-based transformer oil or vegetable-based transformer oil. If a change is planned to modify the type of oil, the Company shall also change the type of the oil absorbent material and obtain approval from the Director to amend this Approval before any modification is implemented.

I3. The Company shall design, construct and operate the sewage works such that the concentration of the effluent parameter named in the table below does not exceed the maximum Concentration Objective shown for that parameter in the effluent, and shall comply with the following requirements:

| <b>Effluent Parameters</b> | <b>Maximum Concentration Objective</b> |
|----------------------------|--|
| Oil and Grease             | 15mg/L                                 |

- (1) notify the District Manager as soon as reasonably possible of any exceedance of the maximum concentration objective set out in the table above;
- (2) take immediate action to identify the cause of the exceedance; and
- (3) take immediate action to prevent further exceedances.

I4. Upon commencement of the operation of the Facility, the Company shall establish and carry out the following monitoring program for the sewage works:

- (1) the Company shall collect and analyze the required set of samples at the sampling points listed in the table below in accordance with the measurement frequency and sample type specified for the effluent parameter, oil and grease, and create a written record of the monitoring:

| <b>Effluent Parameters</b> | <b>Measurement Frequency and Sample Points</b>  | <b>Sample Type</b> |
|----------------------------|---|--------------------|
| Oil and Grease             | Quarterly, i.e. four times over a year, relatively evenly spaced having a minimum two (2) of these samples taken within 48 hours after a 10mm rainfall event. | Grab               |

- (2) in the event of an exceedance of the maximum concentration objective set out in the table in Condition I3, the Company shall:

- (a) increase the frequency of sampling to once per month, for each month that effluent discharge occurs, and
  - (b) provide the District Manager, on a monthly basis, with copies of the written record created for the monitoring until the District Manager provides written direction that monthly sampling and reporting is no longer required; and
- (3) if over a period of twenty-four (24) months of effluent monitoring under Condition I4, there are no exceedances of the maximum concentration set out in the table for Concentration Objective, the Company may reduce the measurement frequency of effluent monitoring to a frequency as the District Manager may specify in writing, provided that the new specified frequency is never less than annual.
- I5. The Company shall comply with the following methods and protocols for any sampling, analysis and recording undertaken in accordance with Condition I4:
- (1) Ministry of the Environment publication "Protocol for the Sampling and Analysis of Industrial/ Municipal Wastewater", January 1999, as amended from time to time by more recently published editions, and
  - (2) the publication "Standard Methods for the Examination of Water and Wastewater", 21st edition, 2005, as amended from time to time by more recently published editions.

## **J – TRAFFIC MANAGEMENT PLANNING**

- J1. Within three (3) months of receiving this Approval, the Company shall prepare a Traffic Management Plan and provide it to the Municipality of Lambton Shores, Township of Warwick, Lambton County, and Middlesex County.
- J2. Within three (3) months of having provided the Traffic Management Plan to the Municipality of Lambton Shores, Township of Warwick, Lambton County, and Middlesex County, the Company shall make reasonable efforts to enter into a Road Users Agreement with the Municipality of Lambton Shores, Township of Warwick, Lambton County, and Middlesex County.
- J3. If a Road Users Agreement has not been signed with the Municipality of Lambton Shores, Township of Warwick, Lambton County, and Middlesex County within three (3) months of having provided the Traffic Management Plan to the Municipality of Lambton Shores, Township of Warwick, Lambton County, and Middlesex County, the Company shall provide a written explanation to the Director as to why this has not occurred.

## **K – ENDANGERED SPECIES ACT REQUIREMENTS**

- K1. No construction or installation activities shall be commenced in areas at the project location that support habitat for Bobolink and Eastern Meadowlark until the Company has met all requirements under the Endangered Species Act, 2007.



- K2. The Company shall not commence operation of the Facility prior to receiving a written notice of approval from the Minister of Natural Resources related to any operations mitigation plans submitted by the Company pursuant to paragraph 1 of subsection 23.20(7) of O. Reg. 242/08.
- K3. The Company shall ensure that the mitigation measures contained in the approved mitigation plans described in Condition K2 are implemented during the operation of the Facility, subject to any agreement on alternative mitigation measures between the Company and the Ministry of Natural Resources.

## **L – NATURAL HERITAGE**

### **General**

- L1. The Company shall implement the Natural Heritage Environmental Effects Monitoring Plan (EEMP) for the Jericho Wind Energy Centre, dated October 2013, and the commitments made in the following reports and included in the Application, and which the Company submitted to the Ministry of Natural Resources in order to comply with O. Reg. 359/09:
- (1) Natural Heritage Assessment and Environmental Impact Study Report, dated February 2013 and prepared by AECOM.
  - (2) Natural Heritage Assessment and Environmental Impact Study Addendum, dated December 10, 2012, prepared by AECOM
  - (3) Natural Heritage Assessment and Environmental Impact Study Report Second Addendum, dated January 2013, prepared by AECOM
  - (4) Natural Heritage Assessment and Environmental Impact Study Report Third Addendum, dated October 2013, prepared by AECOM
- L2. If the Company determines that it must deviate from the Environmental Effects Monitoring Plan or the Natural Heritage Assessment and Environmental Impact Study or Addenda thereto, described in Condition L1, the Company shall contact the Director and the Ministry of Natural Resources, prior to making any changes to the Environmental Effects Monitoring Plan or the Natural Heritage Assessment and Environmental Impact Study or Addenda, and follow any directions provided.

### **Post Construction Monitoring - Significant Wildlife Habitat**

- L3. The Company shall implement the post-construction monitoring described in the Environmental Effects Monitoring Plan described in Condition L1, including the following:
- (1) Disturbance Monitoring for Bat Maternity Colony Habitat (BMA-143; BMA-155; BMA-168; BMA-216; BMA-217; BMA-382)

- (2) Disturbance Monitoring for Bald Eagle and Osprey Nesting, Foraging and Perching Habitat (BEN-01)
- (3) Disturbance Monitoring for Amphibian Woodland Breeding Habitat (AWO-01; AWO-03; AWO-04; AWO-05; AWO-11; AWO-12; AWO-13; AWO-19)
- (4) Disturbance Monitoring for Amphibian Movement Corridor (AMC-01)

### **Post Construction Monitoring - Birds and Bats**

L4. The Company shall implement the post-construction bird and bat mortality monitoring described in the Environmental Effects Monitoring Plan, described in Condition L1, at a minimum of 28 of the 92 constructed turbines, selected in consultation with the Ministry of Natural Resources.

### **Thresholds and Mitigation**

L5. The Company shall contact the Director and the Ministry of Natural Resources if any of the following bird and bat mortality thresholds, as stated in the Environmental Effects Monitoring Plan for the Jericho Wind Energy Centre described in Condition L1, exceeds:

- (1) 10 bats per turbine per year;
- (2) 14 birds per turbine per year at individual turbines or turbine groups;
- (3) 0.2 raptors per turbine per year (all raptors) across the Facility;
- (4) 0.1 raptors per turbine per year (provincially tracked raptors) across the Facility;
- (5) 10 or more birds at any one turbine during a single monitoring survey; or
- (6) 33 or more birds (including raptors) at multiple turbines during a single monitoring survey.

L6. If the bat mortality threshold described in Condition L5(1) is exceeded, the Company shall:

- (1) implement operational mitigation measures consistent with those described in the Ministry of Natural Resources publication entitled "*Bats and Bat Habitats: Guidelines for Wind Power Projects*" dated July 2011, or in an amended version of the publication. Such measures shall include some or all of the following:
  - i. increase cut-in speed to 5.5 m/s and/or feather wind turbine blades when wind speeds are below 5.5 m/s between sunset and sunrise, from July 15 to September 30 at all turbines; or
- (2) implement an additional three (3) years of effectiveness monitoring.

- L7. If the bat mortality threshold described in Condition L5(1) is exceeded after operational mitigation is implemented in accordance with Condition L6, the Company shall prepare and implement a contingency plan, in consultation with the Director and the Ministry of Natural Resources, to address mitigation actions which shall include additional mitigation and scoped monitoring requirements.
- L8. If any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded for turbines located outside 120m of bird significant wildlife habitat, the Company shall conduct two (2) years of subsequent scoped mortality monitoring and cause and effects monitoring. Following the completion of scoped monitoring, the Company shall implement operational mitigation and effectiveness monitoring at individual turbines as agreed to between the Company, the Director and the Ministry of Natural Resources, for the first three (3) years following the implementation of mitigation.
- L9. If either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded, the Company shall prepare and implement a contingency plan to address immediate mitigation actions which shall include:
- (1) periodic shut-down of select turbines; or
  - (2) blade feathering at specific times of year; or
  - (3) an alternate plan agreed to between the Company, the Director, and the Ministry of Natural Resources.
- L10. If any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded while monitoring is being implemented in accordance with Conditions L8, or if either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded after mitigation is implemented in accordance with Condition L9, the Company shall contact the Director and the Ministry of Natural Resources and prepare and implement an appropriate response plan that shall include some or all of the following mitigation measures:
- (1) increased reporting frequency to identify potential threshold exceedance;
  - (2) additional behavioural studies to determine factors affecting mortality rates;
  - (3) periodic shut-down of select turbines;
  - (4) blade feathering at specific times of year; or
  - (5) an alternate plan agreed to between the Company, the Director, and the Ministry of Natural Resources.

## Reporting and Review of Results

- L11. The Company shall report, in writing, the results of the post-construction disturbance monitoring described in Conditions L3, to the Director and the Ministry of Natural Resources for three (3) years on an annual basis and within three (3) months of the end of each calendar year in which the monitoring took place.
- L12. The Company shall report, in writing, bird and bat mortality levels to the Director and the Ministry of Natural Resources for three (3) years on an annual basis and within three (3) months of the conclusion of the November mortality monitoring, with the exception of the following:
- (1) if either of the bird mortality thresholds described in Conditions L5(5) or L5(6) are exceeded, the Company shall report the mortality event to the Director and the Ministry of Natural Resources within 48 hours of observation;
  - (2) for any and all mortality of species at risk (including a species listed on the Species at Risk in Ontario list as Extirpated, Endangered or Threatened under the provincial *Endangered Species Act, 2007*) that occurs, the Company shall report the mortality to the Ministry of Natural Resources within 24 hours of observation or the next business day;
  - (3) if the bat mortality threshold described in Condition L5(1) is exceeded, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the additional three (3) years of monitoring described in Condition L6, on an annual basis and within three (3) months of the conclusion of the October mortality monitoring for each year;
  - (4) if any of the bird mortality thresholds described in Conditions L5(2), L5(3), or L5(4) are exceeded for turbines located outside 120 m of bird significant wildlife habitat, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the additional two (2) years of cause and effects monitoring described in Condition L8, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year; and
  - (5) if the Company implements operational mitigation following cause and effects monitoring in accordance with Condition L8, the Company shall report mortality levels to the Director and the Ministry of Natural Resources for the three (3) years of subsequent effectiveness monitoring described in Condition L8, on an annual basis and within three (3) months of the conclusion of the November mortality monitoring for each year.
- L13. The Company shall publish the following documents on the Company's website:
- (1) any modifications to the Environmental Effects Monitoring Plan as described in Condition L2 within ten (10) days of submitting the final plan to the Director and the Ministry of Natural Resources;

- (2) the results of the post-construction disturbance monitoring as described in Condition L11 within ten (10) days of submitting the final report(s) to the Director and the Ministry of Natural Resources; and
- (3) annual bird and bat mortality monitoring as described in Condition L12 with the exception of subsection L12(2), within ten (10) days of submitting the final report(s) to the Director and the Ministry of Natural Resources.

### **Additional Post Construction Requirements**

- L14. As identified in the Environmental Effects Monitoring Plan, described in Condition L1, a compensation plan will be developed and implemented to establish an area of forest equal in area to the cleared area (0.5ha), with the total area to be confirmed through a post-construction site inspection conducted by the Company. Details of the compensation plan will be prepared in consultation with the Director and the Ministry of Natural Resources. The compensation plan shall be submitted to the Director and the Ministry of Natural Resources within the first year of operation of the project.
- L15. As identified in the Environmental Effects Monitoring Plan, described in Condition L1, a restoration plan will be developed and implemented to revegetate the 5m buffer between an access road and WET-027. Details of the restoration plan, including two years of monitoring, will be prepared in consultation with the Director and the Ministry of Natural Resources. The restoration plan shall be submitted to the Director and the Ministry of Natural Resources prior to construction adjacent to WET-027.

### **M – ENVIRONMENT CANADA**

- M1. Prior to operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) any of the wind turbines at the Facility, the Company shall, in collaboration with Environment Canada, develop and, enter into the following:
- (1) an Exceptional Weather Event Protocol that ensures that the Exeter Radar Station (Weather Radar) continues to provide accurate and reliable forecasts and weather warnings for high risk weather events;
  - (2) a Follow-up Plan; and
  - (3) an Adaptive Management Strategy.
- M2. Prior to operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) any of the wind turbines at the Facility, the Company shall enter into an Agreement Regarding the Implementation of the Follow-up Plan, the Adaptive Management Strategy and the Exceptional Weather Event Protocol (Agreement) with Environment Canada that will set out the details of the commitments and timelines required for the Exceptional Weather Event Protocol, Follow-up Plan, and Adaptive Management Strategy. The Agreement shall include specifics of the financial assurance to be provided by the Company to ensure the implementation of the agreement.

- M3. The day the first wind turbine is operating (turbine blade movement that is feathered in accordance with the manufacturer's specifications is allowed) at the Facility, the Company shall begin implementing its obligations under the Exceptional Weather Event Protocol and Follow-up Plan described in Condition M1.
- M4. As part of the Follow-Up Plan, the Company shall, in collaboration with Environment Canada:
- (1) develop the measureable objectives and decision making criteria for defining the success of the plan;
  - (2) provide for the development, and subsequently the implementation, of the data interpolation mitigation measure agreed to by the Company and Environment Canada;
  - (3) verify the accuracy of the predicted adverse impacts to the Weather Radar resulting from the commercial operation of the Facility;
  - (4) assess the effectiveness of the data interpolation measure(s) to mitigate the predicted adverse impacts during the commercial operation of the Facility; and
  - (5) monitor the effectiveness of the Weather Radar in order to determine whether any additional mitigation measures are necessary.
- M5. During the implementation of the Follow-Up Plan, should it be determined based on the Follow-Up Plan that the data interpolation mitigation measure(s) do not adequately mitigate the adverse impacts of the Facility so that the Weather Radar can continue to provide accurate and reliable forecasts and weather warnings in accordance with Environment Canada's mandate, the Company shall, in collaboration with Environment Canada, implement the Adaptive Management Strategy, which shall include the following:
- (1) the design and implementation of additional mitigation measures that are reasonably necessary to mitigate any identified adverse impacts to the Weather Radar; and
  - (2) the monitoring and assessment of the effectiveness of these additional mitigation measures.

## **N – ABORIGINAL CONSULTATION**

- N1. During the construction, installation, operation, use and retiring of the Facility, the Company shall:
- (1) create and maintain written records of any communications with Aboriginal communities; and
  - (2) make the written records available for review by the Ministry upon request.

