


**CERTIFICATE OF APPROVAL**
**AIR**

NUMBER 9293-7UTPFA

Issue Date: April 1, 2011

1721027 Ontario Inc., Operating As Becker Co-Generation Plant,  
 199 Mumford Drive  
 Lively, Ontario  
 P3Y 1L2

Site Location: Becker Co-Generation Plant  
 2 Becker Road Haig, Hornepayne Township, District of Algoma, Ontario.

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

**Description Section**

A facility producing steam and electricity, consisting of the following processes and support units:

- a reciprocating grate type wood boiler, firing *Clean Wood Based Fuels* during normal operation and propane during start ups, with cogeneration via steam turbine and electric generator, generating steam and 16.2 MW of electric power, having a maximum heat input of 413 Gigajoules per hour, equipped with an electrostatic precipitator;
- a cooling tower,.
- wood fuel handling operations including storage bins, wood chipping equipment and conveyors;
- mechanical ash handling system, including ash silo and truck handling facility;

including the *Equipment* and any other ancillary and support processes and activities, operating at a *Facility Production Limit* of 16.2 Megawatt hour of electricity, exhausting to the atmosphere as described in the *ESDM Report*.

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

1. "Air Standards Manager" means the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, or any other person who represents and carries out the duties of the Manager, Human Toxicology and Air Standards Section, Standards Development Branch, as those duties relate to the conditions of this *Certificate*.
2. "Basic Comprehensive User Guide" means the *Ministry* document titled Basic Comprehensive Certificates of Approval (Air) User Guide" dated April 2004 as amended.
3. "Certificate" means this entire certificate of approval document, issued in accordance with section 9 of the *EPA* and includes all the *Schedules*, and the *Supporting Documentation*.
4. "Clean Wood Based Fuels" means wood based fuels that are not derived from particle board, laminated board, wood coated with paint or other coatings, salt laden wood, wood treated with preservatives or stain prevention agents;
5. "Company" means 1721027 Ontario Inc., Operating As Becker Co-Generation Plant, that is responsible for the construction or operation of the *Facility* and includes any successors and assigns.
6. "Compound of Concern" means a contaminant that, based on generally available information, may be emitted to the

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atmosphere in a quantity from any source at the *Facility* that is significant either in comparison to the relevant *Ministry Point of Impingement Limit* or if a *Ministry Point of Impingement Limit* is not available for the compound then, based on generally available toxicological information, the compound has the potential to cause an adverse effect as defined by the *EPA* at a *Point of Impingement*.

7. "*Description Section*" means the section on page one of the *Certificate* describing the *Company's* operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility*.
8. "*Director*" means any person appointed in writing by the Minister of the Environment pursuant to section 5 of the *EPA* as a Director for the purposes of section 9 of the *EPA*.
9. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry*, where the *Facility* is geographically located.
10. "*Emission Summary Table*" means the table prepared in accordance with O. Reg. 419/05 and the *Procedure Document* listing the appropriate *Point of Impingement* concentrations of each *Compound of Concern* from the *Facility* and providing comparison to the corresponding *Ministry Point of Impingement Limit* or *Maximum Concentration Level Assessment*.
11. "*Environmental Assessment Act*" means the Environmental Assessment Act, R.S.O. 1990, c.E.18.
12. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19.
13. "*Equipment*" means equipment or processes described in the *ESDM Report*, this *Certificate* and in the *Supporting Documentation* referred to herein and any other equipment or processes.
14. "*Equipment with Specific Operational Limits*" means the *Wood Fired Boiler*, complete with the *Electrostatic Precipitator* and any *Equipment* related to the thermal oxidation of waste or waste derived fuels, fume incinerators or any other *Equipment* that is specifically referenced in any published *Ministry* document that outlines specific operational guidance that must be considered by the *Director* in issuing of a Certificate of Approval.
15. "*ESDM Report*" means the Emission Summary and Dispersion Modelling Report, dated June 12, 2009, prepared in accordance with the *Procedure Document* by Golder Associated Ltd. and submitted in support of the application, and includes any amendments to the *ESDM Report* listed in *Schedule A* and all up-dated *ESDM Reports* prepared as required by the Documentation Requirements conditions of this *Certificate*.
16. "*Facility*" means the entire operation located on the property where the *Equipment* is located.
17. "*Facility Production Limit*" means the production limit placed on the main product(s) or raw materials used by the *Facility* that represents the design capacity of the *Facility* and assists in the definition of the operations approved by the *Director*.
18. "*Independent Acoustical Consultant*" means an Acoustical Consultant not representing the *Company*, and not involved in the noise impact assessment or the design/implementation of noise control measures for the *Facility/Equipment*. The Independent Acoustical Consultant shall not be retained by the consultant involved in the noise/vibration impact assessment or the design/implementation of noise/vibration control measures for the *Facility/Equipment*.
19. "*Log*" means the up-to-date log that is used to track all *Modifications* to the *Facility* since the date of this *Certificate* as required by the Documentation Requirements conditions of this *Certificate*.
20. "*Manager*" means the Manager, Technology Standards Section, Standards Development Branch, who has been appointed under Section 5 of the Act for the purposes of Section 11(1)2 of O.Reg. 419, or any other person who represents and carries out the duties of the Manager, Technology Standards Section, Standards Development Branch, as those duties relate to the conditions of this *Certificate*.
21. "*Manual*" means a document or a set of documents that provide written instructions to staff of the *Company*.
22. "*Maximum Concentration Level Assessment*" means the Maximum Concentration Level Assessment for the purposes of a Basic Comprehensive Certificate of Approval, described in the *Basic Comprehensive User Guide*, prepared by a *Toxicologist* using currently available toxicological information, that demonstrates that the concentration at any *Point of*

