

Environmental Assessment Approval

Approval Date: September 13, 2019

Birrette's East Uniacke Quarry Expansion

Bio Design Earth Products Inc.

East Uniacke, Hants County, Nova Scotia

Terms and Conditions for Environmental Assessment Approval

1 Definitions

- 1.1 Approval means the environmental assessment (EA) Approval terms and conditions, which relates to the Approval Holder and their Project situated at or near East Uniacke, Hants County, Nova Scotia.
- 1.2 Environment Act means Environment Act 1994-95, c.1, s.1, and includes, unless the context otherwise requires, the regulations made pursuant to the Act, as amended from time to time.
- 1.3 Department means the Department of Environment (unless otherwise specified in the Approval conditions), and the contact for the Department for this Approval is: Bedford Office, Regional Inspector.
- 1.4 Minister means the Minister of Environment.
- 1.5 Commencement of the Project means the same as to commence work, as defined in the Environmental Assessment Regulations.

2 Scope

- 2.1 Project means the Birrette's East Uniacke Quarry Expansion Project described in the EA Registration Information. Registration Information means the Registration Document and/or Addendum for the Project submitted to the Department during the EA review.

3 General

- 3.1 The Approval Holder shall, within two years of the date of issuance of this Approval, commence work on the Project unless granted a written extension by the Minister.

- 3.2 The Approval Holder shall provide written notification to the Department of the commencement date of the Project, at a minimum 30 days prior to the commencement.
- 3.3 The Approval Holder shall provide to the Department a concordance table detailing the status of the EA terms and conditions on January 31 of each year until released in writing by the Department.
- 3.4 Any proposal by the Approval Holder for expansion, modification or relocation of any aspect of the Project from that proposed in the Registration Information shall be submitted to the EA Branch for review and may require an EA.
- 3.5 Nothing in this Approval relieves the Approval Holder of the responsibility for obtaining and paying for all other licenses, permits, approvals or authorizations necessary for carrying out the Project which may be required by municipal by-laws or provincial or federal legislation. The Minister does not warrant that such licenses, permits, approvals or authorizations will be issued.
- 3.6 The Approval Holder shall not transfer, sell, lease, assign or otherwise dispose of this Approval without the written consent of the Minister. The sale of a controlling interest of a business or a transfer of this Approval from a parent company to a subsidiary or an affiliate is deemed to be a transfer requiring consent.
- 3.7 If there is a discrepancy between the Registration Information and the terms and conditions of this Approval, the terms and conditions of this Approval shall apply.
- 3.8 Upon any changes to the Registry of Joint Stock Companies information related to the Approval Holder, the Approval Holder shall provide a copy to the Department within 5 days of the changes.
- 3.9 Where a timeline is associated with a condition(s) of the Approval, the Approval Holder shall fulfil the requirements of the condition(s) within the prescribed timeline, unless otherwise authorized in writing by the Department.
- 3.10 The Approval Holder shall notify the Department in writing within 48 hours of any incidents of non-compliance with this Approval.
- 3.11 The Approval Holder shall bear all expenses incurred in carrying out the environmental management and monitoring required under the terms and conditions of this Approval.

- 3.12 Unless specified otherwise in this Approval, all samples required to be collected by this Approval shall be collected, preserved and analyzed, by qualified personnel, in accordance with recognized industry standards and procedures that are deemed acceptable to the Department.
- 3.13 The Approval Holder shall ensure that this Approval, or a copy, is present at the Project site while personnel are on site and that personnel directly involved in the Project are made fully aware of the terms and conditions which pertain to this Approval.
- 3.14 The Approval Holder shall update and/or revise any of the plans, programs or other documents required in this Approval to reflect the progressive development of and/or changes to the Project at a schedule acceptable to, or upon the request of, the Department.
- 3.15 Based on the results of the monitoring plans required in this Approval, the Approval Holder shall make necessary modifications to mitigation plans and/or changes to Project operations to prevent unacceptable environmental effects, as required by the Department.
- 3.16 Where a condition of this Approval requires the Approval Holder to consult a particular party or parties regarding the content of a document, the Approval Holder shall: provide a written notice to each such party inviting comments on the document within a reasonable timeframe, provide a written explanation to each party how the comments are addressed and considered, as well as maintain a record of consultation with each party and provide a copy of such consultation to the Department.