- N2. The Company shall provide the following to interested Aboriginal communities:
- (1) updated project information, including the results of monitoring activities undertaken and copies of additional archaeological assessment reports that may be prepared; and;
  - (2) updates on key steps in the construction, installation, operation, use and retirement phases of the Facility, including notice of the commencement of construction activities at the project location.
- N3. If an Aboriginal community requests a meeting to obtain information relating to the construction, installation, operation, use and retiring of the Facility, the Company shall make reasonable efforts to arrange and participate in such a meeting.
- N4. If any archaeological resources of Aboriginal origin are found during the construction of the Facility, the Company shall:
- (1) notify any Aboriginal community considered likely to be interested or which has expressed an interest in such finds; and,
  - (2) if a meeting is requested by an Aboriginal community to discuss the archaeological find(s), make reasonable efforts to arrange and participate in such a meeting.

#### **O – ARCHAEOLOGICAL RESOURCES**

- O1. The Company shall implement all of the recommendations, if any, for further archaeological fieldwork and for the protection of archaeological sites found in the consultant archaeologist's report included in the Application, and which the Company submitted to the Ministry of Tourism, Culture and Sport in order to comply with O. Reg. 359/09.
- O2. Should any previously undocumented archaeological resources be discovered, the Company shall:
- (1) cease all alteration of the area in which the resources were discovered immediately;
  - (2) engage a consultant archaeologist to carry out the archaeological fieldwork necessary to further assess the area and to either protect and avoid or excavate any sites in the area in accordance with the *Ontario Heritage Act*, the regulations under that act and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*; and
  - (3) notify the Director as soon as reasonably possible.

#### **P – COMMUNITY LIAISON COMMITTEE**

- P1. Within three (3) months of receiving this Approval, the Company shall make reasonable efforts to establish a Community Liaison Committee. The Community Liaison Committee shall be a forum to exchange ideas and share concerns with interested residents and members of the public. The Community Liaison Committee shall be established by:

- (1) publishing a notice in a newspaper with general circulation in each local municipality in which the project location is situated; and
  - (2) posting a notice on the Company's publicly accessible website, if the Company has a website; to notify members of the public about the proposal for a Community Liaison Committee and invite residents living within a one (1) kilometre radius of the Facility that may have an interest in the Facility to participate on the Community Liaison Committee.
- P2. The Company may invite other members of stakeholders to participate in the Community Liaison Committee, including, but not limited to, local municipalities, local conservation authorities, Aboriginal communities, federal or provincial agencies, and local community groups.
- P3. The Community Liaison Committee shall consist of at least one Company representative who shall attend all meetings.
- P4. The purpose of the Community Liaison Committee shall be to:
- (1) act as a liaison facilitating two way communications between the Company and members of the public with respect to issues relating to the construction, installation, use, operation, maintenance and retirement of the Facility;
  - (2) provide a forum for the Company to provide regular updates on, and to discuss issues or concerns relating to, the construction, installation, use, operation, maintenance and retirement of the Facility with members of the public; and
  - (3) ensure that any issues or concerns resulting from the construction, installation, use, operation, maintenance and retirement of the Facility are discussed and communicated to the Company.
- P5. The Community Liaison Committee shall be deemed to be established on the day the Director is provided with written notice from the Company that representative Community Liaison Committee members have been chosen and a date for a first Community Liaison Committee meeting has been set.
- P6. If a Community Liaison Committee has not been established within three (3) months of receiving this Approval, the Company shall provide a written explanation to the Director as to why this has not occurred.
- P7. The Company shall ensure that the Community Liaison Committee operates for a minimum period of two (2) years from the day it is established. During this two (2) year period, the Company shall ensure that the Community Liaison Committee meets a minimum of two (2) times per year. At the end of this two (2) year period, the Company shall contact the Director to discuss the continued operation of the Community Liaison Committee.



- P8. The Company shall ensure that all Community Liaison Committee meetings are open to the general public.
- P9. The Company shall provide administrative support for the Community Liaison Committee including, at a minimum:
- (1) providing a meeting space for Community Liaison Committee meetings;
  - (2) providing access to resources, such as a photocopier, stationery, and office supplies, so that the Community Liaison Committee can:
    - a) prepare and distribute meeting notices;
    - b) record and distribute minutes of each meeting; and
    - c) prepare reports about the Community Liaison Committee's activities.
- P10. The Company shall submit any reports of the Community Liaison Committee to the Director and post it on the Company's publicly accessible website, if the Company has a website.

#### **Q – OPERATION AND MAINTENANCE**

- Q1. Prior to the commencement of the operation of the Facility, the Company shall prepare a written manual for use by Company staff outlining the operating procedures and a maintenance program for the Equipment that includes as a minimum the following:
- (1) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;
  - (2) emergency procedures;
  - (3) procedures for any record keeping activities relating to operation and maintenance of the Equipment; and
  - (4) all appropriate measures to minimize noise emissions from the Equipment.
- Q2. The Company shall;
- (1) update, as required, the manual described in Condition Q1; and
  - (2) make the manual described in Condition Q1 available for review by the Ministry upon request.
- Q3. The Company shall ensure that the Facility is operated and maintained in accordance with the Approval and the manual described in Condition Q1.

## **R – RECORD CREATION AND RETENTION**

R1. The Company shall create written records consisting of the following:

- (1) an operations log summarizing the operation and maintenance activities of the Facility;
- (2) within the operations log, a summary of routine and Ministry inspections of the Facility; and
- (3) a record of any complaint alleging an Adverse Effect caused by the construction, installation, use, operation, maintenance or retirement of the Facility.

R2. A record described under Condition R1 (3) shall include:

- (1) a description of the complaint that includes as a minimum the following:
  - a) the date and time the complaint was made;
  - b) the name, address and contact information of the person who submitted the complaint;
- (2) a description of each incident to which the complaint relates that includes as a minimum the following:
  - a) the date and time of each incident;
  - b) the duration of each incident;
  - c) the wind speed and wind direction at the time of each incident;
  - d) the ID of the Equipment involved in each incident and its output at the time of each incident;
  - e) the location of the person who submitted the complaint at the time of each incident; and
- (3) a description of the measures taken to address the cause of each incident to which the complaint relates and to prevent a similar occurrence in the future.

R3. The Company shall retain, for a minimum of five (5) years from the date of their creation, all records described in Condition R1, and make these records available for review by the Ministry upon request.

## **S – NOTIFICATION OF COMPLAINTS**

S1. The Company shall notify the District Manager of each complaint within two (2) business days of the receipt of the complaint.

S2. The Company shall provide the District Manager with the written records created under Condition R2 within eight (8) business days of the receipt of the complaint.

**T – CHANGE OF OWNERSHIP**

T1. The Company shall notify the Director in writing, and forward a copy of the notification to the District Manager, within thirty (30) days of the occurrence of any of the following changes:

- (1) the ownership of the Facility;
- (2) the operator of the Facility;
- (3) the address of the Company;
- (4) the partners, where the Company is or at any time becomes a partnership and a copy of the most recent declaration filed under the *Business Names Act*, R.S.O. 1990, c.B.17, as amended, shall be included in the notification; and
- (5) the name of the corporation where the Company is or at any time becomes a corporation, other than a municipal corporation, and a copy of the most current information filed under the *Corporations Information Act*, R.S.O. 1990, c. C.39, as amended, shall be included in the notification.

## **SCHEDULE A**

### **Facility Description**

The Facility shall consist of the construction, installation, operation, use and retiring of the following:

#### **Jericho wind farm:**

- (a) a total of ninety two (92) out of ninety nine (99) wind turbine generators GE1.6-100 LNTE each rated at a maximum of 1.62 megawatts (MW) generating output capacity with a maximum total name plate capacity of 150 megawatts (MW), designated as source ID Nos. J\_WTG1 through J\_WTG112, each with a hub height of eighty (80) metres above grade, and sited at the locations shown in Schedule B, in accordance with Condition C1(2)(b); and
- (b) associated ancillary equipment, systems and technologies including one (1) 150 mega-volt-ampere (MVA) transformer substation, on-site access roads, underground cabling and overhead distribution lines,

#### **Parkhill interconnect:**

- (c) associated ancillary equipment, systems and technologies including two (2) 225 mega-volt-ampere (MVA) transformer substation, on-site access roads, underground cabling and overhead distribution lines,

all in accordance with the Application.

The location of any construction disturbance areas associated with the Facility, access roads, entrances to the site, underground or overhead distribution or transmission lines, and other project components, with the exception of turbines and substations, may be altered or moved by up to 20 meters from the locations specified in the Project Description Report, provided the appropriate Ministries have been consulted, including the Ministry of Natural Resources and the Ministry of Tourism, Culture and Sport and the Renewable Energy Approvals Director of the Ministry of the Environment is satisfied with the proposed adjustments.

**SCHEDULE B**  
**Coordinates of the Equipment and Noise Specifications**

Coordinates of the Equipment below in UTM, Z17-NAD83 projection

**Table B1:** Coordinates and Maximum Sound Power Levels of Wind Turbine Generators

| Source ID | Maximum sound power level (dBA) | Easting (m) | Northing (m) | Source description                           |
|-----------|---------------------------------|-------------|--------------|--|
| J_WTG1    | 103.0                           | 422,934     | 4,782,626    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG2    | 103.0                           | 425,395     | 4,782,628    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG3    | 103.0                           | 425,072     | 4,782,306    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG4    | 103.0                           | 426,390     | 4,782,888    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG6    | 103.0                           | 427,880     | 4,782,909    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG7    | 103.0                           | 429,900     | 4,783,065    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG8    | 103.0                           | 431,218     | 4,782,647    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG9    | 103.0                           | 432,948     | 4,782,666    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG10   | 103.0                           | 432,980     | 4,782,332    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG11   | 103.0                           | 423,300     | 4,781,540    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG12   | 103.0                           | 423,455     | 4,781,110    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG13   | 103.0                           | 425,096     | 4,781,354    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG14   | 103.0                           | 425,407     | 4,780,588    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG15   | 103.0                           | 425,432     | 4,779,689    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG16   | 103.0                           | 425,427     | 4,779,324    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG17   | 103.0                           | 425,438     | 4,779,000    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG18   | 103.0                           | 424,671     | 4,777,622    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG19   | 103.0                           | 426,927     | 4,781,538    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG20   | 103.0                           | 427,625     | 4,781,512    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG21   | 103.0                           | 426,904     | 4,779,457    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG22   | 103.0                           | 427,490     | 4,779,351    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG23   | 103.0                           | 426,912     | 4,779,123    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG24   | 103.0                           | 427,496     | 4,778,951    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG25   | 103.0                           | 426,702     | 4,778,723    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG26   | 103.0                           | 426,793     | 4,777,497    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG27   | 103.0                           | 429,702     | 4,781,114    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG28   | 103.0                           | 428,834     | 4,780,429    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |

**Table B1: Coordinates and Maximum Sound Power Levels of Wind Turbine Generators**  
(continued)

| Source ID | Maximum sound power level (dBA) | Easting (m) | Northing (m) | Source description                           |
|-----------|---------------------------------|-------------|--------------|--|
| J_WTG29   | 103.0                           | 429,082     | 4,779,472    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG30   | 103.0                           | 428,966     | 4,779,176    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG32   | 103.0                           | 432,946     | 4,780,524    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG33   | 103.0                           | 433,468     | 4,780,620    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG34   | 103.0                           | 433,305     | 4,778,809    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG35   | 103.0                           | 423,023     | 4,774,153    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG36   | 103.0                           | 423,163     | 4,773,804    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG37   | 103.0                           | 422,709     | 4,773,370    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG38   | 103.0                           | 422,315     | 4,772,336    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG39   | 103.0                           | 424,752     | 4,775,510    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG40   | 103.0                           | 424,739     | 4,774,511    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG41   | 103.0                           | 425,265     | 4,774,348    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG42   | 103.0                           | 425,195     | 4,773,894    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG43   | 103.0                           | 424,568     | 4,773,358    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG44   | 103.0                           | 425,250     | 4,771,778    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG45   | 103.0                           | 427,315     | 4,775,969    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG46   | 103.0                           | 427,344     | 4,775,093    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG47   | 103.0                           | 427,230     | 4,774,277    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG48   | 103.0                           | 426,991     | 4,773,869    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG49   | 103.0                           | 426,878     | 4,773,491    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG50   | 103.0                           | 426,937     | 4,773,188    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG51   | 103.0                           | 426,974     | 4,772,870    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG52   | 103.0                           | 426,800     | 4,772,226    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG53   | 103.0                           | 426,701     | 4,771,707    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG54   | 103.0                           | 427,078     | 4,771,459    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG56   | 103.0                           | 429,249     | 4,775,281    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG57   | 103.0                           | 429,070     | 4,774,660    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG58   | 103.0                           | 428,800     | 4,774,175    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG59   | 103.0                           | 429,218     | 4,773,628    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG60   | 103.0                           | 428,729     | 4,772,001    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |

**Table B1:** Coordinates and Maximum Sound Power Levels of Wind Turbine Generators  
(continued)

| Source ID | Maximum sound power level (dBA) | Easting (m) | Northing (m) | Source description                           |
|-----------|---------------------------------|-------------|--------------|--|
| J_WTG61   | 103.0                           | 428,870     | 4,771,602    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG62   | 103.0                           | 428,396     | 4,771,388    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG63   | 103.0                           | 429,171     | 4,771,190    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG64   | 103.0                           | 429,434     | 4,770,999    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG65   | 103.0                           | 431,622     | 4,776,681    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG66   | 103.0                           | 430,977     | 4,775,907    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG67   | 103.0                           | 431,368     | 4,775,755    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG68   | 103.0                           | 430,927     | 4,775,519    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG69   | 103.0                           | 431,033     | 4,775,239    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG70   | 103.0                           | 431,153     | 4,774,338    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG71   | 103.0                           | 431,413     | 4,773,975    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG72   | 103.0                           | 431,241     | 4,773,292    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG73   | 103.0                           | 431,190     | 4,771,673    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG74   | 103.0                           | 431,458     | 4,771,501    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG75   | 103.0                           | 430,375     | 4,770,394    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG76   | 103.0                           | 430,783     | 4,770,250    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG78   | 103.0                           | 433,148     | 4,776,918    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG79   | 103.0                           | 433,468     | 4,776,776    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG80   | 103.0                           | 433,011     | 4,775,171    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG81   | 103.0                           | 433,464     | 4,775,119    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG82   | 103.0                           | 433,893     | 4,775,152    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG83   | 103.0                           | 433,198     | 4,773,791    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG84   | 103.0                           | 433,120     | 4,773,447    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG85   | 103.0                           | 433,574     | 4,773,553    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG86   | 103.0                           | 432,842     | 4,771,321    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG88   | 103.0                           | 423,333     | 4,771,025    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG89   | 103.0                           | 423,570     | 4,770,500    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG90   | 103.0                           | 424,258     | 4,770,677    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |

**Table B1: Coordinates and Maximum Sound Power Levels of Wind Turbine Generators**  
(continued)

| Source ID   | Maximum sound power level (dBA) | Easting (m) | Northing (m) | Source description                           |
|-------------|---------------------------------|-------------|--------------|--|
| J_WTG91     | 103.0                           | 425,041     | 4,770,310    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG92     | 103.0                           | 425,439     | 4,770,368    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG94     | 103.0                           | 430,779     | 4,768,868    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG96     | 103.0                           | 423,842     | 4,769,183    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG97     | 103.0                           | 423,840     | 4,768,848    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG102    | 103.0                           | 433,049     | 4,766,446    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG103    | 103.0                           | 433,371     | 4,766,165    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG104    | 103.0                           | 423,276     | 4,765,200    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG105    | 103.0                           | 421,483     | 4,763,567    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG106    | 103.0                           | 426,830     | 4,783,362    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG107    | 103.0                           | 433,424     | 4,776,577    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG108    | 103.0                           | 432,869     | 4,771,130    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG109    | 103.0                           | 429,142     | 4,769,404    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_WTG112    | 103.0                           | 429,214     | 4,773,348    | Wind Turbine GE1.6-100 LNTE, 80 m hub height |
| J_Trans     | 103.8                           | 427,098     | 4,777,771    | 150 MVA Transformer Substation, see Table B2 |
| Parkhill T1 | 105.8                           | 452,735     | 4,774,658    | 225 MVA Parkhill Transformer, See Table B3   |
| Parkhill T2 | 105.8                           | 452,777     | 4,774,648    | 225 MVA Parkhill Transformer, See Table B3   |

Note: The Maximum Sound Power Level of Source ID "J\_Trans", "Parkhill T1" and "Parkhill T2" include the applicable 5 dB tonal penalty described in the Noise Guidelines for Wind Farms.