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*Impingement* for a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* is not likely to cause an adverse effect as defined by the *EPA*. The concentration at *Point of Impingement* for a *Compound of Concern* must be calculated in accordance with O. Reg. 419/05.

23. "*Ministry*" means the ministry of the government of Ontario responsible for the *EPA* and includes all officials, employees or other persons acting on its behalf.

24. "*Ministry Point of Impingement Limit*" means the appropriate Standard from Schedule 1, 2 or 3 from O.Reg. 419/05 and if a standard is not provided for a *Contaminant of Concern* the appropriate criteria listed in the *Ministry* publication titled "Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution - Local Air Quality (including Schedule 6 of O. Reg. 419 on Upper Risk Thresholds)", dated February 2008, as amended.

25. "*Modification*" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the *Facility* that may discharge or alter the rate or manner of discharge of a *Compound of Concern* to the atmosphere or discharge or alter noise or vibration emissions from the *Facility*.

26. "*Noise Abatement Measures*" means the noise control equipment detailed in Schedule "E" of this Certificate.

27. "*Noise Control Measures*" means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.

28. "*O. Reg. 419/05*" means the Ontario Regulation 419/05, Air Pollution – Local Air Quality.

29. "*Operating Envelope*" means the limits on the *Company's* approved operations set out in Conditions 2.3 to 2.7 of this Certificate.

30. "*Performance Limits*" means the performance limits specified in the section of this Certificate titled Performance Limits.

31. "*Point of Impingement*" means any point outside the facility in the natural environment and as defined by s.2 of O. Reg. 419/05.

32. "*Point of Reception*" means Point of Reception as defined by *Publication NPC-205* and/or *Publication NPC-232*, as applicable.

33. "*Pre-test Information*" means the information outlined in Section 1.1 of the Source Testing Code.

34. "*Procedure Document*" means *Ministry* Procedure titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July 2005, as amended.

35. "*Processes with Significant Environmental Aspects*" means the *Equipment* which, during regular operation or if not properly operated or maintained, may cause or are likely to cause an adverse effect.

36. "*Publication NPC-205*" means the *Ministry* Publication NPC-205, "Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban)", October, 1995 as amended.

37. "*Publication NPC-207*" means the *Ministry* draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the *Ministry*.

38. "*Publication NPC-232*" means the *Ministry* Publication NPC-232, "Sound Level Limits for Stationary Sources in Class 3 Areas (Rural)", October, 1995 as amended.

39. "*Publication NPC-233*" means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995 as amended.

40. "*Schedules*" means the following schedules attached to the Certificate and forming part of the Certificate namely:

Schedule A - Supporting Documentation

Schedule B - Test Contaminants  
Schedule C - Souce Testing Procedures  
Schedule D - Continuous Emission Monitoring Systems

41. "*Source Testing*" means sampling and testing to measure emissions resulting from operating the equipment at a level of maximum production within the approved operating range of the equipment.

