Ontario

Ministry of the Environment
Ministère de l'Environnement

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 4386-8R5PP5
Issue Date: February 28, 2012

BIOX Canada Limited
125 Lakeshore Rd E, No. Suite 200
Oakville, Ontario
L6J 1H3

Site Location: BIOX
41 Oliver St
Hamilton City,
L8L 4K9

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

Description Section

A biodiesel fuel manufacturing facility, consisting of the following processes and support units:

- Feedstock and Raw Material Receiving, Handling and Storage;
- Natural Gas-Fired Hot Oil Heater System;
- Natural Gas-Fired Steam Boiler;
- Biodiesel Processing Equipment (including Rototherms and a Solvent Recovery Condenser vent);
- Cooling Tower; and
- Diesel Fire Pump.

including the *Equipment* and any other ancillary and support processes and activities, **operating at a *Facility Production Limit* of up to 60 million litres of biodiesel fuel per year,** exhausting to the atmosphere as described in the *ESDM Report* .

For the purpose of this environmental compliance approval, the following definitions apply:

1. "*Acceptable Maximum Ground Level Concentration*" means a concentration accepted by the *Ministry,* as described in the *Guide to Applying for Approval (Air & Noise),* for a *Compound of Concern* listed in the *Original ESDM Report* that has no *Ministry Point of Impingement* Limit and no *Jurisdictional Screening*

DATED AT TORONTO this 28th day of February, 2012

Ian Parrott, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

ST/
c: District Manager, MOE Hamilton - District
Tony van der Vooren, AMEC

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 8018-6JCHAY issued on November 25, 2005

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, S.O. 1993, c. 28 (Environmental Bill of Rights), 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:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance 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

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

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

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, Suite 1500
Toronto, Ontario
M5G 1E5

AND

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

AND

The Director appointed for the purposes of Part II.1 of the 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) 212-6349, Fax: (416) 314-4506 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, 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.ebr.gov.on.ca, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

REPORTING REQUIREMENTS

Condition No. 5 is included to require the *Company* to provide a yearly *Written Summary Form* to the *Ministry* to assist the *Ministry* with the review of the site's compliance with the *EPA*, the regulations and this *Approval*.

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.

ODOUR

Condition No. 7 is included to outline the minimum performance requirements considered necessary to prevent an adverse effect resulting from the operation of the *Facility/Equipment* and to require the *Company* to gather accurate information so that the environmental impact and subsequent compliance with the *EPA* , the regulations and this *Approval* can be verified.

SOURCE TESTING

Condition No. 8 is included to require the *Company* to gather accurate information so that compliance with the *EPA* , the regulations and this *Approval* can be verified.

COMPLAINTS RECORDING PROCEDURE

Condition No. 9 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.

RECORD KEEPING REQUIREMENTS

Condition No. 10 is included to require the *Company* to retain all documentation related to this *Approval* and provide access to employees in or agents of the *Ministry*, upon request, so that the *Ministry* can determine if a more detailed review of compliance with the *Performance Limits* is necessary.

ACOUSTIC AUDIT

Condition No. 11 is included to require the *Company* to gather accurate information and submit an *Acoustic Audit Report* in accordance with procedures set in the *Ministry* 's noise guidelines, so that the environmental impact and subsequent compliance with this *Approval* can be verified.

REVOCATION OF PREVIOUS APPROVALS

Condition No. 12 is included to identify that this *Approval* replaces all Section 9 Certificate(s) of Approval that have been previously issued for this *Facility*.