**Table B2: Maximum Sound Power Spectrum (dB) of 150 MVA Transformer Substation-including 5dB tonal penalty**

| 150 MVA transformer     | Octave Band Centre Frequency (Hz) |       |       |       |      |      |      |      |
|-------------------------|-----------------------------------|-------|-------|-------|------|------|------|------|
|                         | 63                                | 125   | 250   | 500   | 1000 | 2000 | 4000 | 8000 |
| Sound Power Level (dBA) | 106.4                             | 108.4 | 103.4 | 103.4 | 97.4 | 92.4 | 87.4 | 80.4 |

**Table B3: Maximum Sound Power Spectrum (dB) of 225 MVA Transformer Substation - Parkhill Interconnect including 5dB tonal penalty**

| Parkhill T1<br>Parkhill T2 | Octave Band Centre Frequency (Hz) |       |       |       |      |      |      |      |
|----------------------------|-----------------------------------|-------|-------|-------|------|------|------|------|
|                            | 63                                | 125   | 250   | 500   | 1000 | 2000 | 4000 | 8000 |
| Sound Power Level (dBA)    | 108.4                             | 110.4 | 105.4 | 105.4 | 99.4 | 94.4 | 89.4 | 82.4 |



## SCHEDULE C Noise Control Measures

### Acoustic Barriers

#### 1- **Jericho wind farm:**

One (1) 42 metres long, 7 metres high, three sided acoustic barrier, positioned as per Figure 1 of the Acoustic Assessment Report. The acoustic barrier shall be continuous without holes, gaps and other penetrations, and having a surface mass density of at least 20 kilograms per square metres.

#### 2- **Parkhill Interconnect Substation:**

Two (2) 28 metres long and 5.5 metres high acoustic barriers, positioned as per Figure entitled "Noise Map" of the Parkhill Noise Acoustic Assessment Report. The acoustic barriers shall be continuous without holes, gaps and other penetrations, and having a surface mass at least 20 kilograms per square metres.

*The reasons for the imposition of these terms and conditions are as follows:*

1. Conditions A1, A2 and A8 are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in the manner in which it was described for review and upon which Approval was granted. These conditions are also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.
2. Conditions A3 and A4 are included to require the Company to provide information to the public and the local municipality.
3. Conditions A5 and A6 are included to ensure that final retirement of the Facility is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure long-term protection of the health and safety of the public and the environment.
4. Condition A7 is included to require the Company to inform the Ministry of the commencement of activities related to the construction, installation and operation of the Facility.
5. Condition B is intended to limit the time period of the Approval.
6. Condition C1 is included to provide the minimum performance requirement considered necessary to prevent an Adverse Effect resulting from the operation of the Equipment and to ensure that the noise emissions from the Equipment will be in compliance with applicable limits set in the Noise Guidelines for Wind Farms.
7. Conditions A7, C2, C3 and D are included to ensure that the Equipment is constructed, installed, used, operated, maintained and retired in a way that meets the regulatory setback prohibitions set out in O. Reg. 359/09.

8. Conditions E and F are included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, O. Reg. 359/09, the Noise Guidelines for Wind Farms and this Approval can be verified.
9. Conditions G, H, I, J, K and L are included to ensure that the Facility is constructed, installed, used, operated, maintained and retired in a way that does not result in an Adverse Effect or hazard to the natural environment or any persons.
10. Condition M is included to ensure that Environment Canada's Exeter Radar Station can continue to be used to provide accurate and reliable forecasts and weather warnings consistent with Environment Canada's mandate.
11. Condition N is included to protect archaeological resources that may be found at the project location.
12. Condition O is included to ensure continued communication between the Company and interested Aboriginal communities.
13. Condition P is included to ensure continued communication between the Company and the local residents.
14. Condition Q is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the Act, O. Reg. 359/09 and this Approval.
15. Condition R is included to require the Company to keep records and provide information to the Ministry so that compliance with the Act, O. Reg. 359/09 and this Approval can be verified.
16. Condition S is included to ensure that any complaints regarding the construction, installation, use, operation, maintenance or retirement of the Facility are responded to in a timely and efficient manner.
17. Condition T is included to ensure that the Facility is operated under the corporate name which appears on the application form submitted for this Approval and to ensure that the Director is informed of any changes.

## **NOTICE REGARDING HEARINGS**

*In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.*

*In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.*

*Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:*

1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The signed and dated notice requiring the hearing should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. The municipality or municipalities within which the project is to be engaged in;

*This notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, 15th Floor  
Toronto, Ontario  
M5G 1E5

AND

The Environmental Commissioner  
1075 Bay Street, 6th Floor  
Suite 605  
Toronto, Ontario  
M5S 2B1

AND

The Director  
Section 47.5, *Environmental Protection Act*  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca), you can determine when this period ends.*

*Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.*

DATED AT TORONTO this 14th day of April, 2014




---

Vic Schroter, P.Eng.  
Director  
Section 47.5, *Environmental Protection Act*

NH/  
c: District Manager, MOE Sarnia  
Ben Greenhouse, Jericho Wind, Inc.

**AMENDMENT TO RENEWABLE ENERGY APPROVAL**NUMBER 5855-9HHGQR  
Issue Date: September 2, 2014

Jericho Wind GP, ULC, as general partner for and on behalf of Jericho Wind, LP  
390 Bay Street, Suite 1720  
Toronto, Ontario  
M5H 2Y2

**Site Location: Jericho Wind Energy Centre**

Generally bounded by Lakeshore Road/Bog Line to the north, Egremont Road to the south, the Lambton Shores/North Middlesex municipal boundary to the east, and Rawlings Road/Elarton Road to the west, in Lambton County. Extends eastward into Middlesex County generally along and adjacent to Elginfield Road and Nairn Road between the Lambton Shores/North Middlesex municipal boundary and Cassidy Road.

Municipality of Lambton Shores, Township of Warwick, County of Lambton, Municipality of North Middlesex, County of Middlesex

*You are hereby notified that I have amended Approval No. 5855-9HHGQR issued on April 14, 2014 for a Class 4 wind facility, as follows:*

**A. The owner/ operator of the Facility is deleted and replaced with the following:**

Jericho Wind GP, ULC, as general partner for and on behalf of Jericho Wind, LP  
390 Bay Street, Suite 1720  
Toronto, Ontario  
M5H 2Y2

**B. The definitions of "Application" and "Company" are deleted and replaced with the following:**

11. "Application" means the application for a Renewable Energy Approval dated February 12, 2013, and signed by F. Allen Wiley, Jericho Wind, Inc., and all supporting documentation submitted with the application, including amended documentation submitted up to April 14, 2014; and as further amended by the application for an amendment to a Renewable Energy Approval dated July 21, 2014, and signed by F. Allen Wiley, Jericho Wind, LP, and all supporting documentation submitted with the application, including amended documentation submitted up to the date this amendment is issued;

18. "Company" means Jericho Wind GP, ULC, as general partner for and on behalf of Jericho Wind, LP, a limited partnership formed under the laws of Ontario, and includes its successors and assignees;

**C. Condition H2 is deleted and replaced with the following:**

- H2. Notwithstanding Condition H1, at the construction sites for turbines where groundwater dewatering in excess of 50,000 litres per day is anticipated, the Company is authorized to take a maximum amount of litres of water per day as indicated in Table 4 (as revised August 28, 2014) of the report entitled "Hydrogeological Report in Support of a Modification to the Renewable Energy Approval for the Jericho Wind Energy Centre" for the purpose of construction dewatering for foundation construction. In the event that groundwater dewatering requirements exceed those indicated in Table 4 of the "Hydrogeological Report in Support of a Modification to the Renewable Energy Approval for the Jericho Wind Energy Centre" (as submitted August 28, 2014), the Company may consult directly with the Ministry's Southwestern Regional Office Technical Support Section to request an increase of the maximum allowable litres of water per day and determine associated mitigation measures, provided additional studies supporting such increases are included with the request.

**D. Conditions H8 and H9 are added to the Approval:**

- H8. Prior to commencing dewatering activities for foundation construction of turbines 7, 9, 10, 79 and 107, the Company shall conduct an in-the-field assessment of the existence of shallow water wells within the respective site specific Study Areas (500 m radius of a turbine), up to and including a door-to-door survey of any residences located within the Study Area. Should a shallow domestic water well be identified within a Study Area by in-the-field reconnaissance conducted by the Company, the Company shall retain a qualified person to make a formal decision on whether a shallow groundwater monitoring well is required to be located between the dewatering site and the shallow water well. Such a monitor, if deemed necessary, shall be installed by the Company and would act as a sentinel as a first alert to potential adverse impact to a domestic water quantity supply.
- H9. Within two months of foundation construction at Turbine 79, the Company shall submit a letter report to the Ministry's Southwestern Regional Office Technical Support Section on the mitigation, monitoring and contingency measures implemented for the construction dewatering at Turbine 79 in order to protect water body feature R2.73. The report shall include a discussion of the success and adequacy of the implemented measures.

**All other Terms and Conditions of the Approval remain the same.**

**This Notice shall constitute part of the approval issued under Approval No. 5855-9HHGQR dated April 14, 2014.**

*In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.*

*In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.*

*Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:*

1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The signed and dated notice requiring the hearing should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. The municipality or municipalities within which the project is to be engaged in;

*This notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, 15th Floor  
Toronto, Ontario  
M5G 1E5

AND

The Environmental Commissioner  
1075 Bay Street, 6th Floor  
Suite 605  
Toronto, Ontario  
M5S 2B1

AND

The Director  
Section 47.5, *Environmental Protection Act*  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca), you can determine when this period ends.*

*Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.*

DATED AT TORONTO this 2nd day of September, 2014



---

Vic Schroter, P.Eng.  
Director  
Section 47.5, *Environmental Protection Act*

SR/

c: District Manager, MOE Sarnia  
Nancy O'Neill, NextEra Energy Canada, ULC

**AMENDMENT TO RENEWABLE ENERGY APPROVAL**NUMBER 5855-9HHGQR  
Issue Date: November 12, 2014

Jericho Wind GP, ULC, as general partner for and on behalf of Jericho Wind, LP  
390 Bay Street, Suite 1720  
Toronto, Ontario  
M5H 2Y2

Site Location: Jericho Wind Energy Centre

Generally bounded by Lakeshore Road/Bog Line to the north, Egremont Road to the south, the Lambton Shores/North Middlesex municipal boundary to the east, and Rawlings Road/Elarton Road to the west, in Lambton County. Extends eastward into Middlesex County generally along and adjacent to Elginfield Road and Nairn Road between the Lambton Shores/North Middlesex municipal boundary and Cassidy Road.

Municipality of Lambton Shores, Township of Warwick, County of Lambton, Municipality of North Middlesex, County of Middlesex.

*You are hereby notified that I have amended Approval No. 5855-9HHGQR issued on April 14, 2014 for a Class 4 wind facility , as follows:*

**A. The definition of "Application" is deleted and replaced with the following:**

11. "Application" means the application for a Renewable Energy Approval dated February 12, 2013, and signed by F. Allen Wiley, Jericho Wind, Inc., and all supporting documentation submitted with the application, including amended documentation submitted up to April 14, 2014; and as further amended by the application for an amendment to a Renewable Energy Approval dated July 21, 2014, and signed by F. Allen Wiley, Jericho Wind, LP, and all supporting documentation submitted with the application, including amended documentation submitted up to September 2, 2014; and as further amended by the application for an amendment to a Renewable Energy Approval dated October 3, 2014, and signed by F. Allen Wiley, Jericho Wind, LP, and all supporting documentation submitted with the application, including amended documentation submitted up to the date this amendment is issued;



**B. Condition U1 is added to the Approval:**

**U – GROUNDWATER**

- U1. Should the advancement of piles penetrate a confined aquifer, the Company shall take all steps necessary to ensure that the piles do not create a conduit for the vertical migration of groundwater.