42. "*Source Testing Code*" means the Source Testing Code, Version 2, Report No. ARB-66-80, dated November 1980, prepared by the *Ministry*, as amended.

43. "*Supporting Documentation*" means the documents listed in Schedule A of this *Certificate* which forms part of this *Certificate*.

44. "*Test Contaminants*" means those contaminants set out in Schedule "B" attached to this Certificate of Approval.

45. "*Toxicologist*" means a qualified professional currently active in the field of risk assessment, risk management and toxicology that has a combination of formal university education, training and experience necessary to assess the *Compound of Concern* in question.

46. "*Wood Fired Boiler*" means the wood fired steam boiler complete with the electrostatic precipitator, associated with the power generation facility, described in the Company's application, this *Certificate* and in the supporting documentation submitted with the application, to the extent approved by this *Certificate*.

47. "*Written Summary*" means the written summary that must be submitted annually to the *Ministry* as required by the Section titled Reporting Requirements 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**

### **1. GENERAL**

1.1 Except as otherwise provided by this *Certificate*, the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Certificate* and in accordance with the application, the *ESDM Report*, plans, specifications and *Supporting Documentation* submitted and the following *Schedules* attached hereto:

Schedule A - Supporting Documentation  
Schedule B - Test Contaminants  
Schedule C - Souce Testing Procedures  
Schedule D - Continuous Emission Monitoring Systems

### **2. OPERATIONAL FLEXIBILITY**

2.1 The *Company* may make *Modifications* to the *Facility* in accordance with this *Certificate*.

2.2 Despite Condition 2.1, all *Modifications* made by the *Company* shall be within the *Operating Envelope* of the *Facility* as defined by conditions 2.3 to 2.7.

2.3 Despite Condition 2.1, the *Company* shall not make *Modifications* to the *Facility* that are outside the scope of the intended operations of the *Facility* as described in the *Description Section*.

2.4 Despite Condition 2.1, the *Company* shall not make *Modifications* to the *Facility* that result in an increase of the *Facility Production Limit* above the level specified in this *Certificate*.

2.5 Despite Condition 2.1, the *Company* shall not make *Modifications* to the *Facility* that would add any *Equipment with Specific Operational Limits*. The *Company* shall operate *Equipment with Specific Operational Limits* approved by this *Certificate* in accordance with the original *ESDM Report* and Condition 9 in the *Certificate*.

2.6 Despite Condition 2.1, the *Company* shall only make *Modifications* to the *Facility* which comply with the *Performance Limits*.

2.7 Despite Condition 2.1, the *Company* shall not make *Modifications* to the *Facility* if the *Modifications* would be subject to the *Environmental Assessment Act*.

2.8 Condition 2.1 of this *Certificate* shall expire five (5) years from the date of this *Certificate*, unless this *Certificate* is revoked prior to this date. Upon expiry of Condition 2.1 of this *Certificate*, the *Company* shall apply for amendment to include the current *ESDM Report* in Schedule A as *Supporting Documentation* to this *Certificate*.

### 3. PERFORMANCE LIMITS

3.1 The *Company* shall, at all times, ensure that all *Equipment* that are a source of a *Compound of Concern* from the *Facility* are operated to comply with the following *Performance Limits*:

(a) the maximum concentration of any *Compound of Concern* at a *Point of Impingement* shall not exceed the corresponding *Ministry Point of Impingement Limit*;

(b) for any *Compound of Concern* that does not have a *Ministry Point of Impingement Limit*, the maximum concentration of any *Compound of Concern* at a *Point of Impingement* shall not be greater than a level assessed as part of the original *ESDM Report*; or

(c) for any *Compound of Concern* that does not have a *Ministry Point of Impingement Limit*, the maximum concentration of any *Compound of Concern* at a *Point of Impingement* shall not be greater than the *Maximum Concentration Level Assessment* submitted to the *Ministry* and accepted by the *Air Standards Manager*.