4 Water Resources

- 4.1 The Approval Holder shall not conduct any Project activities, or removal of vegetation within 30 metres of a watercourse and/or a wetland unless otherwise authorized in writing by the Department.
- 4.2 Refueling shall not be conducted within 30 metres of any surface water resource.
- 4.3 Prior to commencement of the Project, the Approval Holder shall submit a surface water quality and quantity monitoring plan for Watercourses 2 and 3, including sampling locations, parameters and frequency to the Department for review and acceptance. The Approval Holder shall develop the plan in consultation with the Department's Sustainability and Applied Science Division, and Fisheries and Oceans Canada and shall implement the plan once the plan is deemed acceptable by the Department.

- 4.4 The Approval Holder shall re-assess the potential effects of the Project to surface water quality and quantity, and fish and fish habitat within Watercourses 2 and 3 by the middle of and after completion of Phase 1 (as defined in the Addendum to the EA Registration Information). Based on the revised assessments, the Approval Holder shall make any necessary modifications to mitigation plans and/or changes to Project operations to prevent unacceptable environmental effects, to be submitted for review and acceptance by the Department, as well as abide by any additional required approvals (e.g., watercourse alteration approvals and/or Fisheries Act authorization).
- 4.5 Prior to commencement of the Project, the Approval Holder shall submit an erosion and sedimentation control plan, developed by a qualified professional engineer or geoscientist licensed to practice in the Province of Nova Scotia, to the Department for review and acceptance. The Approval Holder shall implement the plan once the plan is deemed acceptable by the Department.
- 4.6 The Approval Holder, as part of the application for the Part V Approval under the Environment Act, shall submit details of the on-site settling pond design, to the Department, including a plan to monitor compliance during the different operational phases of the Project. The settling pond shall be designed by qualified professional engineer, licensed to practice in the Province of Nova Scotia. The settling pond design shall consider, at a minimum, the items outlined in the Addendum to the EA Registration Information, the appropriate removal of total suspended solids and the potential impacts of climate change in sizing requirements.
- 4.7 The Approval Holder, by the middle of Phase 3 (as defined in the Addendum to the EA Registration Information), shall submit a surface water management plan for the closure case. This plan shall include re-evaluation of impacts to Watercourse 2 post-reclamation phase, supported by analysis of available monitoring data, and mitigation measures to potential impacts to Watercourse 2 that arise from this re-evaluation. The Approval Holder shall submit the plan to the Department for review and acceptance, and implement the plan once the plan is deemed acceptable by the Department.
- 4.8 The Approval Holder, as part of the application for the Part V Approval under the Environment Act, shall submit a plan for water use for the purpose of dust suppression, to the Department, including the water source(s) and its estimated volumes to determine whether requirements for water withdrawal approvals will be triggered.