**All other Terms and Conditions of the Approval remain the same.**

**This Notice shall constitute part of the approval issued under Approval No. 5855-9HHGQR dated April 14, 2014.**

*In accordance with Section 139 of the Environmental Protection Act, within 15 days after the service of this notice, you may by further written notice served upon the Director, the Environmental Review Tribunal and the Environmental Commissioner, require a hearing by the Tribunal.*

*In accordance with Section 47 of the Environmental Bill of Rights, 1993, the Environmental Commissioner will place notice of your request for a hearing on the Environmental Registry.*

*Section 142 of the Environmental Protection Act provides that the notice requiring the hearing shall state:*

1. The portions of the renewable energy approval or each term or condition in the renewable energy approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

*The signed and dated notice requiring the hearing should also include:*

3. The name of the appellant;
4. The address of the appellant;
5. The renewable energy approval number;
6. The date of the renewable energy approval;
7. The name of the Director;
8. The municipality or municipalities within which the project is to be engaged in;

*This notice must be served upon:*

The Secretary\*  
Environmental Review Tribunal  
655 Bay Street, 15th Floor  
Toronto, Ontario  
M5G 1E5

AND

The Environmental Commissioner  
1075 Bay Street, 6th Floor  
Suite 605  
Toronto, Ontario  
M5S 2B1

AND

The Director  
Section 47.5, *Environmental Protection Act*  
Ministry of the Environment and Climate  
Change  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

**\* Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 314-4600, Fax: (416) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

*Under Section 142.1 of the Environmental Protection Act, residents of Ontario may require a hearing by the Environmental Review Tribunal within 15 days after the day on which notice of this decision is published in the Environmental Registry. By accessing the Environmental Registry at [www.ebr.gov.on.ca](http://www.ebr.gov.on.ca), you can determine when this period ends.*

*Approval for the above noted renewable energy project is issued to you under Section 47.5 of the Environmental Protection Act subject to the terms and conditions outlined above.*

DATED AT TORONTO this 12th day of November, 2014



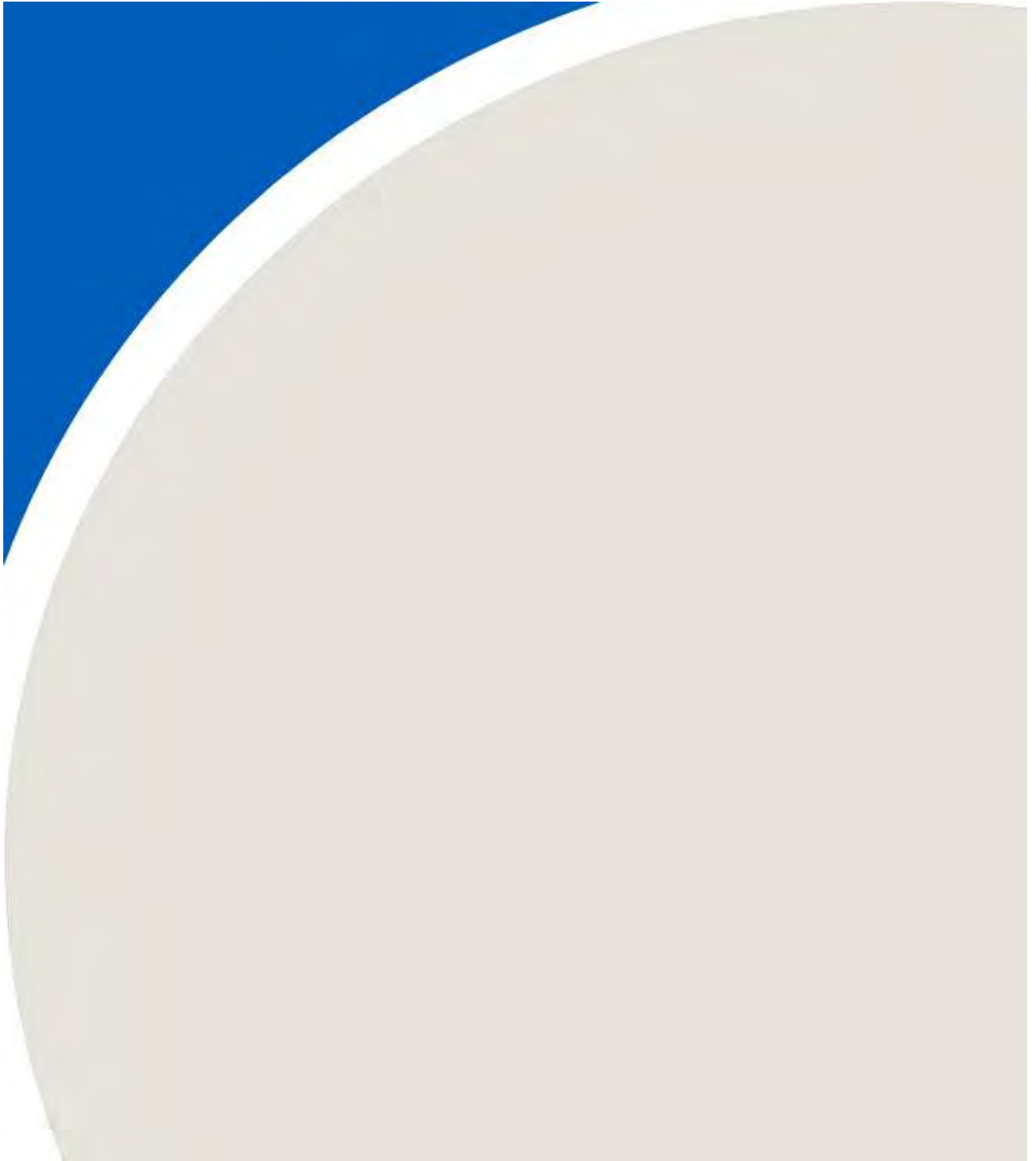
---

Vic Schroter, P.Eng.  
Director  
Section 47.5, *Environmental Protection Act*

NC/

c: District Manager, MOECC Sarnia  
Andrea Garcia, NextEra Energy Canada

## APPENDIX C



# MEASUREMENT EQUIPMENT

---



## Sound Level Meter

| <b>Sound Level Meter</b> |   |
|--------------------------|---|
| Make and Model           | RWDT Envision Data Collection System                        |
| Serial No.               | NAVCAD03  |
| <b>Preamplifier</b>      |   |
| Make and Type            | PCB Piezotronics Preamplifier Type 426E01                   |
| Serial No.               | 035614  |
| <b>Microphone</b>        |   |
| Make and Type            | PCB Piezotronics Microphone Type 377B02                     |
| Serial No.               | 148739  |
| <b>Calibrator</b>        |   |
| Make and Type            | Larson-Davis CAL200 precision acoustic calibrator (1000 Hz) |
| Serial No.               | 2939  |



Form:378B02

Approved by:.

Feb-16

Ver 1.0

Calibration Report for Certificate :

151016

| Make             |  | Model  | Serial |  | Asset        |
|------------------|--|--------|--------|--|--------------|
| PCB Piezotronics |  | 378B02 | 118365 |  | NAVCAD MIC 3 |
| PCB Piezotronics |  | 377B02 | 148739 |  | nan          |
| PCB Piezotronics |  | 426E01 | 035614 |  | nan          |

### Sensitivity at 250Hz

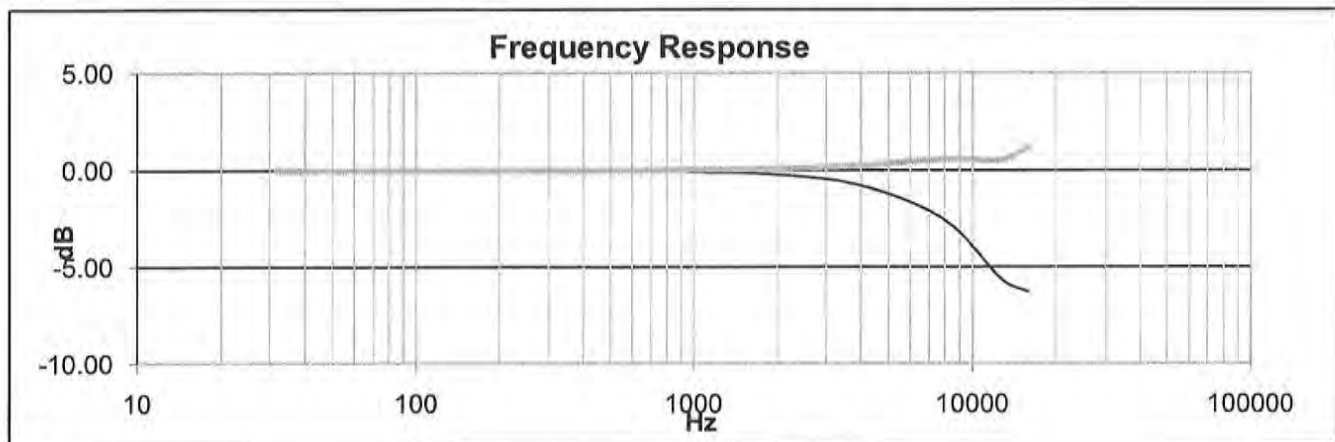
| Specs Nom | Unit          | Min    | Reading | Max    | In/Out |
|-----------|---------------|--------|---------|--------|--------|
| 50        | mV/Pa         | 39.72  | 46.56   | 62.94  | In     |
| -26.02    | dB re 1V/Pa   | -28.02 | -26.64  | -24.02 | In     |
| 0         | dB re 50mV/Pa | -2     | -0.62   | 2      | In     |

Ambient Conditions: Static Pressure 98.2 kPa  
Temperature 23.5°C  
Rel.Humidity 36.0%

### Frequency response

| Freq<br>Hz | Lower          | Upper            |
|------------|----------------|------------------|
|            | Pressure<br>dB | Free Field<br>dB |
| 31.5       | 0.01           | -0.01            |
| 63.1       | -0.01          | -0.02            |
| 125.9      | 0.00           | -0.02            |
| 251.3      | 0.00           | 0.00             |
| 502.5      | -0.01          | -0.02            |
| 1005.1     | -0.08          | 0.03             |
| 1978.7     | -0.22          | 0.06             |
| 3957.5     | -0.77          | 0.22             |
| 7914.9     | -2.55          | 0.58             |
| 12663      | -5.63          | 0.53             |
| 15830      | -6.28          | 1.20             |

ref





# MEASUREMENT EQUIPMENT

---



## Sound Level Meter

| <b>Sound Level Meter</b> |   |
|--------------------------|---|
| Make and Model           | RWDI Envision Data Collection System                        |
| Serial No.               | NAVCAD06  |
| <b>Preamplifier</b>      |   |
| Make and Type            | PCB Piezotronics Preamplifier Type 426E01                   |
| Serial No.               | 035623  |
| <b>Microphone</b>        |   |
| Make and Type            | PCB Piezotronics Microphone Type 377B02                     |
| Serial No.               | 156425  |
| <b>Calibrator</b>        |   |
| Make and Type            | Larson-Davis CAL200 precision acoustic calibrator (1000 Hz) |
| Serial No.               | 2939  |





|             |               |        |         |
|-------------|---------------|--------|---------|
| Form:378B02 | Approved by:. | Feb-16 | Ver 1.0 |
|-------------|---------------|--------|---------|

Calibration Report for Certificate :

**151579**

| Make             |  |  | Model  | Serial | Asset       |
|------------------|--|--|--------|--------|-------------|
| PCB Piezotronics |  |  | 378B02 | 156425 | NAVCAD MIC6 |
| PCB Piezotronics |  |  | 377B02 | 118394 | nan         |
| PCB Piezotronics |  |  | 426E01 | 35623  | nan         |

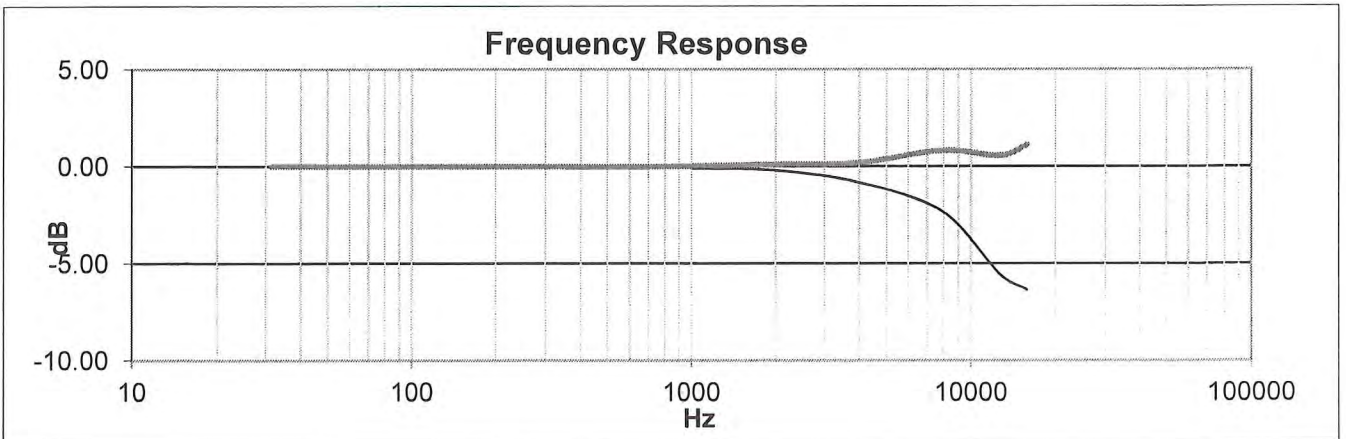
Sensitivity at 250Hz

| Specs Nom | Unit          | Min    | Reading | Max    | In/Out |
|-----------|---------------|--------|---------|--------|--------|
| 50        | mV/Pa         | 39.72  | 47.21   | 62.94  | In     |
| -26.02    | dB re 1V/Pa   | -28.02 | -26.52  | -24.02 | In     |
| 0         | dB re 50mV/Pa | -2     | -0.50   | 2      | In     |

Ambient Conditions: Static Pressure 100.2 kPa  
 Temperature 23.4°C  
 Rel.Humidity 20.0%

Frequency response

|        | Lower    | Upper      |     |
|--------|----------|------------|-----|
| Freq   | Pressure | Free Field |     |
| Hz     | dB       | dB         |     |
| 31.5   | 0.01     | 0.01       |     |
| 63.1   | 0.00     | 0.00       |     |
| 125.9  | 0.00     | 0.00       |     |
| 251.3  | 0.00     | 0.00       | ref |
| 502.5  | -0.02    | -0.02      |     |
| 1005.1 | -0.08    | 0.02       |     |
| 1978.7 | -0.19    | 0.11       |     |
| 3957.5 | -0.81    | 0.19       |     |
| 7914.9 | -2.32    | 0.82       |     |
| 12663  | -5.56    | 0.56       |     |
| 15830  | -6.35    | 1.11       |     |





esz AG calibration & metrology

NIS

akkreditiert durch die / accredited by the

Deutsche Akkreditierungsstelle GmbH



DAkkS

Deutsche Akkreditierungsstelle D-K-15019-01-00

als Kalibrierlaboratorium im / as calibration laboratory in the

Deutschen Kalibrierdienst



Kalibrierschein  
Calibration certificate

Kalibrierzeichen  
Calibration mark

|                 |
|-----------------|
| 134047-02       |
| D-K-15019-01-00 |
| 2016-12         |

|  |  |
|--|--|
| Gegenstand<br><i>Object</i>  | Data Acquisition Unit  |
| Hersteller<br><i>Manufacturer</i>  | National Instruments   |
| Typ<br><i>Type</i>   | 9234   |
| Fabrikat/Serien-Nr.<br><i>Serial number</i>  | 19FC2D3<br>n.a.  |
| Auftraggeber<br><i>Customer</i>  | National Instruments Corporation<br>11500 N. MoPac Expressway,<br>RMA-Building A<br>TX 78759-3504 Austin / USA |
| Auftragsnummer<br><i>Order No.</i>   | BK061697   |
| Anzahl der Seiten des Kalibrierscheines<br><i>Number of pages of the certificate</i> | 3  |
| Datum der Kalibrierung<br><i>Date of calibration</i>                                 | 2016-12-05   |

Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI). Die DAkkS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine. Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

*This calibration certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI). The DAkkS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates. The user is obliged to have the object recalibrated at appropriate intervals.*

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung sowohl der Deutschen Akkreditierungsstelle als auch des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine ohne Unterschrift haben keine Gültigkeit.