3.2 The *Company* shall, no later than thirty (30) days prior to:

(a) the introduction of a new *Compound of Concern* that does not have a *Ministry Point of Impingement Limit*;

(b) an increase to the concentration at a *Point of Impingement* of a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* such that the resulting concentration at a *Point of Impingement* will be greater than the level that was reviewed as part of the original *ESDM Report*; or

(c) an increase to the concentration at a *Point of Impingement* of a *Compound of Concern* that does not have a *Ministry Point of Impingement Limit* such that the resulting concentration at a *Point of Impingement* will be greater than the corresponding *Maximum Concentration Level Assessment* previously accepted by the *Air Standards Manager*;

submit a proposed or revised *Maximum Concentration Level Assessment* for the *Compound of Concern* to the *Director* for review by the *Air Standards Manager*.

3.3 The *Company* may not use the *Maximum Concentration Level Assessment* prior to thirty (30) days from the date of an acknowledgment letter from the *Ministry* unless the *Company* receives written acceptance by the *Director*.

3.4 If the *Air Standards Manager* does not accept the proposed *Maximum Concentration Level Assessment*, the *Company* shall not introduce or increase the emission rate of the *Compound of Concern* without approval from the *Director*.

3.5 The *Company* shall, at all times, ensure that the noise emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-205* and/or *Publication NPC-232*, as applicable.

3.6 The *Company* shall, at all times, ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207*.

### 4. DOCUMENTATION REQUIREMENTS

4.1 The *Company* shall, at all times, maintain documentation that describes the current operations of the *Facility*, including

but not limited to:

(a) a current *ESDM Report* that demonstrates compliance with the *Performance Limits* for the *Facility* regarding all *Compounds of Concern*;

(b) an up-to-date *Log* that describes each *Modification* to the *Facility*; and

(c) a record of the changes to the *ESDM Report* that documents how each *Modification* is in compliance with the *Performance Limits*.

4.2 The *Company* shall, during regular business hours, make the current *Emission Summary Table* available for inspection at the *Facility* by any interested member of the public.

## 5. REPORTING REQUIREMENTS

5.1 The *Company* shall provide the *District Manager* and the *Director* no later than June 15 of each year, a *Written Summary* of activities undertaken in the previous calendar year that shall include the following:

(a) a signed statement that the *Facility* was in compliance with the *Performance Limits*;

(b) a summary of each *Modification* that took place in the previous calendar year and resulted in a change in the previously calculated concentration at the *Point of Impingement* for any *Compound of Concern*;

(c) a list of each *Compound of Concern* submitted to the *Air Standards Manager* for review in the previous calendar year;

(d) a review of any changes to a *Ministry Point of Impingement Limit* undertaken in the previous calendar year that affect a *Compound of Concern* emitted from the *Facility*;

(e) a tabulated summary of the changes in the emission rate of any *Compound of Concern* and the resultant increase or decrease in the *Point of Impingement* concentration reported in the *ESDM Report* over the previous calendar year; and

(f) the *Emission Summary Table* for the *Facility* as of December 31 from the previous calendar year.

## 6. OPERATION AND MAINTENANCE

6.1 The *Company* shall develop and update as necessary, prior to commencement of operation of the *Facility/ Equipment*, Operating Procedures and Maintenance Programs for all *Processes with Significant Environmental Aspects*. The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained at all times in accordance with this *Certificate*, the operating procedures and maintenance programs. The operating procedures and maintenance programs shall specify as a minimum:

(a) frequency of inspections and scheduled preventative maintenance;

(b) procedures to prevent upset conditions;

(c) procedures to minimize all fugitive emissions, including procedures for ash management;

(d) procedures to prevent and/or minimize odorous emissions; and

(e) procedures for record keeping activities relating to the operation and maintenance programs.

6.2. The *Company* shall develop and update as necessary, prior to commencement of operation of the *Facility/Equipment*, a Best Management Practices Plan for the control of fugitive particulate emissions. This Best Management Practices Plan shall include, but not be limited to:

(1) identification of the main sources of fugitive particulate emissions such as:

a) on-site traffic;

- b) paved roads/areas;
- c) unpaved roads/areas;
- d) material stock piles;
- e) loading/unloading areas and loading/unloading techniques;
- f) material spills;
- g) material conveyance systems;
- h) exposed openings in process and storage buildings; and
- i) general work areas.

(2) preventative and control measures in place or under development to minimize particulate emissions from the sources of fugitive dust emissions identified above. Details of the preventative and control measures shall include:

- a) a description of the control equipment/measures or preventative procedures to be implemented;
- b) the frequency of occurrence of periodic preventative activities, as applicable.

(3) inspection and maintenance procedures and verification initiatives to ensure effective implementation of the preventative and control measures.

