


CERTIFICATE OF APPROVAL
AIR

NUMBER 2023-7HUMVW

Issue Date: December 10, 2008

Greenfield South Power Corporation
 2275 Lakeshore Boulevard West, Suite 401
 Toronto, Ontario
 M8V 3Y3

Site Location: Greenfield South Power Project, Loreland Avenue
 Lot 3, Concession 1, Part 1, Reference Plan 43R - 7398
 Mississauga City, Regional Municipality of Peel, Ontario

You have applied in accordance with Section 9 of the Environmental Protection Act for approval of:

one (1) combined cycle electricity generation facility, having a nominal rating of 280 megawatts, operated during periods of high and intermediate demand for electricity, consisting of the following equipment and accessories:

- one (1) gas turbine, firing on natural gas and distillate fuel oil with natural gas as the Primary Fuel, to generate electricity, having a nominal rating of 175 megawatts and a nominal heat input of 2,312 gigajoules per hour and equipped with dry low-NOx burners, with its hot flue gas discharging to the HRSG described below;
- one (1) heat recovery steam generator (HRSG), recovering the heat from the hot flue gas of the gas turbine described above to generate steam to feed the steam turbine noted below. The HRSG is equipped with a duct burner, firing primarily on natural gas with distillate fuel oil with natural gas as the Primary Fuel, having a nominal heat input of 371 gigajoules per hour. The HRSG exhausts into the atmosphere through a stack, having a maximum volumetric flow rate of 480 cubic metres per second, having an exit diameter of 5.5 metres, extending at a minimum 40.0 metres above grade;
- one (1) steam turbine, having a nominal rating of 105 megawatts and using the steam generated by the above noted HRSG to generate electricity;
- one (1) forced draft, counter-flow, 5-cell cooling tower, each cell equipped with a fan, having an air flow rate of 654 standard cubic metres per second, having a fan diameter of 9.15 metres, extending 12.2 metres above grade;
- twelve (12) natural gas fired space heaters, to provide comfort heating to the gas turbine hall and the steam turbine hall, having a total maximum heat input of 1,583,000 kilojoules per hour; and
- one (1) roof-top natural gas fired air conditioning unit, to provide comfort heating to the administration offices, control room, change room and lunch room, having a maximum heat input of 264,000 kilojoules per hour;

all in accordance with the Application for Approval (Air & Noise), dated November 29, 2005 and signed by Hubert S. Vogt, Greenfield South Power Corporation, and all supporting information and documentation associated with the application including additional information provided by Greenfield South Power Corporation, received August 22, 2008 in an email sent from Francis C. Itliong, P.Eng., and received September 10, 2008 in another email sent from Francis C. Itliong, P.Eng.

For the purpose of this Certificate of Approval and the terms and conditions specified below, the following definitions apply:

1. "Acoustic Audit" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Facility, assessed to determine compliance with the Performance Limits for

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the Facility regarding noise emissions, completed in accordance with the procedures set in Publication NPC-103 and reported in accordance with Publication NPC-233.

2. "Acoustic Audit Report" means a report presenting the results of an Acoustic Audit, prepared in accordance with Publication NPC-233.

3. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from a Facility.

4. "Act" means the *Environmental Protection Act*.

5. "CEM System" means the continuous emission monitoring and recording devices to continuously monitor and record the concentrations of nitrogen oxides, carbon monoxide and oxygen at the Combustion Turbine Facility exhaust stack, and shall be designed, installed and operated following the recommendations of the document titled "Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Power Generation - Report EPS 1/PG/7" published by Environment Canada in September 1993, as modified.

6. "Certificate" means this Certificate of Approval, including Schedule "A", "B", "C" and "D", issued in accordance with Section 9 of the Act.

7. "Combustion Turbine Facility" means the combustion turbine with dry low- NO_x burners, the HRSG with duct burners and the steam turbine as described in the Company's application, this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate.

8. "Company" means Greenfield South Power Corporation.

9. "Director" means any Ministry employee appointed by the Minister pursuant to Section 5 of the Act.

10. "District Manager" means the District Manager, Halton-Peel District Office, Central Region of the Ministry.

