

AERCOUSTICS' ENGINEERING LIMITED

MELANCTHON WIND PLANT NOISE COMPLAINT MANAGEMENT PROTOCOL

Prepared For:

CANADIAN HYDRO DEVELOPERS, INC.

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1.0 INTRODUCTION

The Melancthon Wind Plant consists of two phases with a total of 133 turbines. These wind turbines are located in Melancthon and Amaranth Townships, County of Dufferin, and have a combined nameplate capacity of 199.5 megawatts (“MW”).

The Ministry of the Environment (“MOE”) granted a Certificate of Approval (Air), Number: 7389-75NRFT, for this plant on August 20, 2007. As a commitment to the community, keeping with the conditions of the Certificate of Approval (Air) and the Minutes of Settlement executed between Canadian Hydro Developers, Inc. (“Canadian Hydro”) and the Township of Amaranth, and to ensure that the plant complies with all provincial standards, Canadian Hydro requested Aercoustics Engineering Limited to prepare this Noise Complaint Management Protocol.

The intent of this document is to outline a procedure for residents to raise any reasonable concerns or complaints regarding potential noise from this plant. This protocol provides recommendations and procedures that can be implemented on a best efforts basis in order to manage any reasonable noise complaint(s). This protocol will address the following items:

- Noise Complaint Initiation
- Information Management
- Investigative Actions
- Complaint Resolution.

This protocol will allow Canadian Hydro and residents to efficiently and reasonably resolve any raised complaints.

2.0 NOISE COMPLAINT INITIATION

A toll free number is available for the community, in order to initiate complaints should any arise. The phone number is **866-925-6549**. Canadian Hydro will endeavour to respond to voicemail messages within two hours of them being left between 8:00 a.m. and 3:00 p.m. weekdays and prior to 10:00 a.m. the next weekday morning if they are left after 3:00 p.m. Otherwise, calls will be linked to Canadian Hydro’s automated voice messaging system. This line is accessible 24/7 and will have a dedicated extension for noise complaints. The messages will be checked daily Monday through Friday and complaints will be responded to promptly. Additionally, on weekends and holidays Canadian Hydro will endeavour to check daily for messages and to respond the same day as any complaint. The need for such monitoring outside business hours will be reviewed by Canadian Hydro and the Township once the wind farm has been in operation for six months and has been shown to be operating without valid complaints of noise.

The message service should provide the public with clear instructions on what information should be provided (e.g. time and date of call, nature of complaint, resident’s location, and contact information).

3.0 INFORMATION MANAGEMENT

In order to ensure a timely response, it is important to obtain and process the required information pertaining to the issue within a given timeframe that is consistent with the standard reporting procedures that are normally requested by the MOE.

3.1 RECORD & TRACKING

Upon receipt of a noise complaint, a *Complaint Response Form* should be initiated. The purpose of this form will be to record the complaint, the response taken, and the resolution of the complaint.

It is recommended that each *Complaint Response Form* include the following information:

Initial Information:

- Resident location
- Resident contact information
- Date and time when complaint was received
- Date and time of complaint occurrence
- Details regarding nature of complaint
- Performance parameters of turbine during complaint period
- Meteorological data during complaint period

Investigative Information:

- Date & time measurements conducted
- Performance parameters of turbine during measurements
- Meteorological data during measurement period

Resolution Information:

- Determination of compliance to the applicable MOE noise guidelines using measurements conducted
- Actions taken to resolve the issue
- Date file closed

It is also recommended that each *Complaint Response Form* have a unique file number for tracking purposes.

As experience with the *Complaint Response Form* is gained through its potential application, the form may be refined by Canadian Hydro to increase its functionality.

3.2 NOTIFICATION OF COMPLAINTS

Notification of complaints should be provided to the MOE District Office in accordance with Section 4 of the Certificate of Approval (Air). This notification should be provided in writing by submitting a copy of the initiated Complaint Response Form. In addition to providing this to the MOE a copy should also be forwarded to the complainant as well as a copy to the corresponding Township in which the complainant resides. The above mentioned parties should be notified within two business days of receiving the complaint.

Notification should also be provided to the MOE, complainant and corresponding Township once the *Complaint Response Form* is closed. This should occur by submitting a copy of the completed form to the parties. This notification should occur within ten business days of the issue being resolved.

4.0 INVESTIGATIVE ACTIONS

Should a complaint be received, the first step will be for Canadian Hydro operational personnel to respond. They will determine initially if there is anything out of the ordinary with the turbine which can be immediately and obviously rectified. Should these immediate actions not rectify the complaint, qualified personnel should then be employed to conduct a more detailed acoustical investigation as appropriate.