6.3 The Company shall implement the *Operating Procedures and Maintenance Programs* and the *Best Management Practices Plan* for the control of fugitive particulate emissions immediately after commencement of operation of the *Equipment/Facility*.

## 7. COMPLAINTS RESPONDING PROCEDURE

7.1 If at any time, the *Company* receives any environmental complaints from the public regarding the operation of the *Equipment* approved by this *Certificate*, the *Company* shall respond to these complaints according to the following procedure:

- (a) the *Company* shall record and number each complaint, either electronically or in a log book, and shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and the address of the complainant, if known;
- (b) the *Company*, upon notification of a complaint, shall initiate appropriate steps to determine all possible causes of the complaint, and shall proceed to take the necessary actions to appropriately deal with the cause of the subject matter of the complaint;
- (c) the *Company* shall notify the *District Manager*, in writing within three (3) business days of the receipt of a complaint, including the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and the address of the complainant, if known; and
- (d) the *Company* shall complete, retain on-site and provide to the *District Manager* a report written within one (1) week of the complaint date, listing the actions taken to appropriately deal with the cause of the subject matter of the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

## 8. RECORD KEEPING REQUIREMENTS

8.1 Any information requested by the *Ministry* concerning the *Facility* and its operation under this *Certificate*, including, but not limited to, any records required to be kept by this *Certificate*, shall be provided to the *Ministry*, upon request, in a timely manner.

8.2 The *Company* shall retain, for a minimum of seven (7) years from the date of their creation, except as noted below, all reports, records and information described in this *Certificate* and shall include but not be limited to:

- (a) the current *ESDM Report*;
- (b) the *Acoustic Assessment Report*;
- (c) supporting information used in the emission rate calculations performed in the *ESDM Report* and *Acoustic Assessment Report* to document compliance with the *Performance Limits* (superseded information must be retained for a period of three (3) years after *Modification*);
- (d) the *Log* that describes each *Modification* to the *Facility*;
- (e) the *Written Summaries* provided to the *Ministry*;
- (f) the operating procedures and maintenance programs, including records on the maintenance, repair and inspection of the *Equipment* related to all *Processes with Significant Environmental Aspects*;
- (g) all records produced by the *Stack Testing* programs required by this *Certificate* and the Continuous Emission Monitoring systems associated with the *Wood Fired Boiler*;
- (h) firing rates of the fuels in the *Wood Fired Boiler*; and
- (i) the complaints recording procedure, including records related to all environmental complaints made by the public as required by the section titled Complaints Recording Procedure of this *Certificate*.

## **9. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS-WOOD FIRED BOILER**

### **PERFORMANCE**

9.1 The Company shall ensure that the *Wood Fired Boiler* is designed and operated to comply, at all times, with the following performance requirements:

#### **Emission Concentration Limit**

(1) The concentration of total suspended particulate matter in the undiluted gas emitted from the *Wood Fired Boiler* shall not exceed 50 milligrams per dry cubic metre normalized to 11 percent oxygen at reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals.

#### **Operating Parameters**

(2) The combustion gases inside the secondary chamber of the *Wood Fired Boiler* are retained at a temperature above 1000 degrees Celsius for more than one second.

(3) The concentration of oxygen in the undiluted gas emitted from the *Wood Fired Boiler* shall not be less than 6 per cent by volume on a dry basis.

#### **Source Testing**

9.2. The Company shall perform *Source Testing* in accordance with the procedures and schedule outlined in Schedule "C", to determine the rate of emission of the *Test Contaminants* from the *Wood Fired Boiler*.

#### **Continuous Monitoring**

9.3. The Company shall install, conduct and maintain a program to continuously monitor the concentration of oxygen carbon monoxide and opacity in the undiluted gas emitted from the *Wood Fired Boiler*, and the temperature of the hot combustion gases in the *Wood Fired Boiler*. The continuous monitoring system shall be equipped with continuous recording devices and shall comply with the requirements outlined in the attached Schedule "D".

**Notification**

9.4 The *Company* shall notify the *Director* and the *District Manager*, in writing, at least ten (10) business days prior to the commencement of the operation of the *Wood Fired Boiler*.

**10. REVOCATION OF PREVIOUS CERTIFICATES OF APPROVAL(Air & Noise)**

10.1 This *Certificate* replaces and revokes all Section 9 Certificates of Approval issued to the *Facility* and dated prior to the date of this *Certificate*.