11. "Equipment" means the Combustion Turbine Facility, the cooling tower, and all the acoustic measures described in the Company's application, this Certificate and in the supporting documentation referred to herein, to the extent approved by this Certificate.

12. "Facility" means the entire operation on the property where the Equipment is located.

13. "Fuel Flow Rate" means flow rate of the fuel, expressed in cubic metres per second at standard temperature and pressure, or kilograms per second.

14. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report or the design/implementation of Noise Control Measures for the Facility and/or Equipment.

The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment or the design/implementation of Noise Control Measures for the Facility and/or Equipment.

15. "Lower Heating Value" means the energy released during combustion of the fuel, excluding the latent heat content of the water vapour component of the products of combustion, expressed in megajoules per cubic metre at standard temperature and pressure, or megajoules per kilogram.

16. "Manager" means the Manager, Technology Standards Section, Standards Development Branch of the Ministry, or any other person who represents and carries out the duties of the Manager, as those duties relate to the conditions of this Certificate.

17. "Manual" means a document or a set of documents that provide written instructions to staff of the Company.

18. "Ministry" means Ontario Ministry of the Environment.

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19. "NO_x" means oxides of nitrogen, including nitric oxide (NO) and nitrogen dioxide (NO₂).
20. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, silencers, acoustical louvres, hoods and acoustical treatment, described in Schedule "D" of this Certificate and in supporting information including the Noise Report.
21. "Noise Report" means the report entitled "Environmental Acoustic Assessment Report, Proposed Combined Cycle Power Plant", prepared by HGC Engineering, dated October 6, 2008.
22. "Non-peaking Mode" means operation of the gas turbine exceeding the hour of operation limits specified in the Peaking Mode.
23. "O. Reg. 419/05" means Ontario Regulation 419/05, Air Pollution - Local Air Quality.
24. "Point of Impingement" means any point in the natural environment and as defined by s. 2 of O. Reg. 419/05.
25. "Primary Fuel" means the fuel used in the Facility to generate 10% or more of the electricity in a contract year.
26. "Peaking Mode" means operation of the gas turbine not more than 7,500 hours in any five (5) year period and, in those years, a total of not more than 3,000 hours during the months of May, June, July, August and September.
27. "Power Output" means the electricity and shaft power production of the Combustion Turbine Facility, expressed in megawatts.
28. "Pre-Test Information" means the information outlined in Section 1 of the Source Testing Code.
29. "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.
30. "Publication NPC-205" means Ministry Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October, 1995.
31. "Publication NPC-233" means Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound" , October 1995.
32. "Source Testing" means sampling and testing to measure emissions resulting from operating the Combustion Turbine Facility under conditions which yield the worst case emissions within the approved operating range of the Combustion Turbine Facility.
33. "Source Testing Code" means the Source Testing Code, Version 2, Report No. ARB-66-80, dated November 1980, prepared by the Ministry, as amended.
34. "Thermal Efficiency" means the fraction of the total energy input which is transformed into net useful energy output, usually expressed as a percentage on a lower heating value basis, calculated according to the formula described in Schedule "B" of this Certificate.

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

TERMS AND CONDITIONS

PERFORMANCE REQUIREMENTS

1. The Company shall ensure that the Facility is designed and operated to comply, when it is operated, with the following performance requirements:

Emission Limits

(1) The concentrations of nitrogen oxides, sulphur dioxide and carbon monoxide in the undiluted gases emitted from the Combustion Turbine Facility exhaust stack are not greater than the limits specified in Schedule "A" of this Certificate.

Thermal Efficiency

(2) The Thermal Efficiency of the Combustion Turbine Facility is not less than the thermal efficiency specified in Schedule "A" of this Certificate.

Noise Limits

(3) The Company shall ensure that the noise emissions from the Facility comply with the limits determined in accordance with Publication NPC-205.