- 4.9 Prior to commencement of Project, the Approval Holder shall obtain Wetland Alteration Approval(s) from the Department for all wetlands directly or indirectly impacted as a result of the development, including those wetlands predicted to experience changes in hydrologic / hydrogeologic inputs. As part of the application(s), the Approval Holder shall develop a comprehensive wetland monitoring plan in consultation with the Department. The Approval Holder shall implement the plan once the plan is deemed acceptable by the Department.
- 4.10 The Approval Holder, as part of the application for the Part V Approval under the Environment Act, shall submit a groundwater monitoring plan including the location of monitoring wells and monitoring parameters to the Department for review and acceptance. This plan shall be designed to evaluate potential impacts to both groundwater levels and groundwater quality. The Approval Holder shall implement the plan once the plan is deemed acceptable by the Department.
- 4.11 The Approval Holder, as part of the application for the Part V Approval under the Environment Act, shall provide additional analysis for the potential of Acid Rock Drainage (ARD) generation. Rock characterization shall be based on an initial representative rock at a sampling density consistent with the *Sulphide Bearing Materials Regulations*. Sampling locations for analysis for potential ARD generation shall be based on representative sampling of all rock expected to be quarried within the projected operating footprint. Should the samples taken for ARD testing be identified as a sulphide bearing material (aggregate with sulphide sulphur content equal to or greater than 0.4%), the Approval Holder shall provide results of additional geochemical testing by a qualified geochemist to determine the potential for arsenic leaching from the rock to be quarried.
- 4.12 Should acid generation and /or the potential for arsenic leaching from the rock to be quarried be predicted, at the request of the Department, the Approval Holder shall develop a plan to prevent and/or manage disturbance of sulphide bearing material and/or arsenic leaching. The Approval Holder shall implement the plan once the plan is deemed acceptable by the Department.
- 4.13 The Approval Holder shall not excavate within 1 metre of the measured maximum annual water table level unless otherwise authorized in writing by the Department.

- 4.14 Prior to any blasting, the Approval Holder, as part of the application for the Part V approval under the Environment Act, shall provide for review and acceptance, an updated blasting plan, to the Department. The plan shall include an updated pre-blast survey for structures and water wells within 800 metres of the point of the blast, a detailed blast monitoring plan, and a full blast damage response policy.
- 4.15 The Approval Holder, at their expense, shall replace any water supply which has been lost or damaged as a result of Project operations, as authorized and required by the Department.

5 Flora and Fauna

- 5.1 Prior to commencement of the Project, the Approval Holder shall provide Nova Scotia Department of Lands and Forestry, Wildlife Division with digital way points and shape files revealing precise locations for wetlands and species listed under the Species at Risk Act and/or Endangered Species Act as well as all S1, S2 and S3 listed species under the Atlantic Canada Conservation Data Center, identified during field work within the area of the Project. The date of the above noted field data shall also be provided to the Department of Lands and Forestry. The Approval Holder shall provide written notification to the Department that the files have been provided to the Department of Lands and Forestry.
- 5.2 The Approval Holder shall develop, in consultation with the Department of Lands and Forestry, Regional Services and Wildlife Divisions, a wildlife management plan to address the following points:
- a) measures to protect all identified species listed under the Species at Risk Act and/or Endangered Species Act as well as all S1, S2 and S3 listed species under the Atlantic Canada Conservation data Centre;
 - b) measures to protect Boreal Felt Lichen (*Erioderma pedicellatum*) should predicted habitat polygons for the species be present within the study area;
 - c) common nighthawk (*Chordeiles minor*) preconstruction field surveys using adequate and scientifically sound methodologies to properly assess the presence / absence of the species, and development of appropriate mitigation measures should *C. minor* be discovered;

- d) owls preconstruction field surveys and development of appropriate mitigation measures should any species and/or nests be discovered;
- e) approaches and procedures to avoid avian species nests - e.g. common nighthawk (*C. minor*), barn swallows (*Hirundo rustica*), bank swallows (*Riparia riparia*) and killdeer (*Charadrius vociferous*) – during the breeding season in the event Project operations and /or facilities create nesting habitat;
- f) appropriate mitigation measures to minimize the risk of impacts on birds listed under the *Migratory Birds Conservation Act* and processes to follow should an active nest be found at any time of the year;
- g) appropriate mitigation measures for the event of finding nests of Snapping Turtle (*Chelydra serpentina*) in the quarry development area for the life of the Project operations, since this environment has the potential to create artificial nesting habitat for the species;
- h) appropriate mitigation measures and procedures to follow for the event of finding active maternity roosts of bats listed under the Species at Risk Act within the Project's development area, including the human-built structures; and
- i) measures to manage non-native (alien invasive) plant species during all Project phases.