*This calibration certificate may not be reproduced other than in full except with the permission of both the German Accreditation Body and the issuing laboratory. Calibration certificates without signature are not valid.*

Datum  
*Date*  
2016-12-05

Laborleitung  
*Laboratory management*  
Kai Krienetzki

Bearbeiter  
*Person in charge*  
Norbert Dobmaier

|                     |
|---------------------|
| 134047-02           |
| D-K-<br>15019-01-00 |
| 2016-12             |

## 8. Summary

Evaluation considering the measurement uncertainty based on esz Intranet: K:\Dokumentation Hersteller\National Instruments\NI9234\NI9234\_Calibration Performance Test Data, März 2015.pdf

- The measured values lie within the tolerance limits.
- The measured values are out of tolerance (X).
- Marked values lie marginal within the specifications. The tolerance threshold of 80 % of the specification interval (%TOL) is exceeded. (!)
- Marked values lie under consideration of the measurement uncertainty (MU) with a probability of only 50% to 95% within the specification, cf. ILAC-G8:03/2009-Fig.1-Case 2 (?).

## 9. Detailed Results: Outgoing Test

The definition of test points has been done considering the laboratory's measurement capabilities and technical infrastructure according to esz Intranet: K:\Dokumentation Hersteller\National Instruments\NI9234\NI9234\_Calibration Performance Test Data, März 2015.pdf

The comma is used as decimal separator.

The requested calibration interval is 24 months.

Detailed results and certificate are available at the certificate portal (esz Asset Expert) for downloading:

| Download at the certificate portal |   | direct link via QR-Code   |
|------------------------------------|---|---|
| Web address                        | <a href="https://www.esz-ag.de/certificatedownload.html">https://www.esz-ag.de/certificatedownload.html</a> |  |
| Certificate number                 | 134047-02   |   |
| Order number                       | BK061697  |   |
| Number of pages                    | 4   |   |



# esz AG calibration & metrology

NIS

akkreditiert durch die / accredited by the

**Deutsche Akkreditierungsstelle GmbH**



**DAkKS**

Deutsche Akkreditierungsstelle  
D-K-15019-01-00

als Kalibrierlaboratorium im / as calibration laboratory in the  
**Deutschen Kalibrierdienst**



Kalibrierschein  
*Calibration certificate*

Kalibrierzeichen  
*Calibration mark*

|                 |
|-----------------|
| 134047-01       |
| D-K-15019-01-00 |
| 2016-12         |

|  |  |
|--|--|
| Gegenstand<br><i>Object</i>  | Data Acquisition Unit  |
| Hersteller<br><i>Manufacturer</i>  | National Instruments   |
| Typ<br><i>Type</i>   | 9234   |
| Fabrikat/Serien-Nr.<br><i>Serial number</i>  | 19FC2D3<br>n.a.  |
| Auftraggeber<br><i>Customer</i>  | National Instruments Corporation<br>11500 N. MoPac Expressway,<br>RMA-Building A<br>TX 78759-3504 Austin / USA |
| Auftragsnummer<br><i>Order No.</i>   | BK061697   |
| Anzahl der Seiten des Kalibrierscheines<br><i>Number of pages of the certificate</i> | 3  |
| Datum der Kalibrierung<br><i>Date of calibration</i>                                 | 2016-12-05   |

Dieser Kalibrierschein dokumentiert die Rückführung auf nationale Normale zur Darstellung der Einheiten in Übereinstimmung mit dem Internationalen Einheitensystem (SI). Die DAkKS ist Unterzeichner der multilateralen Übereinkommen der European co-operation for Accreditation (EA) und der International Laboratory Accreditation Cooperation (ILAC) zur gegenseitigen Anerkennung der Kalibrierscheine. Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

*This calibration certificate documents the traceability to national standards, which realize the units of measurement according to the International System of Units (SI). The DAkKS is signatory to the multilateral agreements of the European co-operation for Accreditation (EA) and of the International Laboratory Accreditation Cooperation (ILAC) for the mutual recognition of calibration certificates. The user is obliged to have the object recalibrated at appropriate intervals.*

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. Auszüge oder Änderungen bedürfen der Genehmigung sowohl der Deutschen Akkreditierungsstelle als auch des ausstellenden Kalibrierlaboratoriums. Kalibrierscheine ohne Unterschrift haben keine Gültigkeit.

*This calibration certificate may not be reproduced other than in full except with the permission of both the German Accreditation Body and the issuing laboratory. Calibration certificates without signature are not valid.*

Datum  
*Date*  
2016-12-05

Laborleitung  
*Laboratory management*  
Kai Krienetzki

Bearbeiter  
*Person in charge*  
Norbert Dobmaier

**1. Device Under Test**

National Instruments 9234  
Data Acquisition Unit  
Option(s): Phase Matching (s)  
Number of channels: 4  
Technology(-ies): Compact  
Type: Plug-In module  
Test equipment No.: n.a.  
Inventory No.: n.a.

**2. Calibration Procedure**

- Direct measurement procedure using fixed standards or a variable AC/DC-source according to QMH III.1
- AC/DC direct measurement method using a digital multimeter according to esz QMH-IV.1
- Phase calibration at 0° or 180° according to AA0276

Calibration procedure revision 1.6, approved 2015-03-23 by Manuel Meres

Calibration equipment and standards:

| Standards | Manufacturer Model            | Type               | Traceable to    | Cal. No.  | Last Cal. | next Cal. |
|-----------|-------------------------------|--------------------|-----------------|-----------|-----------|-----------|
| 000001    | Hewlett Packard 3458A         | Digital Multimeter | D-K-15019-01-00 | 000001-11 | 2016-05   | 2017-05   |
| 000394    | Fluke 5700A                   | Calibrator         | D-K-15019-01-00 | 000394-15 | 2016-11   | 2017-11   |
| 081159    | National Instruments PXI-4461 | Function Generator | D-K-15019-01-00 | 081159-03 | 2016-03   | 2017-03   |
| 094743    | National Instruments PXI-4132 | Sourcemeeter       | D-K-15019-01-00 | 094743-02 | 2016-01   | 2017-01   |

**3. Ambient Conditions**

Temperature (23,0 to 23,3) °C ±1 K  
Relative Humidity 39 % ±3 %  
Barometric Pressure 964 mbar ±5 mbar

**4. Test Conditions**

Acquisition method: automated  
Data calculation:  $t(s) = (\text{Phi}(\text{°})/360\text{°}) \cdot (1/f)$   
Software version: Calibration Executive 3.6.5

Appropriate storage time at ambient conditions and warm up time have been observed.

**5. Place of Calibration**

Max-Planck-Straße 16  
82223 Eichenau  
Germany

**6. Measurement Uncertainties (MU)**

The given measurement uncertainties are calculated in accordance to DAkkS-DKD-3 (GUM) and contain the uncertainties of the calibration method, the calibration equipment and of the DUT during calibration. Any long term instability is not considered. The uncertainty as stated is the expanded uncertainty obtained by multiplying the standard uncertainty by coverage factor  $k=2$ . The value of the measurands lies within the assigned range of values with a probability of 95%. Relative uncertainties are based on the nominal test point (calibration of measurement devices), otherwise on the measured value (calibration of sources or standards).

**7. Additional Maintenance**

Adjustment       Repair       Function Test       Cleaning

|                     |
|---------------------|
| 134047-01           |
| D-K-<br>15019-01-00 |
| 2016-12             |

**8. Summary**

Evaluation considering the measurement uncertainty based on esz Intranet: K:\Dokumentation Hersteller\National Instruments\NI9234\NI9234\_Calibration Performance Test Data, März 2015.pdf

- The measured values lie within the tolerance limits.
- The measured values are out of tolerance (X).
- Marked values lie marginal within the specifications. The tolerance threshold of 80 % of the specification interval (%TOL) is exceeded. (!)
- Marked values lie under consideration of the measurement uncertainty (MU) with a probability of only 50% to 95% within the specification, cf. ILAC-G8:03/2009-Fig.1-Case 2 (?).

**9. Detailed Results: Incoming Test**

The definition of test points has been done considering the laboratory's measurement capabilities and technical infrastructure according to esz Intranet: K:\Dokumentation Hersteller\National Instruments\NI9234\NI9234\_Calibration Performance Test Data, März 2015.pdf

The comma is used as decimal separator.

The requested calibration interval is 24 months.

Detailed results and certificate are available at the certificate portal (esz Asset Expert) for downloading:

| Download at the certificate portal |   | direct link via QR-Code   |
|------------------------------------|---|---|
| Web address                        | <a href="https://www.esz-ag.de/certificatedownload.html">https://www.esz-ag.de/certificatedownload.html</a> |  |
| Certificate number                 | 134047-01   |   |
| Order number                       | BK061697  |   |
| Number of pages                    | 4   |   |





|               |                        |        |         |
|---------------|------------------------|--------|---------|
| Form: NI 9234 | Approved by: J. Raposo | Feb-18 | Ver 1.1 |
|---------------|------------------------|--------|---------|

Calibration Report for Certificate : 155352

| Make                 | Model   | Serial No | Asset     |
|----------------------|---------|-----------|-----------|
| National Instruments | NI 9234 | 19FC2D3   | NI IEPE 5 |

| Test | Input | Min | Reading | Max | In/Out |
|------|-------|-----|---------|-----|--------|
|------|-------|-----|---------|-----|--------|

Gain Accuracy AI 0

|           |         |         |         |    |
|-----------|---------|---------|---------|----|
| +4.0000 V | 3.9952  | 3.9991  | 4.0048  | In |
| 0.0000 V  | -0.0012 | 0.0000  | 0.0012  | In |
| -4.0000 V | -4.0048 | -3.9996 | -3.9952 | In |

Channel Gain Match

|      |          |            |          |    |
|------|----------|------------|----------|----|
| AI 0 | -0.04 dB | -0.0009 dB | +0.04 dB | In |
| AI 1 | -0.04 dB | -0.0011 dB | +0.04 dB | In |
| AI 2 | -0.04 dB | -0.0014 dB | +0.04 dB | In |
| AI 3 | -0.04 dB | -0.0012 dB | +0.04 dB | In |

Flatness Accuracy 0.1 to 22.5 kHz

Ref: 1.0 V rms @ 1.000 kHz

|      |          |          |          |    |
|------|----------|----------|----------|----|
| AI 0 | -0.04 dB | +0.02 dB | +0.04 dB | In |
| AI 1 | -0.04 dB | +0.02 dB | +0.04 dB | In |
| AI 2 | -0.04 dB | +0.01 dB | +0.04 dB | In |
| AI 3 | -0.04 dB | +0.02 dB | +0.04 dB | In |

AC/DC coupling Pass

IEPE Operation Pass

# MEASUREMENT EQUIPMENT

---



## Sound Level Meter

| <b>Sound Level Meter</b> |   |
|--------------------------|---|
| Make and Model           | RWDT Envision Data Collection System                        |
| Serial No.               | NAVCAD16  |
| <b>Preamplifier</b>      |   |
| Make and Type            | PCB Piezotronics Preamplifier Type 426E01                   |
| Serial No.               | 035622 & 052038   |
| <b>Microphone</b>        |   |
| Make and Type            | PCB Piezotronics Microphone Type 377B02                     |
| Serial No.               | 150755 & 305580   |
| <b>Calibrator</b>        |   |
| Make and Type            | Larson-Davis CAL200 precision acoustic calibrator (1000 Hz) |
| Serial No.               | 2939  |

# ~ Certificate of Calibration and Compliance ~

Model: 378B02  
Microphone Model: 377B02  
Preamplifier Model: 426E01

Serial Number: 135708  
Serial Number: 305580  
Serial Number: 052038

Manufacturer: PCB  
Manufacturer: PCB

## Calibration Environmental Conditions

Environmental test conditions as printed on microphone calibration chart.

## Reference Equipment

| Manufacturer         | Model #   | Serial # | PCB Control # | Cal Date     | Due Date     |
|----------------------|-----------|----------|---------------|--------------|--------------|
| National Instruments | PCIe-6351 | 1896F08  | CA1918        | 10/20/17     | 10/19/18     |
| Larson Davis         | PRM915    | 134      | CA2114        | 11/30/17     | 11/30/18     |
| Larson Davis         | PRM902    | 5352     | CA1247        | 4/12/18      | 4/12/19      |
| Larson Davis         | PRM916    | 130      | CA1161        | 9/13/17      | 9/13/18      |
| Larson Davis         | CAL250    | 5109     | CA1496        | 10/19/17     | 10/19/18     |
| Larson Davis         | 2201      | 115      | TA472         | 4/12/18      | 4/12/19      |
| Bruel & Kjaer        | 4192      | 2954556  | CA2323        | 9/15/17      | 9/14/18      |
| Larson Davis         | GPRM902   | 3999     | CA1090        | 9/20/17      | 9/20/18      |
| Newport              | iTHX-SD/N | 1080002  | CA1511        | 2/9/18       | 2/8/19       |
| Larson Davis         | PRA951-4  | 222      | LD026         | 12/19/17     | 12/19/18     |
| Larson Davis         | PRM915    | 147      | CA2179        | 6/6/17       | 6/6/18       |
| PCB                  | 68510-02  | N/A      | CA2672        | 12/27/17     | 12/27/18     |
| 0                    | 0         | 0        | 0             | not required | not required |
| 0                    | 0         | 0        | 0             | not required | not required |
| 0                    | 0         | 0        | 0             | not required | not required |

Frequency sweep performed with B&K UA0033 electrostatic actuator.

## Condition of Unit

As Found: n/a

As Left: New Unit, In Tolerance

## Notes

1. Calibration of reference equipment is traceable to one or more of the following National Labs; NIST, PTB or DFM.
2. This certificate shall not be reproduced, except in full, without written approval from PCB Piezotronics, Inc.
3. Calibration is performed in compliance with ISO 10012-1, ANSI/NCSL Z540.3 and ISO 17025.
4. See Manufacturer's Specification Sheet for a detailed listing of performance specifications.
5. System Sensitivity is measured following procedure AT603-5.
6. Measurement uncertainty (95% confidence level with coverage factor of 2) for sensitivity is +/-0.20 dB.
7. Unit calibrated per ACS-63.