**SCHEDULE "A"**

**Supporting Documentation**

(a) Application dated June 9, 2009, signed by David Vitone and submitted by the *Company* for a Certificate of Approval (Air & Noise).

(b) Emission Summary and Dispersion Modelling Report, prepared by Golder Associates Ltd, dated June 12, 2009 and subsequent supporting information and documentation.

**SCHEDULE "B"**

**TEST CONTAMINANTS**

Carbon monoxide  
Total suspended particulate matter  
Formaldehyde  
Acrolein  
Phenol  
Methanol  
Propionaldehyde  
Acetaldehyde  
Nitrogen oxides  
Hydrogen chloride  
Total Hydrocarbon Compounds

**List of Metals:**

Antimony  
Arsenic  
Barium  
Beryllium  
Cadmium  
Chromium  
Cobalt  
Copper  
Lead  
Mercury  
Molybdenum  
Nickel  
Selenium  
Silver  
Thallium  
Vanadium  
Zinc

**Schedule B - Cont'd**

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<u>List of Polycyclic Organic Matter</u>	<u>List of Dioxin/Furan Isomers</u>
Acenaphthylene	2,3,7,8-Tetrachlorodibenzo-p-dioxin
Acenaphthene	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
Anthracene	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
Benzo(a)anthracene	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
Benzo(b)fluoranthene	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
Benzo(k)fluoranthene	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
Benzo(a)fluorene	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin
Benzo(b)fluorene	2,3,7,8-Tetrachlorodibenzofuran
Benzo(ghi)perylene	2,3,4,7,8-Pentachlorodibenzofuran
Benzo(a)pyrene	1,2,3,7,8-Pentachlorodibenzofuran
Benzo(e)pyrene	1,2,3,4,7,8-Hexachlorodibenzofuran
2-Chloronaphthalene	1,2,3,6,7,8-Hexachlorodibenzofuran
Chrysene	1,2,3,7,8,9-Hexachlorodibenzofuran
Coronene	2,3,4,6,7,8-Hexachlorodibenzofuran
Dibenzo(a,c)anthracene	1,2,3,4,6,7,8-Heptachlorodibenzofuran
9,10-Dimethylanthracene	1,2,3,4,7,8,9-Heptachlorodibenzofuran
7,12-Dimethylbenzo(a)anthracene	1,2,3,4,6,7,8,9-Octachlorodibenzofuran
Fluoranthene	
Fluorene	
Indeno(1,2,3-cd)pyrene	
2-Methylanthracene	
3-Methylcholanthrene	
1-Methylnaphthalene	
2-Methylnaphthalene	
1-Methylphenanthrene	
9-Methylphenanthrene	
Naphthalene	
Perylene	
Phenanthrene	
Picene	
Pyrene	
Tetralin	
Triphenylene	

**SCHEDULE "C"**

**SOURCE TESTING PROCEDURES**

1. The *Company* shall submit, to the *Manager* a test protocol including the *Pre-Test Information* required by the *Source Testing Code*, at least thirty (30) days prior to the scheduled *Source Testing* date.
2. The *Company* shall finalize the test protocol in consultation with the *Manager*.
3. The *Company* shall not commence the *Source Testing* until the *Manager* has accepted the test protocol.
4. The *Company* shall complete the first *Source Testing* not later than three (3) months after the *Manager* has accepted the test protocol or three (3) months after commencement of operation of the *Wood Fired Boiler* whichever occurs later.
5. The *Company* shall conduct subsequent *Source Testing* every three (3) calendar years thereafter.
6. 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*.
7. The *Company* shall submit a report on the *Source Testing* programs to the *District Manager* and the *Manager* not later than three (3) months after completing each *Source Testing*. The report shall be in the format described in the *Source Testing Code*, and shall also include, but not be limited to:
  - (1) an executive summary;
  - (2) records of operating conditions; including all records produced by the continuous monitoring systems; and

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- (3) the results of dispersion calculations in accordance with regulation 419/05, indicating the maximum concentration of the *Test Contaminants*, excluding carbon monoxide at the *Point of Impingement*.
  - (4) an updated site wide emission source inventory to assess the aggregate point of impingement concentrations of the *Test Contaminants*.
8. The *Company* shall ensure that the *Source Testing Report* is made available and easily accessible for review by the public at the *Facility*, immediately after the document is submitted to the *Ministry*.
9. The *Director* may not accept the results of the *Source Testing* if:
- (1) the *Source Testing Code* or the requirements of the *Manager* were not followed; or
  - (2) the *Company* did not notify the *District Manager* and the *Manager* of the *Source Testing*; or
  - (3) the *Company* failed to provide a complete report on the *Source Testing*.
10. If the *Director* does not accept the results of the *Source Testing*, the *Director* may require re-testing.

