


CERTIFICATE OF APPROVAL
AIR

NUMBER 9737-7MSM5M

Issue Date: August 27, 2009

Longyear Canada, ULC
 operating as Boart Longyear Canada
 1111 Main Street West
 North Bay, Ontario
 P1B 8H6

Site Location: North Bay Plant # 2
 50 Exeter Street
 North Bay City, District of Nipissing, Ontario

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

Description Section

A drill rig parts and drill rods manufacturing facility, consisting of the following processes and support units:

- quench and temper heat treating;
- high frequency heat treating; and
- quality assurance and quality control laboratories;

including the *Equipment* and any other ancillary and support processes and activities, **operating at a Facility Production Limit of up to 780,000 drill rods per year** 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. "*Acoustic Assessment Report*" means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide*, by Dennis Anderson / DJA Environmental Consultants Inc. and dated December 15, 2008, 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 *Certificate* to demonstrate continued compliance with the *Performance Limits* following the implementation of any *Modification*.
2. "*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 *Certificate*.
3. "*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*.
4. "*Basic Comprehensive User Guide*" means the *Ministry* document titled *Basic Comprehensive Certificates of Approval (Air) User Guide* dated April 2004 as amended.
5. "*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*.

CONTENT COPY OF ORIGINAL

6. "*Company*" means Longyear Canada, ULC operating as Boart Longyear Canada that is responsible for the construction or operation of the *Facility* and includes any successors and assigns.
7. "*Compound of Concern*" means a contaminant that, based on generally available information, may be emitted to the 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*.
8. "*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*.
9. "*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*.
10. "*District Manager*" means the District Manager of the appropriate local district office of the *Ministry*, where the *Facility* is geographically located.
11. "*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*.
12. "*Environmental Assessment Act*" means the Environmental Assessment Act, R.S.O. 1990, c.E.18.
13. "*EPA*" means the Environmental Protection Act, R.S.O. 1990, c.E.19.
14. "*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.
15. "*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 that must be considered by the *Director* in issuing of a Certificate of Approval.
16. "*ESDM Report*" means the Emission Summary and Dispersion Modelling Report prepared in accordance with the *Procedure Document* by Harvey Watson, DJA Environmental Consultants Inc. and dated December 19, 2006 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*.
17. "*Facility*" means the entire operation located on the property where the *Equipment* is located.
18. "*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*.
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. "*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 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.
21. "*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.
22. "*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

CONTENT COPY OF ORIGINAL

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.

23. "*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*.
24. "*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.
25. "*O. Reg. 419/05*" means the Ontario Regulation 419/05, Air Pollution – Local Air Quality.
26. "*Operating Envelope*" means the limits on the *Company's* approved operations set out in Conditions 2.3 to 2.7 of this *Certificate*.
27. "*Performance Limits*" means the performance limits specified in the section of this *Certificate* titled Performance Limits.
28. "*Point of Impingement*" means any point outside the facility in the natural environment and as defined by s.2 of O. Reg. 419/05.
29. "*Point of Reception*" means Point of Reception as defined by *Publication NPC-205*, as applicable.
30. "*Procedure Document*" means *Ministry* Procedure titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated July 2005, as amended.
31. "*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.
32. "*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.
33. "*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*.
34. "*Publication NPC-233*" means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995 as amended.
35. "*Schedules*" means the following schedules attached to the *Certificate* and forming part of the *Certificate* namely:

Schedule A - Supporting Documentation.
36. "*Supporting Documentation*" means the documents listed in Schedule A of this *Certificate* which forms part of this *Certificate*.
37. "*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.
38. "*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

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*, the *Acoustic Assessment Report*, plans, specifications and *Supporting Documentation* submitted and the following *Schedules* attached hereto:

Schedule A - Supporting Documentation.

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 Conditions 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 February 1, 2013, 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* and the current *Acoustic Assessment 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*.

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) 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

(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.

5. REPORTING REQUIREMENTS

5.1 The *Company* shall provide the *District Manager* and the *Director* no later than July 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* or resulted in a change in the sound levels reported in the *Acoustic Assessment Summary Table* at any *Point of Reception*;

(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* and *Acoustic Assessment Summary Table* for the *Facility* as of December 31 from the previous calendar year.

6. OPERATION AND MAINTENANCE

6.1 The *Company* shall prepare and implement, not later than three (3) months from the date of this *Certificate*, 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;
- (d) procedures to prevent and/or minimize odorous emissions; and
- (e) procedures for record keeping activities relating to the operation and maintenance programs.

7. COMPLAINTS RECORDING 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; 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.

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*; and
- (g) 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. REVOCATION OF PREVIOUS CERTIFICATES OF APPROVAL(Air & Noise)

9.1 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 December 20, 2006, signed by Pietro De Ciccio and submitted by the *Company* for a Certificate of Approval (Air & Noise);
- (b) Emission Summary and Dispersion Modelling Report, dated December 19, 2006;
- (c) Acoustic Assessment Report entitled "Acoustic Assessment for Boart Longyear Inc." prepared by the DJA Environmental Consultants Inc., dated December 19, 2006 and signed by Laurent Douilly;
- (d) Acoustic Assessment Report entitled "Acoustic Assessment of the 50 Exeter Street Facility" prepared by DJA Environmental Consultants Inc., dated December 15, 2008 and signed by Dennis Anderson; and
- (e) Additional Information prepared by DJA Environmental Consultants Inc., dated December 23, 2008 and August 11, 2009.

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 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*.

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. REVOCATION OF PREVIOUS CERTIFICATES OF APPROVAL (Air and Noise)

Condition No. 9 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:

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:

CONTENT COPY OF ORIGINAL

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**

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, 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 27th day of August, 2009

Ian Greason, P.Eng.
Director
Section 9, *Environmental Protection Act*

DJ/
c: District Manager, MOE North Bay District Office
Harvey Watson, DJA Environmental Consultants Inc.
Terry Huston, Boart Longyear Canada