The detailed acoustical investigative measures should entail the appropriate sound level measurements be conducted in order to determine compliance to the MOE's publication "*Interpretation for Applying MOE NPC Technical Publications to Wind Turbine Generators*". This detailed investigation should occur under similar meteorological conditions as were present during the complaint. Measurement should be conducted in accordance with the MOE's publication NPC-103.

The investigation should also include meteorological data obtained from a 10 m high weather station located at the measurement site. Meteorological data should include temperature, relative humidity, wind speed, and wind direction for the investigative period.

Canadian Hydro operational personnel will make the initial response within two business days of receiving the complaint. The detailed acoustic investigation of the complaint should occur, if required, within 15 business days of the complaint being initiated, provided that the weather conditions are acceptable. It is anticipated that the results of the investigative measurements can be provided within 10 business days of the measurements being performed.

5.0 COMPLAINT RESOLUTION

If, based on the measurements, it is deemed that the MOE sound level limits as outlined in the "*Interpretation for Applying MOE NPC Technical Publications to Wind Turbine Generators*", are satisfied, then it is expected that the complaint is resolved and the *Complaint Response Form* will be closed.

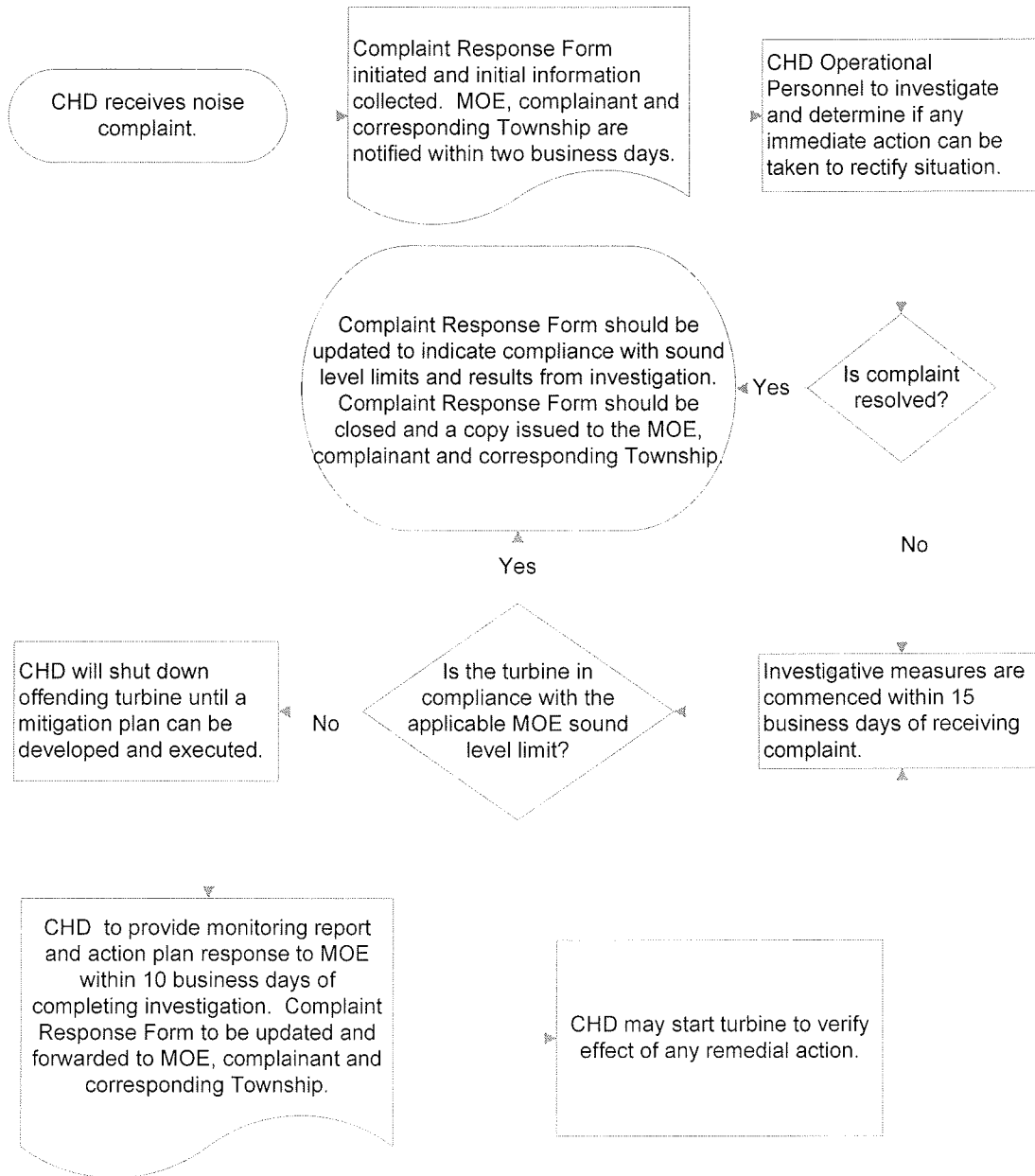
If, based on the measurements, it is determined that there is an exceedance of the MOE sound level limits at certain wind speeds as outlined in the “*Interpretation for Applying MOE NPC Technical Publications to Wind Turbine Generators*”, Canadian Hydro will shut down the offending turbine during periods of those wind speeds. The turbine will continue to operate under wind speed conditions where it still satisfies the sound level limit for that speed. The *Complaint Response Form* will be updated to include the results of the investigation and the action plan to bring the turbine into compliance.