Technician: Mike N. O'Connor *MO*

Date: May 22, 2018



3425 Walden Avenue, Depew, New York, 14043

TEL: 888-684-0013 FAX: 716-685-3886 www.pcb.com

ID:CAL112-360987879.805+0

# ~ Calibration Report ~

Model: 378B02  
 Microphone Model: 377B02  
 Preamplifier Model: 426E01

Serial Number: 135708  
 Serial Number: 305580  
 Serial Number: 052038

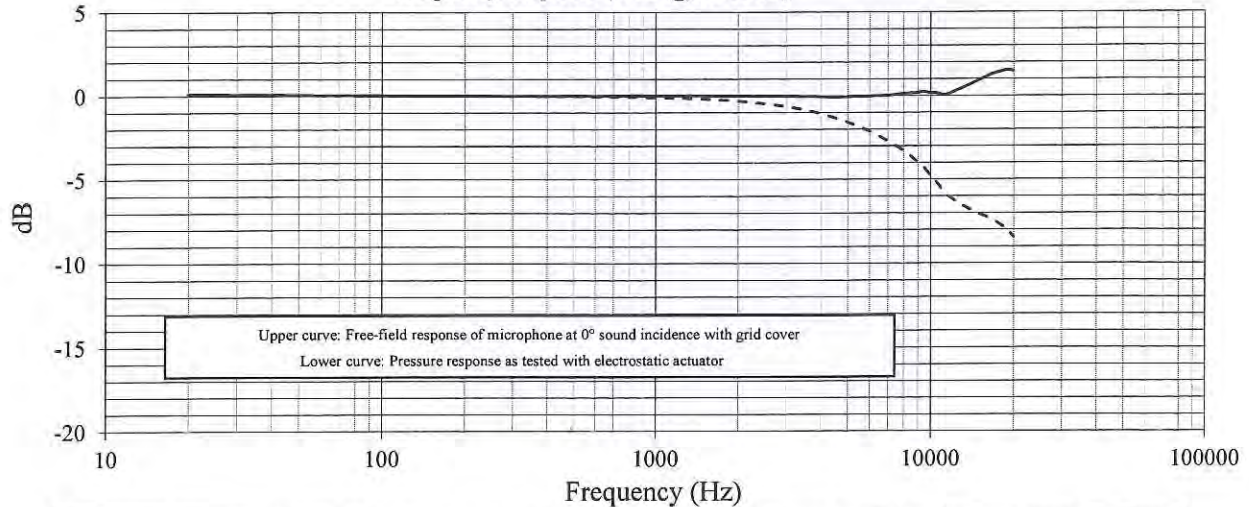
Description: 1/2" Free-Field Microphone  
 and Preamplifier

## Calibration Data

System Sensitivity @ 251.2 Hz: 44.31 mV/Pa      Polarization Voltage, External: 0 V  
 -27.07 dB re 1V/Pa

Temperature: 72 °F (22°C)      Ambient Pressure: 988 mbar      Relative Humidity: 48 %

Frequency Response (0 dB @ 251.2 Hz)



| Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) | Freq (Hz) | Lower (dB) | Upper (dB) |
|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|------------|
| 20.0      | 0.11       | 0.11       | 1679      | -0.23      | 0.00       | 7499      | -3.01      | 0.06       | -         | -          | -          |
| 25.1      | 0.10       | 0.10       | 1778      | -0.26      | -0.01      | 7943      | -3.27      | 0.12       | -         | -          | -          |
| 31.6      | 0.09       | 0.09       | 1884      | -0.28      | 0.00       | 8414      | -3.58      | 0.15       | -         | -          | -          |
| 39.8      | 0.08       | 0.08       | 1995      | -0.31      | 0.00       | 8913      | -3.93      | 0.18       | -         | -          | -          |
| 50.1      | 0.06       | 0.06       | 2114      | -0.35      | -0.01      | 9441      | -4.30      | 0.22       | -         | -          | -          |
| 63.1      | 0.05       | 0.05       | 2239      | -0.39      | -0.02      | 10000     | -4.79      | 0.16       | -         | -          | -          |
| 79.4      | 0.04       | 0.04       | 2371      | -0.43      | -0.02      | 10593     | -5.25      | 0.15       | -         | -          | -          |
| 100.0     | 0.03       | 0.03       | 2512      | -0.47      | -0.01      | 11220     | -5.82      | 0.04       | -         | -          | -          |
| 125.9     | 0.02       | 0.02       | 2661      | -0.52      | -0.01      | 11885     | -6.14      | 0.19       | -         | -          | -          |
| 158.5     | 0.02       | 0.02       | 2818      | -0.58      | -0.02      | 12589     | -6.41      | 0.36       | -         | -          | -          |
| 199.5     | 0.01       | 0.01       | 2985      | -0.65      | -0.03      | 13335     | -6.65      | 0.54       | -         | -          | -          |
| 251.2     | 0.00       | 0.00       | 3162      | -0.71      | -0.03      | 14125     | -6.86      | 0.73       | -         | -          | -          |
| 316.2     | -0.01      | 0.00       | 3350      | -0.78      | -0.04      | 14962     | -7.05      | 0.92       | -         | -          | -          |
| 398.1     | -0.02      | -0.02      | 3548      | -0.87      | -0.05      | 15849     | -7.23      | 1.12       | -         | -          | -          |
| 501.2     | -0.03      | 0.01       | 3758      | -0.95      | -0.05      | 16788     | -7.42      | 1.30       | -         | -          | -          |
| 631.0     | -0.05      | -0.01      | 3981      | -1.06      | -0.06      | 17783     | -7.69      | 1.42       | -         | -          | -          |
| 794.3     | -0.07      | 0.02       | 4217      | -1.18      | -0.07      | 18837     | -7.99      | 1.52       | -         | -          | -          |
| 1000.0    | -0.10      | 0.02       | 4467      | -1.31      | -0.08      | 19953     | -8.45      | 1.48       | -         | -          | -          |
| 1059.3    | -0.11      | 0.02       | 4732      | -1.44      | -0.07      | -         | -          | -          | -         | -          | -          |
| 1122.0    | -0.13      | 0.02       | 5012      | -1.59      | -0.06      | -         | -          | -          | -         | -          | -          |
| 1188.5    | -0.13      | 0.02       | 5309      | -1.75      | -0.05      | -         | -          | -          | -         | -          | -          |
| 1258.9    | -0.14      | 0.02       | 5623      | -1.92      | -0.04      | -         | -          | -          | -         | -          | -          |
| 1333.5    | -0.16      | 0.02       | 5957      | -2.10      | -0.03      | -         | -          | -          | -         | -          | -          |
| 1412.5    | -0.18      | 0.01       | 6310      | -2.30      | -0.01      | -         | -          | -          | -         | -          | -          |
| 1496.2    | -0.20      | 0.00       | 6683      | -2.52      | 0.00       | -         | -          | -          | -         | -          | -          |
| 1584.9    | -0.21      | 0.00       | 7080      | -2.76      | 0.02       | -         | -          | -          | -         | -          | -          |

Technician: Mike N. O'connor      Date: May 22, 2018



3425 Walden Avenue, Depew, New York, 14043

TEL: 888-684-0013      FAX: 716-685-3886      www.pcb.com

ID: CAL112-36098878.805+0



|             |               |        |         |
|-------------|---------------|--------|---------|
| Form:378B02 | Approved by:. | Feb-16 | Ver 1.0 |
|-------------|---------------|--------|---------|

Calibration Report for Certificate :

151017

| Make             |  | Model  | Serial | Asset        |
|------------------|--|--------|--------|--------------|
| PCB Piezotronics |  | 378B02 | 118396 | NAVCAD MIC 4 |
| PCB Piezotronics |  | 377B02 | 150755 | nan          |
| PCB Piezotronics |  | 426E01 | 035622 | nan          |

Sensitivity at 250Hz

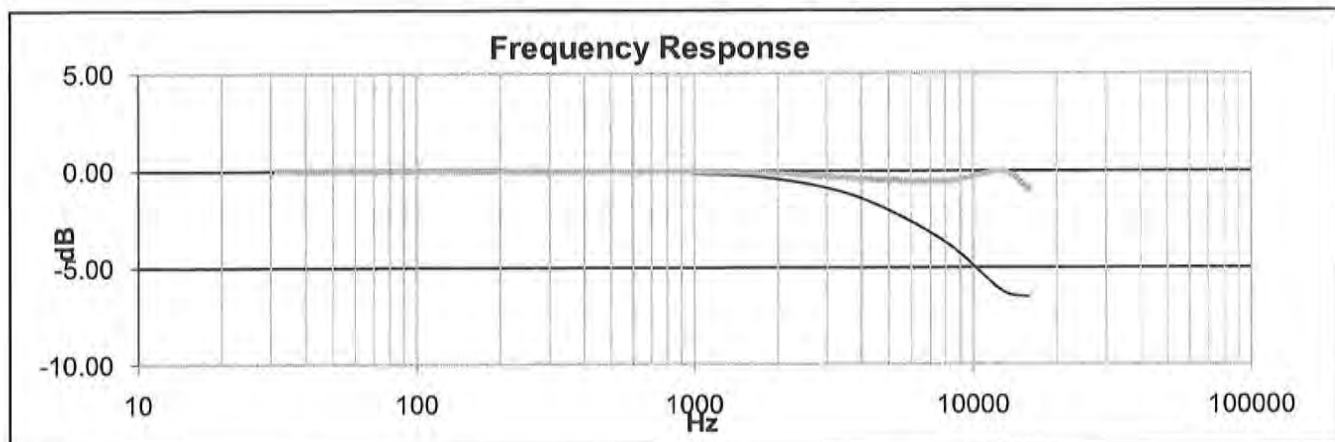
| Specs Nom | Unit          | Min    | Reading | Max    | In/Out |
|-----------|---------------|--------|---------|--------|--------|
| 50        | mV/Pa         | 39.72  | 53.93   | 62.94  | In     |
| -26.02    | dB re 1V/Pa   | -28.02 | -25.36  | -24.02 | In     |
| 0         | dB re 50mV/Pa | -2     | 0.66    | 2      | In     |

Ambient Conditions:   Static Pressure   98.2 kPa  
                                   Temperature       23.5°C  
                                   Rel.Humidity     36.0%

Frequency response

| Freq<br>Hz | Lower          | Upper            |
|------------|----------------|------------------|
|            | Pressure<br>dB | Free Field<br>dB |
| 31.5       | 0.03           | 0.03             |
| 63.1       | 0.01           | 0.01             |
| 125.9      | 0.01           | 0.01             |
| 251.3      | 0.00           | 0.00             |
| 502.5      | -0.02          | -0.03            |
| 1005.1     | -0.13          | -0.03            |
| 1978.7     | -0.41          | -0.12            |
| 3957.5     | -1.40          | -0.41            |
| 7914.9     | -3.67          | -0.55            |
| 12663      | -6.19          | -0.04            |
| 15830      | -6.50          | -0.98            |

ref



NI 16PE 17

## CERTIFICATE of CALIBRATION

Make : National Instruments Reference # : 151008  
Model : NI9234 Customer : Rowan Williams Davies & Irwin Inc  
Guelph, ON  
Descr. : ADC Module 4Ch 24Bit  
Serial # : 1A79E0A P. Order : NOI-01-01-KAH  
Asset # : NAN

Cal. status : Received in spec's, no adjustment made.

*Navair Technologies certifies that the above listed instrument was calibrated on date noted and was released from this laboratory performing in accordance with the specifications set forth by the manufacturer.*

*Unless otherwise noted in the calibration report a 4:1 accuracy ratio was maintained for this calibration.*

*Our calibration system complies with the requirements of ISO-17025 standard, working standards used for calibration are certified by or traceable to the National Research Council of Canada or the National Institute of Standards and Technology.*

Calibrated : Dec 07, 2017

By :



Cal. Due : Dec 07, 2019

J. Raposo

Temperature : 23 °C ± 2 °C Relative Humidity : 30% to 70%

Standards used : J-215

### Navair Technologies

REPAIR AND CALIBRATION TRACEABLE TO NRC AND NIST

6375 Dixie Rd. Mississauga, ON, L5T 2E7  
Phone : 905 565 1584

Fax: 905 565 8325

http://www.navair.com  
e-Mail: service@navair.com

The copyright of this document is the property of Navair Technologies  
Any reproduction other than in full requires written approval!

# Calibration Certificate

Certificate Number 2017001736

**Customer:**

RWDI Air  
600 Southgate Drive  
Guelph, ON N1G4P6, Canada

|                          |   |                         |                   |
|--------------------------|---|-------------------------|-------------------|
| <b>Model Number</b>      | CAL200                                  | <b>Procedure Number</b> | D0001.8386        |
| <b>Serial Number</b>     | 2939                                    | <b>Technician</b>       | Scott Montgomery  |
| <b>Test Results</b>      | <b>Pass</b>                             | <b>Calibration Date</b> | 15 Feb 2017       |
| <b>Initial Condition</b> | AS RECEIVED same as shipped             | <b>Calibration Due</b>  | 15 Feb 2019       |
| <b>Description</b>       | Larson Davis CAL200 Acoustic Calibrator | <b>Temperature</b>      | 23 °C ± 0.3 °C    |
|                          |   | <b>Humidity</b>         | 29 %RH ± 3 %RH    |
|                          |   | <b>Static Pressure</b>  | 101.2 kPa ± 1 kPa |

**Evaluation Method** The data is acquired by the insert voltage calibration method using the reference microphone's open circuit sensitivity. Data reported in dB re 20 µPa.

**Compliance Standards** Compliant to Manufacturer Specifications per D0001.8190 and the following standards:  
IEC 60942:2003 ANSI S1.40-2006

Issuing lab certifies that the instrument described above meets or exceeds all specifications as stated in the referenced procedure (unless otherwise noted). It has been calibrated using measurement standards traceable to the SI through the National Institute of Standards and Technology (NIST), or other national measurement institutes, and meets the requirements of ISO/IEC 17025:2005. **Test points marked with a ‡ in the uncertainties column do not fall within this laboratory's scope of accreditation.**

The quality system is registered to ISO 9001:2008.

This calibration is a direct comparison of the unit under test to the listed reference standards and did not involve any sampling plans to complete. No allowance has been made for the instability of the test device due to use, time, etc. Such allowances would be made by the customer as needed.

The uncertainties were computed in accordance with the ISO Guide to the Expression of Uncertainty in Measurement (GUM). A coverage factor of approximately 2 sigma (k=2) has been applied to the standard uncertainty to express the expanded uncertainty at approximately 95% confidence level.

This report may not be reproduced, except in full, unless permission for the publication of an approved abstract is obtained in writing from the organization issuing this report.