MONITORING

2. The Company shall, when the Combustion Turbine Facility is operating in the Peaking Mode and has not operated previously in the Non-peaking Mode, monitor the emissions and operation of the Combustion Turbine Facility as follows:

Source Testing

(1) The Company shall perform, initially after the commencement of operation of the Combustion Turbine Facility and every two (2) years thereafter, Source Testing to determine the emission rates of NO_x, carbon monoxide and oxygen from the Combustion Turbine Facility exhaust stack, when the Combustion Turbine Facility is fired with Primary Fuel. Three (3) source tests shall be conducted at maximum rating or at the maximum load achievable at the time of testing.

(2) The Company shall submit, within three (3) months after the commencement of operation of the Combustion Turbine Facility, to the Manager a test protocol, including the Pre-Test Information for the Source Testing required by the Source Testing Code. The Company shall finalize the test protocol in consultation with the Manager.

(3) The Company shall complete the Source Testing within three (3) months after the Manager has accepted the test protocol, or within a period directed or agreed by the District Manager.

(4) The Company shall notify the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Certificate, at least fifteen (15) days prior to the Source Testing.

(5) The Company shall, whenever a Source Testing has completed, submit a report on the Source Testing to the District Manager and the Manager not later than two (2) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall also include the following:

- (a) an Executive Summary,
- (b) all records of the operating conditions of the Combustion Turbine Facility at times of the Source Testing,
- (c) all results and average of the source tests obtained during the Source Testing, and
- (d) a comparison of the results and the average of the results obtained during the Source Testing with the applicable emission limits in Schedule "A".

(6) The Director may not accept the results of the Source Testing if:

- (a) the Source Testing Code or the requirements of the Manager were not followed, or
- (b) the Company did not notify the District Manager and the Manager of the Source Testing, or
- (c) the Company failed to provide a complete report on the Source Testing.

(7) If the Director does not accept the results of the Source Testing, the Director may require to repeat Source Testing.

3. In the event that the operation of the Combustion Turbine Facility has switched or is expected to switch from the Peaking Mode to Non-peaking Mode, the Company shall, within three (3) months after the switch or expectation of the switch, install and maintain operational a CEM System to continuously monitor and record the concentrations of NO_x, carbon monoxide and oxygen in the undiluted gases leaving the Combustion Turbine Facility exhaust stack, and shall continue to use the CEM System to monitor emissions from the Combustion Turbine Facility when the Combustion Turbine Facility stays in operation. The locations and specifications of the CEM system are outlined in Schedule "C".

4. The Company shall perform a test, initially after the commencement of operation of the Combustion Turbine Facility and every two (2) years thereafter, to determine the Thermal Efficiency of the Combustion Turbine Facility. The Company shall conduct the Thermal Efficiency test at the same time when the Source Testing is conducted when Source Testing is used for emissions monitoring. The Company shall:

(a) submit, within three (3) months after the commencement of operation of the Combustion Turbine Facility, to the Manager a test protocol, including the Pre-Test Information for the Thermal Efficiency test.

(b) The Company shall finalize the test protocol in consultation with the Manager.

(c) The Company shall not commence the Thermal Efficiency test until the Manager has accepted the test protocol.

(d) The Company shall complete the first Thermal Efficiency test, within three (3) months after the Manager has accepted the test protocol, or within a period directed or agreed by the District Manager.

(e) The Company shall notify the District Manager and the Manager, in writing, of the location, date and time of any impending Thermal Efficiency test required by this Certificate, at least fifteen (15) days prior to the Thermal Efficiency test.

(f) The Company shall determine the parameters described in Schedule "B" attached to this Certificate, during the Thermal Efficiency test for the Combustion Turbine Facility.

(g) The Company shall calculate the Thermal Efficiency of the Combustion Turbine Facility according to the formula described in Schedule "B" attached to this Certificate.

(h) The Company shall prepare a summary of the results of the Thermal Efficiency test no later than two (2) months after completing the test. The summary shall indicate the Thermal Efficiency of the Combustion Turbine Facility and include all parameters described in Schedule "B" attached to this Certificate.

(i) If the measured Thermal Efficiency is less than the anticipated Thermal Efficiency specified in Schedule "A" of this Certificate (with a tolerance of 0.05 multiplied by the anticipated Thermal Efficiency), the Company shall notify the Ministry so that the concentration limits specified in Schedule "A" of this Certificate could be revised accordingly.