Prior to commencement of the Project, the Approval Holder shall ensure the wildlife management plan is deemed acceptable by the Department. The Approval Holder shall begin to implement the plan immediately following the acceptance of the wildlife management plan by the Department.

- 5.3 The Approval Holder shall clear vegetation outside of the breeding season for most bird species (April 15 to August 15), unless otherwise authorized in writing by the Department. Vegetation clearing shall be recorded in a daily log that shall be available for review by the Department indicating the date and time of the clearing operation and the contractor.
- 5.4 The Approval Holder shall report sightings of avian species at risk as listed on Schedule 1 of the Species at Risk Act to Environment Canada Climate Change, Canadian Wildlife Service. The Approval Holder shall report sightings of avian species listed under the Nova Scotia Endangered Species Act to the Department of Lands and Forestry. The Approval Holder shall provide written notification to the Department that sightings have been reported to the Canadian Wildlife Service and to the Department of Lands and Forestry.

6 Air Quality

- 6.1 At the request of the Department, the Approval Holder shall develop and implement an air quality and/or dust monitoring plan. This plan shall include, but not be limited to, sampling locations, parameters, monitoring methods, protocols and frequency.
- 6.2 At the request of the Department, the Approval Holder shall monitor noise levels.

7 Archaeological and Heritage Resources

- 7.1 The Approval Holder shall cease work and contact the Special Places Coordinator, Nova Scotia Department of Communities, Culture and Heritage (CCH) immediately upon discovery of an archaeological, or paleontological site, artifact or fossil specimen unearthed during any phase of the Project. If the find is of certain or possible Mi'kmaq origin, the Approval Holder shall also contact the appropriate Mi'kmaq representatives as advised by CCH.

8 Public Engagement

- 8.1 Prior to commencement of the Project, the Approval Holder shall establish a complaint resolution plan for receiving and responding to complaints related to the Project, including a reporting system which records and documents steps taken to determine the cause of complaint and the corrective measures taken to alleviate the cause and prevent its recurrence. The Approval Holder shall implement the plan once deemed acceptable by the Department.
- 8.2 Prior to commencement of the Project, the Approval Holder shall appoint a contact person designated to deal with complaints and shall provide the contact information to the Department.
- 8.3 At the request of the Department, the Approval Holder shall develop and implement a plan for the formation and operation of a Community Liaison Committee (CLC) including terms of reference, which meets the Department's Guide for the Formation and Operation of a Community Liaison Committee. The Approval Holder shall operate the CLC for the duration of the Project or until released in writing by the Department.

9 Engagement with the Mi'kmaq of Nova Scotia


- 9.1 Prior to commencement of Project, the Approval Holder shall develop and implement a Mi'kmaq Communication Plan for the Project, which will include a process for communicating Project details and seeking input from the Mi'kmaq community.

10 Contingency Plan

- 10.1 The Approval Holder, as part of the application for the Part V Approval under the Environment Act, shall develop a contingency plan which meets the Department's Contingency Planning Guidelines. The plan shall provide prevention measures and address accidental occurrences including but not limited to: spills of hydrocarbons or other hazardous materials, failure of erosion and sediment control measures, fires, and vehicular collisions. The Approval Holder shall implement the plan once deemed acceptable by the Department, over the lifetime of the Project.
- 10.2 The contingency plan shall be kept on Project site at all times when personnel are on site and made available to the Department upon request.

11 Rehabilitation

- 11.1 This Approval is subject to progressive rehabilitation at the existing Project site being completed as required by the Department.
- 11.2 Project operations shall be completed and rehabilitated as required by the Department.
- 11.3 Re-vegetation shall be limited to the use of native species, unless otherwise authorized in writing by the Department.



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Minister of Environment