## Standards Used

| Description                               | Cal Date   | Cal Due    | Cal Standard |
|---|------------|------------|--------------|
| Agilent 34401A DMM                        | 09/07/2016 | 09/07/2017 | 001021       |
| Sound Level Meter / Real Time Analyzer    | 04/07/2016 | 04/07/2017 | 001051       |
| Microphone Calibration System             | 08/17/2016 | 08/17/2017 | 005446       |
| 1/2" Preamplifier                         | 10/06/2016 | 10/06/2017 | 006506       |
| Larson Davis 1/2" Preamplifier 7-pin LEMO | 08/22/2016 | 08/22/2017 | 006507       |
| 1/2 inch Microphone - RI - 200V           | 03/15/2016 | 03/15/2017 | 006510       |
| Pressure Transducer                       | 07/01/2016 | 07/01/2017 | 007368       |

Larson Davis, a division of PCB Piezotronics, Inc  
1681 West 820 North  
Provo, UT 84601, United States  
716-684-0001



**LARSON DAVIS**  
A PCB PIEZOTRONICS DIV.



## Output Level

| Nominal Level [dB] | Pressure [kPa] | Test Result [dB] | Lower limit [dB] | Upper limit [dB] | Expanded Uncertainty [dB] | Result |
|--------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 94                 | 101.2          | 94.02            | 93.80            | 94.20            | 0.14                      | Pass   |
| 114                | 101.0          | 114.02           | 113.80           | 114.20           | 0.13                      | Pass   |

-- End of measurement results--

## Frequency

| Nominal Level [dB] | Pressure [kPa] | Test Result [Hz] | Lower limit [Hz] | Upper limit [Hz] | Expanded Uncertainty [Hz] | Result |
|--------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 114                | 101.0          | 1,000.00         | 990.00           | 1,010.00         | 0.20                      | Pass   |
| 94                 | 101.2          | 1,000.02         | 990.00           | 1,010.00         | 0.20                      | Pass   |

-- End of measurement results--

## Total Harmonic Distortion + Noise (THD+N)

| Nominal Level [dB] | Pressure [kPa] | Test Result [%] | Lower limit [%] | Upper limit [%] | Expanded Uncertainty [%] | Result |
|--------------------|----------------|-----------------|-----------------|-----------------|--------------------------|--------|
| 94                 | 101.2          | 0.43            | 0.00            | 2.00            | 0.25                     | Pass   |
| 114                | 101.0          | 0.38            | 0.00            | 2.00            | 0.25                     | Pass   |

-- End of measurement results--

## Level Change Over Pressure

Tested at: 114 dB, 23 °C, 29 %RH

| Nominal Pressure [kPa] | Pressure [kPa] | Test Result [dB] | Lower limit [dB] | Upper limit [dB] | Expanded Uncertainty [dB] | Result |
|------------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 101.3                  | 101.3          | 0.00             | -0.30            | 0.30             | 0.04 ‡                    | Pass   |
| 108.0                  | 108.0          | -0.05            | -0.30            | 0.30             | 0.04 ‡                    | Pass   |
| 92.0                   | 91.9           | 0.05             | -0.30            | 0.30             | 0.04 ‡                    | Pass   |
| 83.0                   | 83.0           | 0.08             | -0.30            | 0.30             | 0.04 ‡                    | Pass   |
| 74.0                   | 74.0           | 0.05             | -0.30            | 0.30             | 0.04 ‡                    | Pass   |
| 65.0                   | 64.9           | -0.04            | -0.30            | 0.30             | 0.04 ‡                    | Pass   |

-- End of measurement results--

## Frequency Change Over Pressure

Tested at: 114 dB, 23 °C, 29 %RH

| Nominal Pressure [kPa] | Pressure [kPa] | Test Result [Hz] | Lower limit [Hz] | Upper limit [Hz] | Expanded Uncertainty [Hz] | Result |
|------------------------|----------------|------------------|------------------|------------------|---------------------------|--------|
| 108.0                  | 108.0          | 0.00             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |
| 101.3                  | 101.3          | 0.00             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |
| 92.0                   | 91.9           | 0.00             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |
| 83.0                   | 83.0           | 0.00             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |
| 74.0                   | 74.0           | 0.00             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |
| 65.0                   | 64.9           | 0.01             | -10.00           | 10.00            | 0.20 ‡                    | Pass   |

-- End of measurement results--

**Total Harmonic Distortion + Noise (THD+N) Over Pressure**

Tested at: 114 dB, 23 °C, 29 %RH

| Nominal Pressure<br>[kPa] | Pressure<br>[kPa] | Test Result<br>[%] | Lower limit<br>[%] | Upper limit<br>[%] | Expanded Uncertainty<br>[%] | Result |
|---------------------------|-------------------|--------------------|--------------------|--------------------|-----------------------------|--------|
| 108.0                     | 108.0             | 0.37               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |
| 101.3                     | 101.3             | 0.38               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |
| 92.0                      | 91.9              | 0.39               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |
| 83.0                      | 83.0              | 0.41               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |
| 74.0                      | 74.0              | 0.45               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |
| 65.0                      | 64.9              | 0.49               | 0.00               | 2.00               | 0.25 ‡                      | Pass   |

-- End of measurement results--

Signatory: Scott Montgomery

Larson Davis, a division of PCB Piezotronics, Inc  
 1681 West 820 North  
 Provo, UT 84601, United States  
 716-684-0001



# *CERTIFICATE of CALIBRATION*

Make : Larson Davis

Reference # : 155358

Model : CAL200

Customer : Rowan Williams Davies & Irwin Inc  
Guelph, ON

Descr. : Sound cal 94/114dB 1KHz

Serial # : 2939

P. Order : NOI-01-01-KAMH

Asset # : 812 KIT 2

Cal. status : Received in spec's, no adjustment made.

*Navair Technologies certifies that the above listed instrument was calibrated on date noted and was released from this laboratory performing in accordance with the specifications set forth by the manufacturer.*

*Unless otherwise noted in the calibration report a 4:1 accuracy ratio was maintained for this calibration.*

*Our calibration system complies with the requirements of ISO-17025 standard, working standards used for calibration are certified by or traceable to the National Research Council of Canada or the National Institute of Standards and Technology.*

Calibrated : Feb 08, 2019

By :



Cal. Due : Feb 08, 2021

J. Raposo

Temperature : 23 °C ± 2 °C    Relative Humidity : 30% to 70%

Standards used : J-163 J-261 J-282 J-512

## *Navair Technologies*

**REPAIR AND CALIBRATION TRACEABLE TO NRC AND NIST**

6375 Dixie Rd. Mississauga, ON, L5T 2E7  
Phone : 905 565 1584

Fax: 905 565 8325

<http://www.navair.com>  
e-Mail: [service@navair.com](mailto:service@navair.com)

The copyright of this document is the property of Navair Technologies  
Any reproduction other than in full requires written approval!

|             |                       |         |
|-------------|-----------------------|---------|
| Form:CAL200 | Approved By:JR Jan/04 | ver 1.0 |
|-------------|-----------------------|---------|

Calibration Report part of Certificate #: 155358

| Make         | Model  | Serial | Asset    | Cal. By |
|--------------|--------|--------|----------|---------|
| Larson Davis | CAL200 | 2939   | 812 KIT2 | JR      |

| Test | Reading | Spec's | In/Out |
|------|---------|--------|--------|
|------|---------|--------|--------|

SPL re 20 $\mu$ Pa

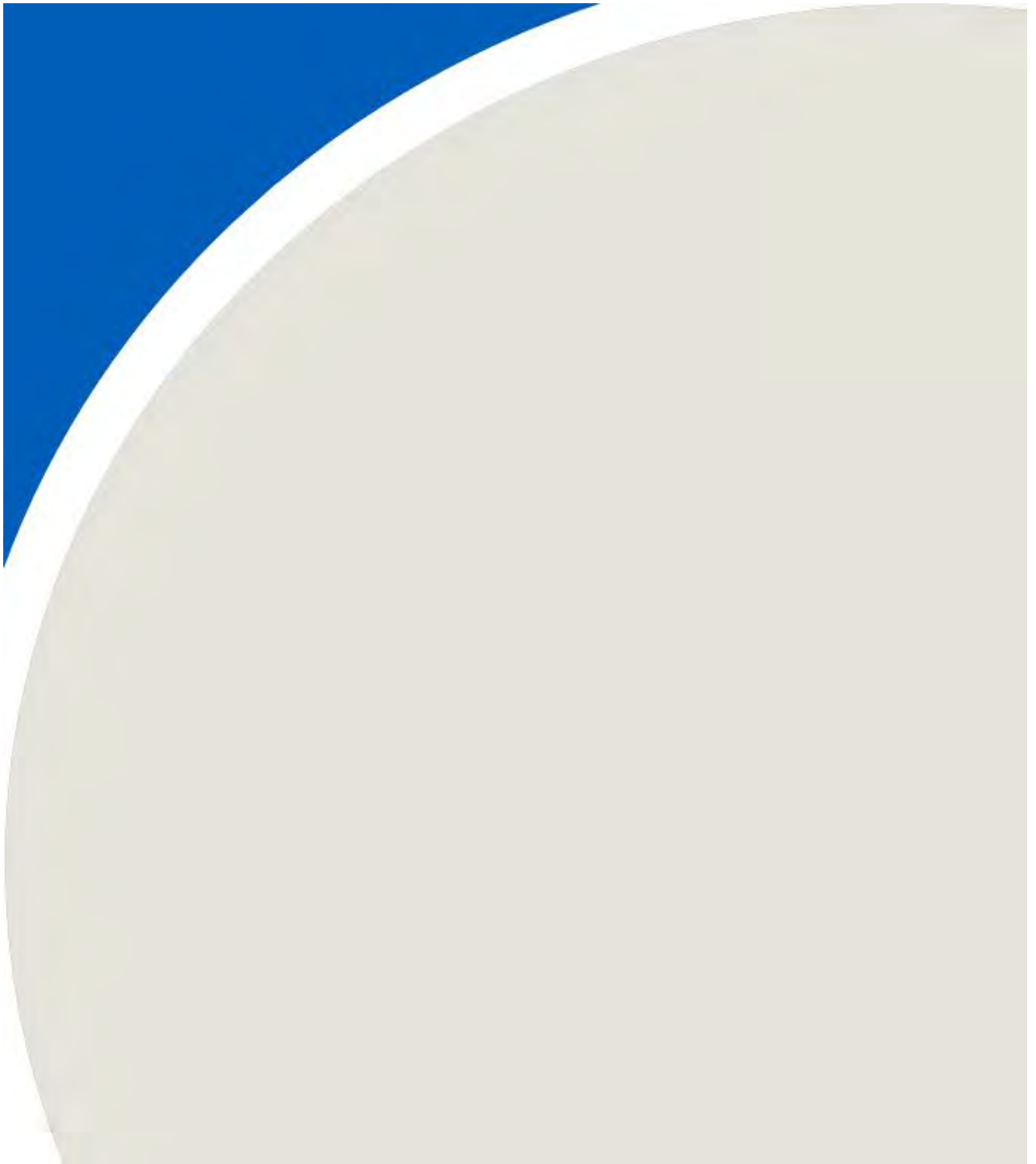
99.7kPa

|       |       |              |    |
|-------|-------|--------------|----|
| 94dB  | 94.0  | $\pm 0.2$ dB | In |
| 114dB | 114.0 | $\pm 0.2$ dB | In |

Freq. Accuracy

|        |        |             |    |
|--------|--------|-------------|----|
| 1000Hz | 1000.1 | $\pm 10$ Hz | In |
|--------|--------|-------------|----|

## APPENDIX D



I can confirm on behalf of Jericho Wind GP, ULC, that the wind turbines located within the Jericho Wind Energy Centre that were included in this immission report were operating normally for the duration of the measurement campaign from October 28, 2018 through November 20, 2019, except during parked ambient noise measurements. For ambient monitoring periods, the turbines were either parked deliberately or were parked due to operational considerations (i.e. to match power demands, or for maintenance).

**Company Name:**  
Jericho Wind GP, ULC

**Name of Company Representative:**  
Dennis Desloges

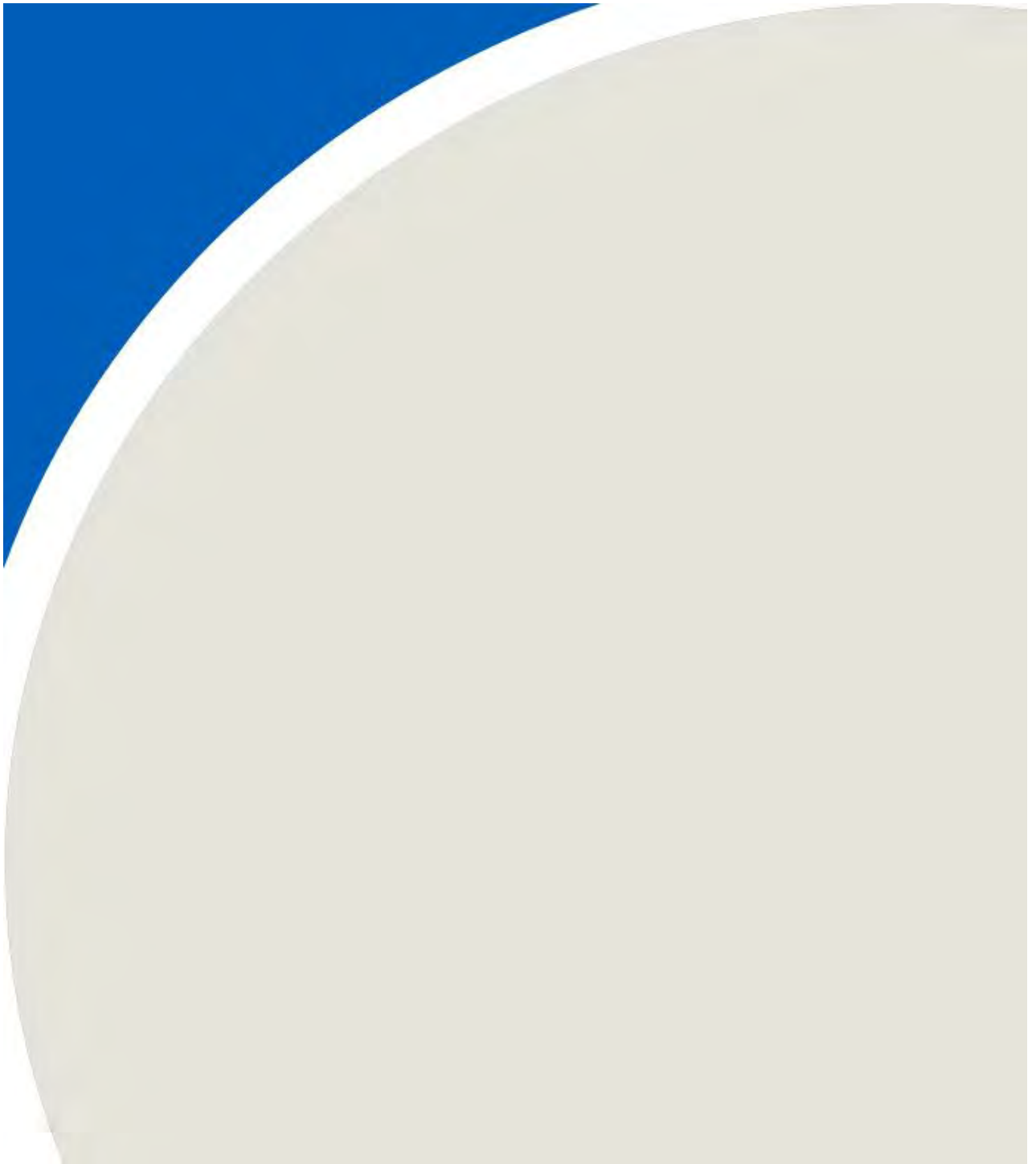
**Title:**  
Wind Site Manager

**Signature of Company Representative:**

A handwritten signature in black ink, appearing to read "Dennis Desloges", written in a cursive style.