OPERATION AND MAINTENANCE:

5. The Company shall ensure that the Facility is properly operated and maintained at all times. The Company shall:

(1) prepare, prior to commencement of operation of the Facility and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Facility, including:

(a) routine operating and maintenance procedures according to good engineering practices and as recommended by Equipment suppliers;

(b) emergency procedures;

(c) frequency of inspection and maintenance of equipment in the Facility;

- (d) procedures for recording and responding to environmental complaints;
- (e) a list of job positions responsible for operation of the Equipment; and
- (f) all appropriate measures to minimize fugitive air emissions from all potential sources;

(2) implement the procedures, measures and recommendations of the Manual.

6. The Company shall fully implement the Noise Control Measures prior to commencement of operations of the Equipment.

ACOUSTIC AUDIT

7.1 The Company shall:

- (1) carry out acoustic audit measurements on the actual noise emissions due to the operation of the Facility, in accordance with the procedures in Publication NPC-103;
- (2) submit a report on the results of the acoustic audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of Publication NPC-233, to the District Manager and the Director not later than three (3) months after the Commencement of Commercial Operation of the Equipment.

7.2 The Director may:

- (1) not accept the results of the acoustic audit if the requirements of Publication NPC-233 were not followed;
- (2) require the Company to repeat the acoustic audit if the results of the acoustic audit are found unacceptable to the Director.

RECORD RETENTION:

8. The Company shall retain, for a minimum of two (2) years from the date of their creation, or in accordance with the requirements of other applicable regulations, all records and information related to or resulting from the maintenance of the Equipment and monitoring activities required by this Certificate. The Company shall retain:

- (1) all records on the maintenance and repair of the Equipment;
- (2) all records produced by the Source Testing and, if equipped, the CEM System;
- (3) all records of the Thermal Efficiency tests, including calculations of the Thermal Efficiency of the Combustion Turbine Facility;
- (4) all records and results of the acoustic audit measurements and the acoustic audit report;
- (5) all records on the environmental complaints, or incidents, if any; including:
 - (a) a description, time and date of each incident to which the complaint relates,
 - (b) wind direction at the time of the incident to which the complaint relates, and
 - (c) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

These records shall be made available to staff of the Ministry on request.

NOTIFICATION OF COMPLAINTS

9. The Company shall notify the District Manager, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:

- (1) this Certificate number;
- (2) a description of the nature of the complaint;
- (3) the time and date of the incident to which the complaint relates; and
- (4) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

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

- 1. Conditions 1 and 6 are included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the Facility.
- 2. Conditions 2, 3 and 4 are included to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the Act, the regulations and this Certificate can be verified.
- 3. Condition 5 is included to emphasize that the Facility must be maintained and operated according to a procedure that will result in compliance with the Act, the regulations and this Certificate.
- 4. Condition 7 is included to require the Company to gather accurate information so that the environmental noise impact and subsequent compliance with the Act, the regulations, Ministry Noise Guidelines and this Certificate can be verified.
- 5. Condition 8 is included to require the Company to keep records to assist the Ministry in determining whether or not the Equipment is being inspected and maintained as required by the Act, the regulations and this Certificate.
- 6. Condition 9 is included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.

SCHEDULE "A"

Peaking Mode		Non-peaking Mode	
Parameter	Limit	Parameter	Limit
Nitrogen Oxides	80 ppmv	Nitrogen Oxides	40 ppmv
Carbon Monoxide	60 ppmv	Carbon Monoxide	60 ppmv
Sulphur Dioxide	199 ppmv	Sulphur Dioxide	164 ppmv
Thermal Efficiency	48.6 percent	Thermal Efficiency	48.6 percent

NOTES:

- 1. "ppmv" means parts per million by volume on a dry basis normalized to 15 percent oxygen on an hourly basis.
- 2. Limits are based on the Combustion Turbine Facility firing on natural gas as the Primary Fuel.