SCHEDULE "D"

Test Contaminants

Solvent Recovery Condenser Vent:

Methanol (CAS # 67-56-1)
Tetrahydrofuran (CAS # 109-99-9)

Natural Gas-Fired Hot Oil Heater System:

Nitrogen Oxides (NOx)

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

GENERAL

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

LIMITED OPERATIONAL FLEXIBILITY, REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT AND PERFORMANCE LIMITS

Conditions No. 2 and 3 are included to limit and define the *Modifications* permitted by this *Approval,* and to set out the circumstances in which the *Company* shall submit a *Maximum Concentration Level Assessment* prior to making *Modifications.* The holder of the *Approval* 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 *Approval* places performance based limits that cannot be exceeded under the terms of this *Approval. Approval* 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.*

DOCUMENTATION REQUIREMENTS

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

SCHEDULE "C"

Procedure for Source Testing

1. Within ninety (90) days of the coming into force of this Schedule, the *Company* shall submit a draft test protocol to the *Manager* for review and acceptance. The draft test protocol shall outline the proposed *Source Testing* and shall include the *Pre-Test Information* . The *Company* shall also provide a copy of the draft test protocol to the *Independent Stack Testing Consultant* .

2. Following the receipt of a written acceptance of the draft test protocol from the *Manager* , the *Company* shall:
   a. provide a copy of the approved test protocol to the *Independent Stack Testing Consultant* ; and
   b. complete *Source Testing* within ninety (90) days of the date of the written acceptance of the draft test protocol from the *Manager* .

3. The *Company* shall provide the *District Manager* , the *Manager* , and the *Independent Stack Testing Consultant* with fifteen (15) days written advance notice of the date and the time it will conduct *Source Testing* in accordance with section 2(b) of this Schedule.

4. The *Company* shall provide the *District Manager* , the *Manager* , and the *Independent Stack Testing Consultant* access to the *Facility* for the purposes of monitoring and witnessing any *Source Testing* conducted in accordance with this *Approval* .

5. Within sixty (60) days of the completion of *Source Testing* in accordance with section 2(b) of this Schedule, the *Company* shall provide the *District Manager* , *Manager* , and *Independent Stack Testing Consultant* a written report detailing the results of the *Source Testing* , including:
   a. an executive summary;
   b. records of the operating conditions while the *Source Testing* was undertaken;
   c. results of the *Source Testing* ; and
   d. a comparison of the maximum concentration of the *Test Contaminants* at the respective *Points of Impingement* , as determined in accordance with a dispersion model approved in accordance with the applicable regulation made under the *EPA* , and the applicable contaminant concentration standards prescribed by O. Reg. 419/05.

6. It is noted that the *Director* may not accept the results of the *Source Testing* if they are not undertaken in compliance with this *Approval* and Schedule. In the event that the *Director* does not accept the results of the *Source Testing* , the *Director* may require re-testing.

SCHEDULE "B"

Procedure to calculate and record the 10-minute average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor

1. Calculate and record one-hour average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor, employing the AERMOD atmospheric dispersion model or with another atmospheric dispersion model acceptable to the Director that employs at least five (5) years of hourly local meteorological data and that can provide results reported as individual one- hour average odour concentrations;

2. Convert and record each of the one-hour average concentrations predicted over the five (5) years of hourly local meteorological data at the Point of Impingement and at the most impacted Sensitive Receptor to 10-minute average concentrations using the One-hour Average to 10-Minute Average Conversion described below; and

3. Record and present the 10-Minute Average concentrations predicted to occur over a five (5) year period at the Point of Impingement and at the most impacted Sensitive Receptor in a histogram. The histogram shall identify all predicted 10-minute average odour concentration occurrences in terms of frequency, identifying the number of occurrences over the entire range of predicted odour concentration in increments of not more than 1/10 of one odour unit. The maximum 10-minute average concentration of odour at the Sensitive Receptor will be considered to be the maximum odour concentration at the most impacted Sensitive Receptor that occurs and is represented in the histogram, disregarding outlying data points on the histogram as agreed to by the Director.

ONE-HOUR AVERAGE TO 10-MINUTE AVERAGE CONVERSION

4. Use the following formula to convert and record one-hour average concentrations predicted by the AERMOD atmospheric dispersion model to 10-minute average concentrations:

$$\mathbf{X_{10min} = X_{60min} * 1.65}$$

where: X_{10min} = 10-minute average concentration
X_{60min} = one-hour average concentration

11. ACOUSTIC AUDIT

11.1 The *Company* shall carry out *Acoustic Audit* measurements on the actual noise emissions due to the operation of the *Facility.* The *Company:*

(a) shall carry out *Acoustic Audit* measurements in accordance with the procedures in *Publication NPC-103;*

(b) shall submit an *Acoustic Audit 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 April 30, 2013.