**Date:**  
December 18, 2019

## APPENDIX E





At Measurement Location in the Direction of the Turbine

**Jericho Wind Farm  
Monitor Location A**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E1







In Close Proximity to the Turbine in the Direction of the Measurement Location

**Jericho Wind Farm  
Monitor Location A**

Jericho Fall 2018 Immission Report


Project #1501440

Figure: E1





At 90° to the Line Between the Turbine and Measurement Location, Including Area in the Vicinity of the Microphone and the Receptor

|   |                  |   |
|---|------------------|---|
| <b>Jericho Wind Farm</b><br><b>Monitor Location A</b> | Figure: E1       |  |
| Jericho Fall 2018 Immission Report                    | Project #1501440 |   |



At Measurement Location in the Direction of the Turbine

**Jericho Wind Farm  
Monitor Location D**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E2





In Close Proximity to the Turbine in the Direction of the Measurement Location

**Jericho Wind Farm  
Monitor Location D**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E2





At 90° to the Line Between the Turbine and Measurement Location, Including Area in the Vicinity of the Microphone and the Receptor

**Jericho Wind Farm**  
**Monitor Location D**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E2





At Measurement Location in the Direction of the Turbine

**Jericho Wind Farm  
Monitor Location E**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E3





In Close Proximity to the Turbine in the Direction of the Measurement Location

**Jericho Wind Farm  
Monitor Location E**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E3





At 90° to the Line Between the Turbine and Measurement Location, Including Area in the Vicinity of the Microphone and the Receptor

**Jericho Wind Farm**  
**Monitor Location E**

Jericho Fall 2018 Immission Report

Project #1501440

Figure: E3







# Noise Monitoring Locations

| Monitoring Location | UTM 17      |              | Microphone Height (m) |
|---------------------|-------------|--------------|-----------------------|
|                     | Easting (m) | Northing (m) |                       |
| <b>Jericho A</b>    | 427121      | 4778068      | 4.5                   |
| <b>Jericho D</b>    | 425984      | 4780191      | 4.5                   |
| <b>Jericho E</b>    | 428214      | 4779535      | 4.5                   |



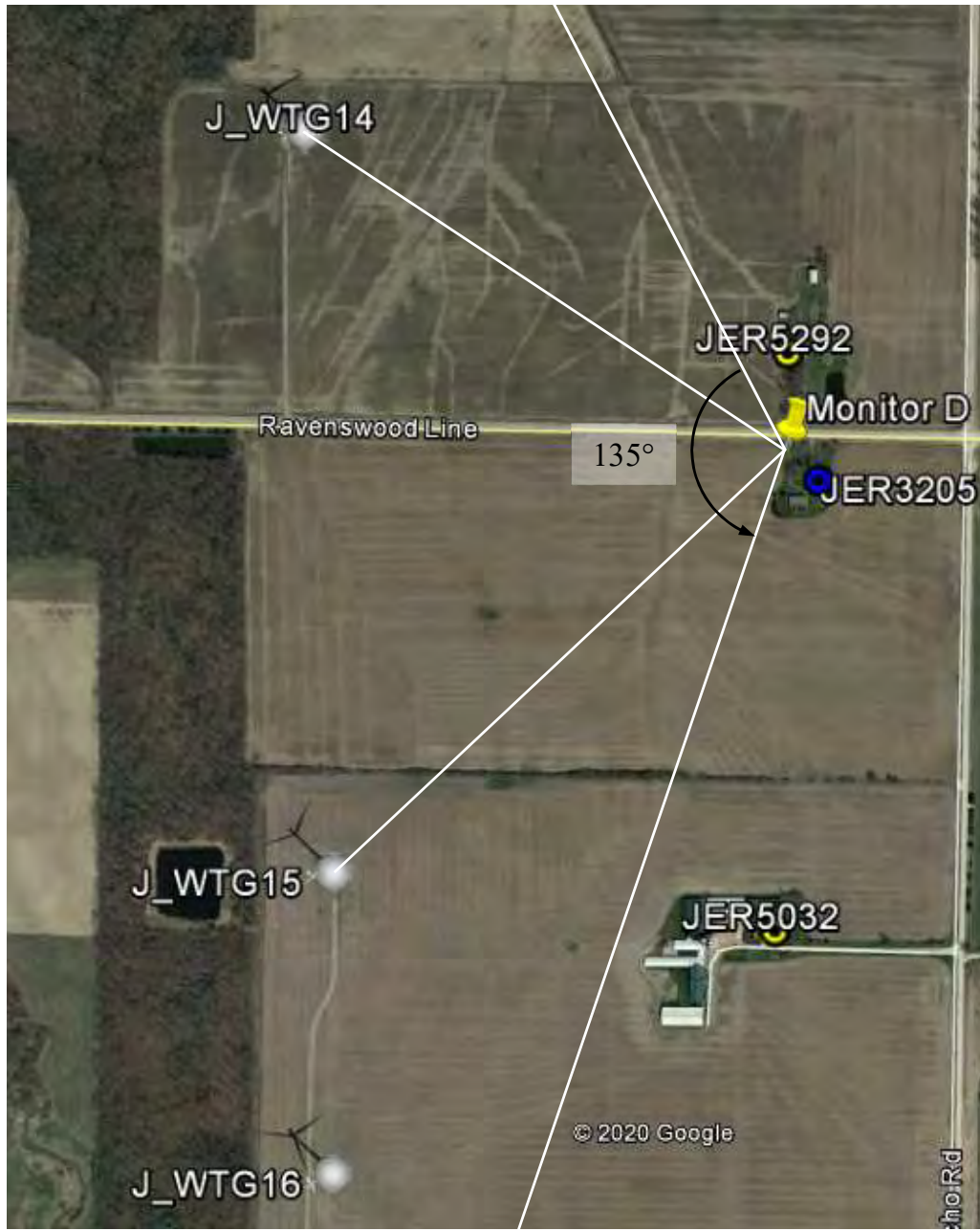
| Monitoring Location A – JER2532   |                     |
|---|---------------------|
| Turbine ID  | Turbine Angle       |
| J_WTG23   | 348                 |
| J_WTG24   | 23                  |
| J_WTG25   | 327                 |
| J_WTG26   | 209                 |
| <b>Most Impactful Turbine:</b>  | J_WTG25             |
| <b>Turbines with Impacts within 2 dB of J_WTG25's Impact at the Receptor:</b> | J_WTG26             |
| <b>Angle Sector 1 (Based on J_WTG25):</b>                                     | 90°<br>(282°- 12°)  |
| <b>Angle Sector 2 (Based on J_WTG26):</b>                                     | 90°<br>(164°- 254°) |

**Wind Angle – Monitor A**

Drawn by: MFA | Figure: E4

Date Revised: June 5, 2020





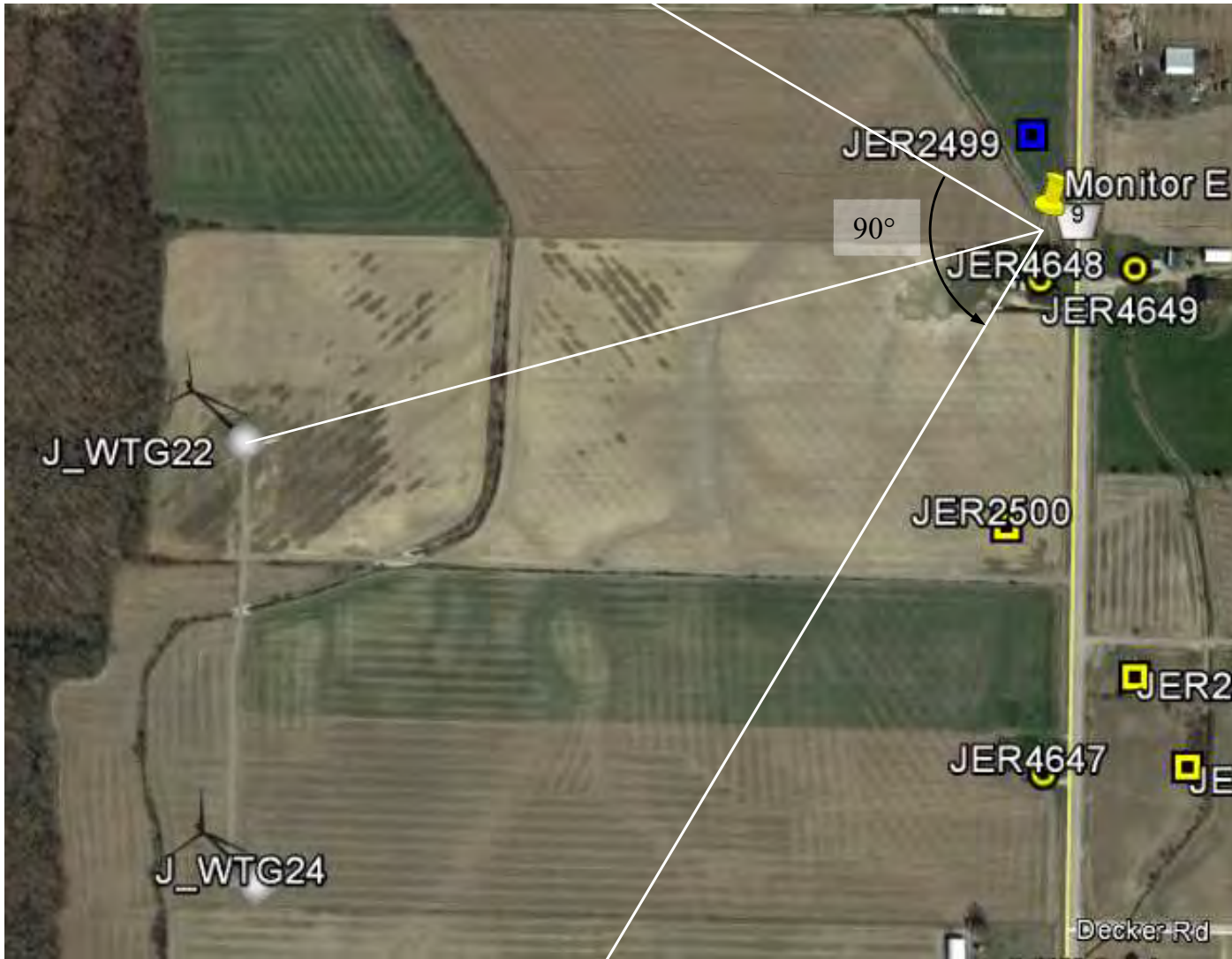
| Monitoring Location D – JER3205   |                       |
|---|-----------------------|
| Turbine ID  | Turbine Angle         |
| J_WTG14   | 304                   |
| J_WTG15   | 227                   |
| J_WTG16   | 212                   |
| <b>Most Impactful Turbine:</b>  | J_WTG14               |
| <b>Turbines with Impacts within 2 dB of J_WTG14's Impact at the Receptor:</b> | J_WTG15               |
| <b>Total Angle with +/- 45° Method Employed:</b>                              | 167°<br>(182° - 349°) |
| <b>Total Angle with +/- 67.5° Method Employed:</b>                            | 135°<br>(198° - 333°) |
| <b>Minimum Total Angle (Angle Chosen for Analysis):</b>                       | 135°<br>(198° - 333°) |

**Wind Angle – Monitor D**

Drawn by: MFA | Figure: E5

Date Revised: June 5, 2020





| Monitoring Location E – JER2499   |                     |
|---|---------------------|
| Turbine ID  | Turbine Angle       |
| J_WTG22   | 255                 |
| J_WTG24   | 230                 |
| <b>Most Impactful Turbine:</b>  | J_WTG22             |
| <b>Turbines with Impacts within 2 dB of J_WTG22's Impact at the Receptor:</b> | None                |
| <b>Angle Sector (Based on J_WTG22):</b>                                       | 90°<br>(210°- 300°) |

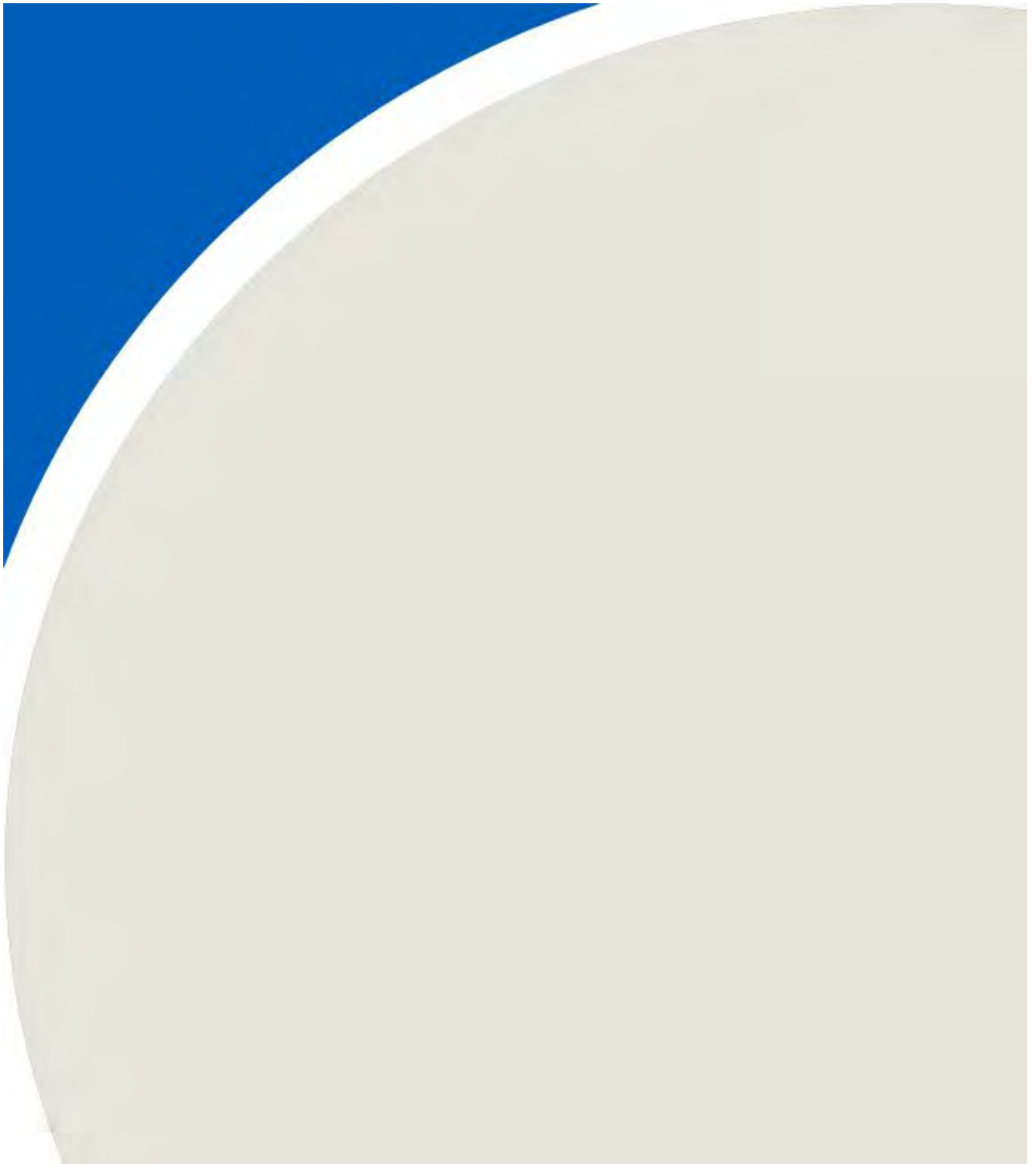
**Wind Angle – Monitor E**

Drawn by: MFA | Figure: E6

Date Revised: June 5, 2020



## APPENDIX F



**Appendix F1 - Summary of Measurement Conditions**

Jericho Wind Energy Centre, 1501440

|                                  |   |
|----------------------------------|---|
| Measurement Duration             | October 28, 2018 to November 20, 2019                                 |
| Wind Speed                       | 0 to 20 m/s   |
| Temperature                      | -27° to 35°C  |
| General Weather Conditions       | Weather conditions varied significantly over the measurement campaign |
| Wind Rose Plots                  | Found in Figures 7-9  |
| Signed Statement by the Operator | Found in Appendix D   |