SCHEDULE "B"

THERMAL EFFICIENCY TESTING PROCEDURE

Parameters to be tested/measured:

1. Power Output
2. Fuel Flow Rate
3. Lower Heating Value
4. (a) Ambient air temperature (expressed in degrees of Celsius)
(b) Barometric pressure (expressed in kilopascal)
(c) Relative humidity (expressed in percent)
5. Date, time and duration of test

FORMULA:

$$\text{Thermal Efficiency} = \frac{\text{Power Output} \times 100\%}{\text{Fuel Flow Rate} \times \text{Lower Heating Value}}$$

NOTE:

Thermal Efficiency testing should be conducted at maximum rating or at the maximum load achievable at the time of testing and shall employ an averaging time of not less than three hours.

SCHEDULE "C"

C.1 CONTINUOUS NITROGEN OXIDES MONITOR AND DATA RECORDER

INSTALLATION:

The continuous nitrogen oxides monitor shall be installed at an accessible location where the measurements are representative of the actual concentrations of nitrogen oxides in the undiluted flue gases leaving the Combustion Turbine Facility exhaust stack and shall meet the following installation specifications:

	PARAMETERS	SPECIFICATION
1	Range (parts per million, ppm):	0 -100
2	Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The continuous nitrogen oxides monitor shall meet the following minimum performance specifications for the following parameters:

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	PARAMETERS	SPECIFICATION
1	Span Value: (nearest ppm equivalent)	80% - 100% of Full Scale (FS) for each range
2	Relative Accuracy:	the greater of ≤ 10 percent of mean value of reference method test data or PG7 low level relief (8 ppm)
3	Calibration Error:	the greater of ≤ 2 percent of FS or 2.5 ppm absolute difference
4	System Bias:	the greater of ≤ 5 percent of FS or 5 ppm average difference value
5	Procedure for Zero and Span Calibration Check:	all system components checked
6	Zero Calibration Drift (24-hour):	the greater of 2% of FS or 2.5 ppm absolute difference
7	Span Calibration Drift (24-hour):	the greater of 2.5% of FS or 2.5 ppm absolute difference
8	Response Time (90 percent of full scale):	≤ 200 seconds
9	Operational Test Period :	≥ 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded when the Combustion Turbine Facility is operating in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter when the Combustion Turbine Facility is operating.

C.2 CONTINUOUS CARBON MONOXIDE MONITOR AND DATA RECORDER

INSTALLATION:

The continuous carbon monoxide monitor shall be installed at an accessible location where the measurements are representative of the actual concentrations of carbon monoxide in the undiluted flue gases leaving the Combustion Turbine Facility exhaust stack and shall meet the following installation specifications:

	PARAMETERS	SPECIFICATION
1	Range (parts per million, ppm):	0 -100
2	Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The continuous carbon monoxide monitor shall meet the following minimum performance specifications for the following parameters:

	PARAMETERS	SPECIFICATION
1	Span Value: (nearest ppm equivalent)	80% - 100% of Full Scale (FS) for each range
2	Relative Accuracy:	the greater of $\leq 10\%$ of mean value of reference method test data or PG7 low level relief (8 ppm)
3	Calibration Error:	the greater of $\leq 2\%$ of FS or 2.5 ppm absolute difference
4	System Bias:	the greater of $\leq 5\%$ of FS or 5 ppm average difference value
5	Procedure for Zero and Span Calibration Check:	all system components check
6	Zero Calibration Drift (24-hour):	the greater of 2% of FS or 2.5 ppm absolute difference
7	Span Calibration Drift (24-hour):	the greater of 2.5% of FS or 2.5 ppm absolute difference
8	Response Time (90 percent of full scale):	≤ 90 seconds
9	Operational Test Period :	≥ 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded when the Combustion Turbine Facility is operating in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter when the Combustion Turbine Facility is operating.