11.2 The *Director:*

(a) may not accept the results of the *Acoustic Audit* if the requirements of *Publication NPC-233* were not followed;

(b) may require the *Company* to repeat the *Acoustic Audit* if the results of the *Acoustic Audit* are found unacceptable to the *Director.*

12. REVOCATION OF PREVIOUS APPROVALS

12.1 This *Approval* replaces and revokes all Certificates of Approval (Air) issued under section 9 EPA to the *Facility* and dated prior to the date of this *Approval.*

SCHEDULE A

Supporting Documentation

(a) Application for Approval (Air & Noise), dated October 6, 2010, signed by Kevin Norton - Chief Operating Officer and submitted by the *Company;*

(b) Emission Summary and Dispersion Modelling Report, prepared by AMEC Americas Limited and dated October 12, 2010 (updated on April 18, 2011);

(c) Additional information provided in support of the application by AMEC Americas Limited, dated May 9, 2005;

(d) Engineering sign-off for the Low NOx burner for the Hot Oil Heater, as required by Guideline A-9, submitted via email by AMEC Americas Limited, dated September 21, 2005;

(e) Letter dated April 13, 2011 from BIOX Canada Limited to the Ontario Ministry of the Environment; and

(f) Acoustic Assessment Report prepared by HGC Engineering, dated December 6, 2011 and signed by Nick McCabe.

(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, if known, the address of the complainant;

(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; and

(c) the *Company* shall complete and retain on-site 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.

10. RECORD KEEPING REQUIREMENTS

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

10.2 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 *Approval* and shall include but not be limited to:

(a) If the *Company* has updated the *ESDM Report* in order to comply with Condition 4.1(a) of this *Approval,* a copy of each new version of the *ESDM Report;*

(b) If the *Company* has updated the *Acoustic Assessment Report,* in order to comply with Condition 4.1(b) of this *Approval,* a copy of each new version of the *Acoustic Assessment Report;*

(c) supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports* 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) all documentation prepared in accordance with Condition 4.3 of this *Approval;*

(f) copies of any *Written Summary Forms* provided to the *Ministry* under Condition 5.1 of this *Approval;*

(g) 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;* and

(h) the complaints recording procedure, including records related to all environmental complaints made by the public as required by Condition 9.1 of this *Approval.*

5.2 Condition 5.1 does not apply if Condition 2.1 has expired.

6. OPERATION AND MAINTENANCE

6.1 The *Company* shall prepare and implement, not later than three (3) months from the date of this *Approval,* operating procedures and maintenance programs for all *Processes with Significant Environmental Aspects,* which 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 a *Fugitive Emissions Control Plan* , identifying fugitive odour emissions from the operation of the *Facility* and outlining the physical and procedural controls such as policies and standard operating procedures required in order to prevent or mitigate fugitive odour emissions from the operation of the *Facility* ;

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

(e) procedures to prevent and/or minimize noise emission; and

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

6.2 The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained at all times in accordance with this *Approval,* the operating procedures and maintenance programs.

7. ODOUR PERFORMANCE LIMIT

7.1 The *Company* shall ensure that the 10-minute average concentration of odour at the most impacted *Sensitive Receptor* , resulting from the operation of the *Facility, Equipment* and *Equipment with Specific Operational Limits,* shall not exceed 1 odour unit.

7.2 The *Company* shall demonstrate compliance with the Odour Performance Limit set out in Condition No. 7.1 above in accordance with the methodology in Schedule "B".

8. SOURCE TESTING

8.1 The *Company* shall perform *Source Testing* to determine the rates of emission of the *Test Contaminants* from the Solvent Recovery Condenser Vent and the Natural Gas-Fired Hot Oil Heater System in accordance with the procedure in Schedule "C".