**SCHEDULE "D"**

**PARAMETER:** Temperature

**LOCATION:** The sample point for the Continuous Temperature Monitor shall be located at a point where the temperature reading is representative of the minimum temperature of the gases retained in the combustion chamber in the *Wood Fired Boiler* for at least 1 second.

**PERFORMANCE:** The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters.

	<b>PARAMETERS</b>	<b>SPECIFICATION</b>
1	Type	shielded "K" type thermocouple, or equivalent
2	Accuracy	+/- 5 degrees Celsius

**DATA RECORDER:** The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 5 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, on a monthly basis, when the Equipment is in operation.

**Schedule "D" cont'd**

**PARAMETER:** Oxygen

**LOCATION:** Continuous Oxygen Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of oxygen in the undiluted gases leaving the *Wood Fired Boiler*.

**PERFORMANCE:** The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

**CONTENT COPY OF ORIGINAL**

	<b>PARAMETERS</b>	<b>SPECIFICATION</b>
1	Relative Accuracy (as compared to values measured during Compliance Testing)	+/- 10 percent
2	Calibration error (percent of actual concentration)	5 maximum
3	Zero drift (2-hour) (percent O2)	0.4 maximum
4	Zero drift (24-hour) (percent O2)	0.5 maximum
5	Calibration drift (2-hour) (percent O2)	0.4 maximum
6	Calibration drift (24-hour) (percent O2)	0.5 maximum
7	Response time (minutes to 95 percent response)	5 maximum
8	Operational Test Period (hours without corrective maintenance)	168 minimum

**CALIBRATION:** The monitor shall be calibrated daily, to ensure that it meets the specifications quoted above, during all periods of the operation of the Equipment. The results of all calibrations shall be recorded at the time of calibration.

**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 15 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, on a monthly basis, when the Equipment is in operation.

**Schedule "D" cont'd**

**PARAMETER: Carbon Monoxide**

**LOCATION:** The Continuous Carbon Monoxide Monitor shall be installed at an accessible location where the measurements are representative of the actual concentration of carbon monoxide in the undiluted gases leaving the *Wood Fired Boiler*.

**PERFORMANCE:** The Continuous Carbon Monoxide Monitor shall meet the following minimum performance specifications for the following parameters.

	<b>PARAMETERS</b>	<b>SPECIFICATION</b>
1	Relative Accuracy (as compared to values measured during Compliance Testing)	+/- 10 percent
2	Calibration error (percent of actual concentration)	5 maximum
3	Zero drift (2-hour) (percent CO)	4 maximum
4	Zero drift (24-hour) (percent CO)	5 maximum
5	Calibration drift (2-hour) (percent CO)	4 maximum
6	Calibration drift (24-hour) (percent CO)	5 maximum
7	Response time (minutes to 95 percent response)	5 maximum
8	Operational Test Period (hours without corrective maintenance)	168 minimum

**CALIBRATION:** The monitor shall be calibrated daily, to ensure that it meets the drift limits specified above, during the periods of the operation of the Equipment. The results of all calibrations shall be recorded at the time of calibration.

**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 15 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, on a monthly basis, when the Equipment is in operation.

**Schedule "D" cont'd**

**PARAMETER: Opacity**

**INSTALLATION:**

The continuous Opacity Monitor shall be installed at an accessible location where the measurements are representative of the actual opacity of the gases leaving the *Wood Fired Boiler* and shall meet the following design and installation specifications.

**PARAMETERS SPECIFICATION**

- 1) Wavelength at Peak Spectral Response (nanometres, nm): 500 - 600
- 2) Wavelength at Mean Spectral Response (nm): 500 - 600
- 3) Detector Angle of View: 5 degrees maximum
- 4) Angle of Projection: 5 degrees maximum
- 5) Range (percent of opacity): 0 -100

**PERFORMANCE:**

The Continuous Opacity Monitor shall meet the following minimum performance specifications for the following parameters.