If there are any potential remedial actions which may result in compliance with the sound level limits, these should also be indicated on the *Complaint Response Form*. After the remedial action plan is implemented, Canadian Hydro may restart the turbine to repeat the investigative measurements to determine if the mitigation was effective.

If the mitigation did not result in compliance with the sound level limit, the offending turbine will remain shut down during wind speed conditions where exceedances have been documented until another alternative mitigation plan can be determined. Where a turbine is identified for shut-down, Canadian Hydro will notify the MOE, complainant and corresponding Township within 24 hours. If it is determined that compliance with the MOE sound level limits has been achieved, Canadian Hydro may continue operating the turbine. The *Complaint Response Form* will be updated and copies will be provided to the MOE and the complainant.

The following figure outlines a flow chart for the complaint resolution process.

Figure 1: Noise Complaint Response



Melancthon Wind Plant Compliant Response Form

File No.

Purpose: to record the complaint, response taken, and the resolution of the complaint.

Canadian Hydro Complaint Champion

Name of Champion: _____

Position: _____

Supervisor: _____

Complainant and Complaint Information

Date of Call: _____

Time of Call: _____

Resident Contact Information:

Name: Mr. / Ms. / Mrs. _____

Resident Location:

Lot _____, Concession _____, Township _____

Date and Time of Complaint: _____

Details of Complaint: _____

Written notification of MOE Guelph District Office:

Date: _____

Time: _____

MOE Person: _____

Method: Fax Courier

Written notification of Township:

Date: _____

Time: _____

Township Person: _____

Method: Fax Courier

Plant Operational Data

Offending Turbine and adjacent turbine(s) performance during complaint period:

Turbine No.	Output (MW)	Wind Speed (m/s) and Direction	Last Maintenance	Comments

OR

Amaranth Transformer Station performance during complaint period:

Output (MW)	Voltage	# of Wind Turbines on-line	Last Maintenance	Comments

Meteorological data during complaint period:

Temperature	Relative Humidity	Wind Speed	Wind Direction	Comments (general weather conditions, cloud cover, precipitation, etc.)

Canadian Hydro Investigative Information

Based upon the wind turbine or transformer station performance data collected for the complaint period, were there any operational activities implemented by Canadian Hydro to rectify the complaint? Yes No

If yes, and compliance with the applicable MOE sound level limit is predicted to be achieved, proceed with issuing the notices of file closure.

If no, proceed to retain an independent environmental noise consultancy.

Comment(s): _____

Consultancy Investigative Information

Name of Noise Consultancy Retained: _____

Consultancy Primary Point of Contact:

Name: _____

Telephone No: _____

Fax No: _____

Email: _____

Date, Time, and Location of Measurement(s): _____

Offending Turbine and adjacent turbine(s) performance during monitoring period:

Turbine No.	Output (MW)	Wind Speed (m/s) and Direction	Last Maintenance	Comment

OR

Amaranth Transformer Station performance during monitoring period:

Output (MW)	Voltage	# of Wind Turbines on-line	Last Maintenance	Comment

Meteorological data during monitoring period (NOTE: consultancy to provide):

Temperature	Relative Humidity	Wind Speed	Wind Direction	Comments (general weather conditions, cloud cover, precipitation, etc.)

Notice of File Closure

Notice of file closure to MOE Guelph District Office:

Date: _____

Time: _____

MOE Person: _____

Method: Fax Courier Mail

Notice of file closure to complainant:

Date: _____

Time: _____

Method: Fax Courier Mail

Notice of file closure to affected Township

Date: _____

Time: _____

Method: Fax Courier Mail

Date file closed: _____

Attach copies of the remedial measures implement, detailed acoustical investigations, notices issued, and pictures as appropriate.