9. COMPLAINTS RECORDING PROCEDURE

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

(d) a record of the changes to the *ESDM Report* and *Acoustic Assessment 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* and *Acoustic Assessment Summary Table* available for inspection at the *Facility* by any interested member of the public.

4.3 Subject to Condition 4.5, the *Company* shall prepare and complete no later than August 15 of each year documentation that describes the activities undertaken at the *Facility* in the previous calendar year, including but not limited to:

(a) a list of all *Compounds of Concern* for which a *Maximum Concentration Level Assessment* was submitted to the *Director* for review by the *Air Standards Manager* pursuant to Condition 3.1.2 or 3.1.3 of this *Approval;*

(b) if the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, a list and concentration level of all such *Compounds of Concern;*

(c) a review of any changes to *Ministry Point of Impingement Limits* that affect any *Compounds of Concern* emitted from the *Facility;* and

(d) a table 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.*

4.4 Subject to Condition 4.5, the *Company* shall, at all times, maintain the documentation described in Condition 4.3.

4.5 Conditions 4.3 and 4.4 do not apply if Condition 2.1 has expired.

4.6 The *Company* shall, within three (3) months after the expiry of Condition 2.1 of this *Approval,* update the *ESDM Report* and the *Acoustic Assessment Report* such that they describe the *Facility* as it was at the time that Condition 2.1 of this *Approval* expired.

5. REPORTING REQUIREMENTS

5.1 Subject to Condition 5.2, the *Company* shall provide the *Ministry* and the *Director* no later than of each year, a *Written Summary Form* that shall include the following:

(a) a declaration that the *Facility* was in compliance with section 9 of the *EPA, O.Reg. 419/05* and the conditions of this *Approval;*

(b) a summary of each *Modification* that took place in the previous calendar year that resulted in a change in the previously calculated concentration at the *Point of Impingement* for any *Compound of Concern* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception.*

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

(b) for a *Compound of Concern* that has an *Acceptable Maximum Ground Level Concentration* and no *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the corresponding *Acceptable Maximum Ground Level Concentration;* and

(c) for a *Compound of Concern* that has a *Maximum Concentration Level Assessment,* the maximum concentration of that *Compound of Concern* at any *Point of Impingement* shall not exceed the most recently accepted corresponding *Maximum Concentration Level Assessment.*

3.2.2 If the *Company* has modified the *Facility* and was not required to submit a *Maximum Concentration Level Assessment* with respect to a *Compound of Concern* under Condition 3.1.2 or 3.1.3, the *Company* shall, at all times, ensure that all *Equipment* that is a source of the *Compound of Concern* is operated such that the maximum concentration of the *Compound of Concern* shall not exceed the concentration listed for the *Compound of Concern* in the most recent version of the *ESDM Report. ESDM Reports* are required to be updated to reflect all *Modifications* under Condition 4.1(a).

3.2.3 The *Company* shall:

(a) implement by not later than October 31, 2012, the *Noise Control Measures* as proposed in the *Acoustic Assessment Report* prepared by HGC Engineering, dated December 6, 2011 and signed by Nick McCabe;

(b) ensure, subsequent to the implementation of the proposed *Noise Control Measures* that the noise emissions from the *Facility* comply with the limits set in *Ministry Publication NPC-205; and*

(c) ensure that the *Noise Control Measures* are properly maintained and continue to provide the acoustical performance outlined in the *Acoustic Assessment Report.*

3.2.4 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* and reflects all *Modifications* made at the *Facility;*

(b) a current *Acoustic Assessment Report* that demonstrates compliance with the *Performance Limits* for the *Facility* regarding noise emissions;

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

(c) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the *Acceptable Maximum Ground Level Concentration.*

(d) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level* and the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

(e) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit, Acceptable Maximum Ground Level Concentration* or a *Maximum Concentration Level Assessment* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level.*

3.1.4 Subject to the Operational Flexibility set out in Condition 2 of this *Approval,* the *Company* may make the *Modification* if the submission of a *Maximum Concentration Level Assessment* under Condition 3.1.2 or 3.1.3 is not required.