**PARAMETERS SPECIFICATION**

- 6) Span Value (percent opacity): 2 times the average normal opacity of the source
- 7) Calibration Error: 3 percent opacity maximum
- 8) Attenuator Calibration: 2 percent opacity maximum
- 9) Response Time (95percent response to a step change): 10 seconds maximum
- 10) Schedule for Zero and Calibration Checks: daily minimum
- 11) Procedure for Zero and Calibration Checks: all system components checked
- 12) Zero Calibration Drift (24-hours): 2 percent opacity maximum
- 13) Span Calibration Drift (24-hours): 2 percent opacity maximum
- 14) Conditioning Test Period: 168 hours without corrective maintenance minimum
- 15) Operational Test Period: 168 hours without corrective maintenance minimum

**CALIBRATION:**

The monitor shall be calibrated, to ensure that it meets the drift limits specified above, during the periods of the operation of the *Wood Fired Boiler*. The results of all calibrations shall be recorded at the time of calibration.

**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 30 seconds 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.

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

**1. GENERAL**

Condition No. 1 is included to require the *Certificate* holder to build, operate and maintain the *Facility* in accordance with the *Supporting Documentation* considered by the *Director* in issuing this *Certificate*.

**2. OPERATIONAL FLEXIBILITY AND PERFORMANCE LIMITS**

Condition Nos. 2 and 3 are included to limit *Modifications* and define the operating envelope permitted by this *Certificate*. The holder of the *Certificate* is approved for operational flexibility for the *Facility* that is consistent with the description of the operations included with the application up to the *Facility Production Limit*. In return for the operational flexibility the *Certificate* places performance based limits that can not be exceeded under the terms of this *Certificate*. *Certificate* holders will still have to obtain other relevant approvals required to operate the *Facility*, including requirements under other

environmental legislation such as the *Environmental Assessment Act*.

### 3. DOCUMENTATION REQUIREMENTS

Condition No. 4 is included to require the *Company* to maintain ongoing documentation that demonstrates compliance with the *Performance Limits* of this *Certificate* and allows the *Ministry* to monitor on-going compliance with the *Performance Limits*. The *Company* is required to have an up to date *ESDM Report* that describes the *Facility* at all times and make the *Emission Summary Table* from this report available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the *Facility*.

### 4. REPORTING REQUIREMENTS

Condition No. 5 is included to require the *Company* to provide a yearly *Written Summary* to the *Ministry*.

### 5. OPERATION AND MAINTENANCE

Condition No. 6 is included to require the *Company* to properly operate and maintain the *Processes with Significant Environmental Aspects* to minimize the impact to the environment from these processes.

### 6. COMPLAINTS RECORDING PROCEDURE

Condition No. 7 is included to require the *Company* to respond to any environmental complaints regarding the operation of the *Equipment*, according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.

### 7. RECORD KEEPING REQUIREMENTS

Condition No. 8 is included to require the *Company* to retain all documentation related to this *Certificate* and provide access to *Ministry* staff, upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

### 8. EQUIPMENT WITH SPECIFIC OPERATIONAL LIMITS

Condition No. 9.1 is included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the *Wood Fired Boilers*.

Condition Nos. 9.2 and 9.3 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.

Condition No. 9.4 is included to required the *Company* to notify the *Ministry* of the commencement of the operation of the *Facility*.

### 9. REVOCATION OF PREVIOUS CERTIFICATES OF APPROVAL (Air & Noise)

Condition No. 10 is included to confirm that this *Certificate* replaces all Section 9 Certificate(s) of Approval that have been previously issued for this *Facility*.

*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, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, S.O. 1993, Chapter 28, the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act, provides that the Notice requiring the hearing shall state:*

CONTENT COPY OF ORIGINAL

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

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](http://www.ert.gov.on.ca)**

*This instrument is subject to Section 38 of the Environmental Bill of Rights, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at [www.ene.gov.on.ca](http://www.ene.gov.on.ca), you can determine when the leave to appeal period ends.*

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

DATED AT TORONTO this 1st day of April, 2011

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

QN/  
c: District Manager, MOE Sault Ste. Marie  
Alison Cumming, Golder Associates Ltd.