C.3 CONTINUOUS OXYGEN MONITOR AND DATA RECORDER

INSTALLATION:

The continuous oxygen monitor shall be installed at an accessible location where the measurements are representative of the actual concentrations of oxygen in the undiluted flue gases leaving the Combustion Turbine Facility exhaust stack and shall meet the following installation specifications:

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	PARAMETERS	SPECIFICATION
1	Range (percentage):	0 - 20 or 0 - 25
2	Calibration Gas Ports:	Close to the sample point

PERFORMANCE:

The continuous oxygen monitor shall meet the following minimum performance specifications for the following parameters:

	PARAMETERS	SPECIFICATION
1	Span Value (percentage):	80% - 100% of Full Scale (FS) for each range
2	Relative Accuracy:	the greater of ≤ 10 percent of mean value of reference method test data or PG7 low level relief (0.5% O ₂)
3	Calibration Error:	$\leq 0.5\%$ O ₂
4	System Bias:	the greater of ≤ 5 percent of FS or 0.5% O ₂ average absolute difference
5	Procedure for Zero and Span Calibration Check:	all system components checked
6	Zero Calibration Drift (24-hour):	0.5% O ₂
7	Span Calibration Drift (24-hour):	0.5% O ₂
8	Response Time (90 percent of full scale):	≤ 90 seconds
9	Operational Test Period:	≥ 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded when the Combustion Turbine Facility is operating in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter when the Combustion Turbine Facility is operating.

SCHEDULE "D"

Noise Control Measures

Noise Control Measures described in the Noise Report, section "Mitigation Measures Summary". Specifically:

1. Gas Turbine and HRSG

- One (1) silencer for the Combustion Turbine Facility exhaust stack and

- one (1) silencer for the gas turbine intake,

capable of providing the following values of Insertion Loss in 1/1 octave frequency bands:

Minimum Dynamic Sound Insertion Loss (dB)

Centre Frequency (Hertz)	63	125	250	500	1000	2000	4000	8000
Gas Turbine air intake silencer *	30	35	40	45	50	50	50	40
Gas Turbine exhaust stack silencer **	26	38	53	53	56	54	47	45

* Combination of plenum, inlet silencer and air filter

** Combination of HRSG and silencer

2. Acoustic Enclosures

- Gas Turbine Generator

The acoustic enclosure housing the gas turbine generator and accessory modules, with the following specification:

- sound level not exceeding 85 dBA, at a distance of 1 metre from the enclosure and all associated ductwork and other components inside the building.

- Steam Turbine and Gas Compressor

Acoustic enclosure or other measures for the gas turbine generator and accessory modules, with the following specification:

- sound level not exceeding 85 dBA, at a distance of 1 metre from the steam turbine casing and the gas compressor casing.

3. Building Construction and Doors

- The exterior envelope of buildings that house the gas turbine generator, the steam turbine generator and the gas compressor capable of providing the following minimum values of Transmission-Loss in 1/1 octave frequency bands, and

- the exterior rollup overhead doors, closed except of ingress and egress, and capable of providing the following minimum values of Transmission Loss in 1/1 octave frequency bands:

Minimum Dynamic Sound Transmission Loss (dB)

Centre Frequency (Hertz)	31.5	63	125	250	500	1000	2000	4000	8000
Rollup Overhead Door	3	9	15	18	21	22	22	24	18
Exterior Building Construction	-	12	19	32	40	46	53	56	47

4. Noise Barriers

- 5.5 metres high noise barriers, constructed around the north face of 250 MVA and 120 MVA step-up transformers, with returns on the east and west sides.

- A noise barrier, 7 metres high, and approximately 60 metres long, along the south property line to provide shielding of noise from the cooling tower and the HRSG.

- rooftop barriers, 2.4 meters high, constructed around each rooftop fan on the steam turbine and gas turbine buildings.

5. Maximum Noise Emission Ratings

- Maximum noise emission rating in accordance with the provisions of the Noise Report.

In accordance with Section 139 of the Environmental Protection Act, R.S.O. 1990, Chapter E-19, as amended, you may by written notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:

1. The portions of the approval or each term or condition in the 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 Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Certificate of Approval number;
6. The date of the Certificate of Approval;
7. The name of the Director;
8. The municipality within which the works are located;

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

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

AND

The Director
Section 9, *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**

The above noted works are approved under Section 9 of the Environmental Protection Act.

DATED AT TORONTO this 10th day of December, 2008

Victor Low, P.Eng.
Director
Section 9, *Environmental Protection Act*

RW/
c: District Manager, MOE Halton-Peel District Office