3.1.5 A *Company* that is required to submit an assessment under Condition 3.1.2 or 3.1.3 shall submit the assessment at least thirty (30) days before the proposed *Modification* occurs.

3.1.6 The *Ministry* shall provide to the *Company* written confirmation of the receipt of the assessment under Condition 3.1.2 or 3.1.3.

3.1.7 If the *Ministry* notifies the *Company* that it does not accept the assessment submitted under Condition 3.1.2 or 3.1.3, the *Company* shall:

(a) revise and resubmit the assessment; or

(b) notify the *Ministry* that the *Company* will not be modifying the *Facility.*

3.1.8 The re-submission under Condition 3.1.7(a) is considered by the *Ministry* as a new submission.

3.1.9 If an assessment is submitted under Condition 3.1.2, the *Company* shall not modify the *Facility* unless the *Ministry* accepts the assessment.

3.1.10 If an assessment is submitted under Condition 3.1.3, the *Company* shall not modify the *Facility* unless the *Ministry:*

(a) accepts the assessment; or

(b) does not respond to the *Company* with respect to the assessment within thirty (30) days from the date of the written confirmation mentioned in Condition 3.1.6.

3.2. PERFORMANCE LIMITS

3.2.1 Subject to Condition 3.2.2, the *Company* shall, at all times, ensure that all *Equipment* that is a source of a *Compound of Concern* is operated to comply with the following *Performance Limits:*

3. REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT AND PERFORMANCE LIMITS

3.1 REQUEST FOR MAXIMUM CONCENTRATION LEVEL ASSESSMENT

3.1.1 If the *Company* proposes to make a *Modification* to the *Facility*, the *Company* shall determine if the proposed *Modification* will result in:

(a) a discharge of a *Compound of Concern* that was not previously discharged; or

(b) an increase in the concentration at a *Point of Impingement* of a *Compound of Concern*.

3.1.2 If a proposed *Modification* mentioned in Condition 3.1.1 will result in the discharge of a *Compound of Concern* that was not previously discharged, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level*.

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level*.

(c) Prior to the proposed *Modification*, a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern* and the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level*.

(d) Prior to the proposed *Modification*, a contaminant was discharged in a negligible amount and the proposed *Modification* will result in the discharge of the contaminant being considered a *Compound of Concern*. Additionally, the *Compound of Concern* does not have a *Ministry Point of Impingement Limit* and the concentration at a *Point of Impingement* will exceed the *Jurisdictional Screening Level*.

3.1.3 If a proposed *Modification* mentioned in Condition 3.1.1 will result in an increase in the concentration at a *Point of Impingement* of a *Compound of Concern*, the *Company* shall submit a *Maximum Concentration Level Assessment* to the *Director* for review by the *Air Standards Manager* in the following circumstances:

(a) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the *Acceptable Maximum Ground Level Concentration*.

(b) The *Compound of Concern* does not have a *Ministry Point of Impingement Limit* or a *Jurisdictional Screening Level* and the concentration at a *Point of Impingement* will exceed the most recently accepted *Maximum Concentration Level Assessment* submitted under Condition 3.1.2 or this Condition.

You are hereby notified that this environmental compliance 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 *Approval,* the *Facility* shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this *Approval* and in accordance with the following *Schedules* attached hereto:

Schedule "A" -Supporting Documentation;

Schedule "B" -Procedure to calculate and record the 10-minute average concentration of odour at the Point of Impingement and at the most impacted Sensitive Receptor;

Schedule "C" -Procedure for Source Testing; and

Schedule "D" - Test Contaminants.

2. LIMITED OPERATIONAL FLEXIBILITY

2.1 Pursuant to section 20.6(1) of the *EPA* and subject to Conditions 2.2 and 2.3 of this *Approval,* future alterations, extensions or replacements are approved in this *Approval* if the future alterations, extensions or replacements are *Modifications* to the *Facility* that:

(a) are within the scope of the intended operations of the *Facility* as described in the *Description Section* of this *Approval;*

(b) do not result in an increase of the *Facility Production Limit* above the level specified in the *Description Section* of this *Approval;* and

(c) result in compliance with the *Performance Limits.*

2.2 Condition 2.1 does not apply to:

(a) the addition of any new *Equipment with Specific Operational Limits* or to the *Modification* of any existing *Equipment with Specific Operational Limits* at the *Facility.* The *Company* shall operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report* and Conditions 7.1 in this *Approval;* or

(b) *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act.*

2.3 Condition 2.1 of this *Approval* shall expire ten (10) years from the date of this *Approval,* unless this *Approval* is revoked prior to the expiry date. The *Company* may apply for renewal of Condition 2.1 of this *Approval* by including an *ESDM Report* and an *Acoustic Assessment Report* that incorporate all *Modifications* made to the *Facility* as of the date of the renewal application in the application as supporting information.

45. "*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, published by the *Ministry*, August 1978, as amended.

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

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

48. "*Schedules* " means the schedules attached to the *Approval* and forming part of the *Approval* .

49. "*Sensitive Receptor* " means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from odour discharges from the *Facility* , including one or a combination of:

    a. private residences or public facilities where people sleep (eg: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.);
    b. institutional facilities (eg: schools, churches, community centres, day care centres, recreational centres, etc.);
    c. outdoor recreational areas (eg: trailer parks, play grounds, picnic areas, etc.); and
    d. commercial areas where there are continuous public activities (eg: commercial plazas and office buildings).

50. "*Source Testing* " means sampling and testing to measure emissions resulting from operating the *Facility* under conditions which yield the worst case emissions within the approved operating ranges of the *Facility*

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

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

53. "*Test Contaminants* " means the contaminants listed in Schedule "D" attached to this *Approval* .

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

55. "*Written Summary Form*" means the electronic questionnaire form, available on the *Ministry* website, and supporting documentation, that documents the activities undertaken at the *Facility* in the previous calendar year that must be submitted annually to the *Ministry* as required by the section of this *Approval* titled Reporting Requirements.

32. "*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.

33. "*Ministry Point of Impingement Limit*" means the applicable Standard listed in Schedule 2 or 3 of *O.Reg. 419/05* or a limit 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.

34. "*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.*

35. *"Noise Control Measures"* means measures to reduce the noise emission from the *Facility* and/or Equipment including, but not limited to silencers, acoustic louvers, enclosures, absorptive treatment, plenums and barriers. It also means the noise control measures detailed in the *Acoustic Assessment Report.*

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

37. "*Original ESDM Report*" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by AMEC Americas Limited and dated October 12, 2010 (updated on April 18, 2011) submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval.*

38. "*Performance Limits*" means the performance limits specified in Condition 3.2 of this *Approval* titled Performance Limits.

39. "*Point of Impingement*" has the same meaning as in section 2 of *O. Reg. 419/05.*

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

41. "*Procedure Document*" means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated March 2009, as amended.

42. "*Processes with Significant Environmental Aspects*" means the *Equipment* which, during regular operation, would discharge a contaminant or contaminants into the atmosphere at an amount which is not considered as negligible in accordance with section 8 of *O. Reg. 419/05* and the *Procedure Document.*

43. "*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.

44. "*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.

22. "*ESDM Report*" means the most current Emission Summary and Dispersion Modelling Report that describes the *Facility*. The *ESDM Report* is based on the *Original ESDM Report*, is prepared after the issuance of this *Approval* in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* by the *Company* or its consultant, and is periodically updated to incorporate all *Modifications* to and changes on discharge from the *Facility*, as required by the Documentation Requirements conditions of this *Approval*.

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

24. "*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*.

25. "*Fugitive Emissions Control Plan* " means a document or a set of documents that provides written instructions to staff of the *Company* ;

26. "*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*.

27. "*Independent Stack Testing Consultant* " means a person retained by the *Community Group* who is familiar with the *Source Testing Code* and *Ministry* source testing practices and procedures, who has a combination of relevant formal post-secondary education, training and experience with the sampling, testing and measurement of emissions, and who has not been previously employed or retained by the *Company* or any of its affiliates.

28. "*Jurisdictional Screening Level*" means a screening level for a *Compound of Concern* that is listed in the Ministry publication titled "Jurisdictional Screening Level (JSL) List, A Screening Tool for Ontario Regulation 419: Air Pollution - Local Air Quality", dated February 2008, as amended.

29. "*Log*" means the up-to-date log that is used to track all *Modifications* to the *Facility* since the date of this *Approval* as required by the Documentation Requirements conditions of this *Approval*.

30. "*Manager* " means the Manager, Technical Services 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 *Approval* .

31. "*Maximum Concentration Level Assessment*" means the Maximum Concentration Level Assessment for the purposes of an *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 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*.

12. "*Company*" means BIOX Canada Limited, operating as BIOX Canada Limited that is responsible for the construction or operation of the *Facility* and includes any successors and assigns in accordance with section 19 of the *EPA*.

13. "*Compound of Concern*" means a contaminant that, based on generally available information, may be emitted to the atmosphere in a quantity from the *Facility* that is non-negligible in accordance with section 8 of *O. Reg. 419/05* 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 may cause an adverse effect as defined by the *EPA* at a *Point of Impingement.*

14. "*Description Section*" means the section on page one of this *Approval* describing the *Company's* operations and the *Equipment* located at the *Facility* and specifying the *Facility Production Limit* for the *Facility.*

15. "*Director*" means a person appointed by the Minister pursuant to section 5 of the *EPA.*

16. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry,* where the *Facility* is geographically located.

17. "*Emission Summary Table*" means the most updated table contained in the *ESDM Report,* which is prepared in accordance with section 26 of *O. Reg. 419/05* and the *Procedure Document* listing the appropriate *Point of Impingement* concentration for each *Compound of Concern* from the *Facility* and providing comparison to the corresponding *Ministry Point of Impingement Limit* or *Maximum Concentration Level Assessment,* or *Jurisdictional Screening Level.*

18. "*Environmental Assessment Act*" means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.

19. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.

20. "*Equipment*" means equipment or processes described in the *ESDM Report,* this *Approval* and in the *Supporting Documentation* referred to herein and any other equipment or processes.

21. "*Equipment with Specific Operational Limits*" means 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, including the Natural Gas-Fired Hot Oil Heater System and the Feedstock and Raw Material Receiving, Handling and Storage equipment, that must be considered by the *Director* in issuing an *Approval.*

Level, or the concentration at a *Point of Impingement* exceeds the *Jurisdictional Screening Level.*

2. "*Acoustic Assessment Report*" means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide,* by Appendix A of the *Basic Comprehensive User Guide* , by Nick McCabe / HGC Engineering and dated December 6, 2011 submitted in support of the application, that documents all sources of noise emissions and *Noise Control Measures* present at the *Facility* and includes all up-dated *Acoustic Assessment Reports* as required by the Documentation Requirements conditions of this *Approval* to demonstrate continued compliance with the *Performance Limits* following the implementation of any Modification.

3. "*Acoustic Assessment Summary Table*" means a table prepared in accordance with the *Basic Comprehensive User Guide* summarising the results of the *Acoustic Assessment Report,* up-dated as required by the Documentation Requirements conditions of this *Approval.*

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

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

6. "*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.*

7. "*AERMOD* " means the dispersion model developed by the American Meteorological Society/U.S. Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) including the PRIME (Plume Rise Model Enhancement) algorithm, used to calculate one-hour average concentrations of a contaminant at the Point of Impingement and at the most impacted Sensitive Receptor.

8. "*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* .

9. "*Approval*" means this entire Approval document and any Schedules to it, including the application and *Supporting Documentation.*

10. "*Basic Comprehensive User Guide* " means the *Ministry* document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated April 2004, as amended.

11. "*Community Group* " means Environment Hamilton Incorporated or its successor.