Newfoundland Labrador

GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Environment and Conservation

CERTIFICATE OF APPROVAL

Pursuant to the Environmental Protection Act, SNL 2002 c E-14.2 Section 83

Issue Date: ***May 19 , 2016*** Approval No. AA16-055636

Expiration Date: ***December 31 , 2017***

File No. 732.205.2

Proponent: **Iron Ore Company of Canada**
2 Avalon Drive
Labrador City, Newfoundland
A1B 4J6

Attention: Mr. Mike Wickersham, Vice President of Northern Operations

Re: **Wabush 3 Open Pit Mine Construction Project**

Approval is hereby given for: the construction of an open pit mine complete with overburden storage, waste rock disposal sites, haulage roads, power supply, water supply, ditches, sedimentation ponds, site perimeter control and other related infrastructure as outlined in the February 11, 2016 application.

This Certificate of Approval does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies. Nothing in this Certificate of Approval negates any regulatory requirement placed on the proponent. Where there is a conflict between conditions in this Certificate of Approval and a regulation, the condition in the regulation shall take precedence. Approval from the Department of Environment and Conservation shall be obtained prior to any significant change in the design, construction or installation of the Wabush 3 Open Pit Mine. This Certificate of Approval shall not be sold, assigned, transferred, leased, mortgaged, sublet or otherwise alienated by the proponent without obtaining prior approval from the Minister.

This Certificate of Approval is subject to the terms and conditions as contained therein, as may be revised from time to time by the Department. Failure to comply with any of the terms and conditions may render this Certificate of Approval null and void, may require the proponent to cease all activities associated with this Certificate of Approval, may place the proponent and its agent(s) in violation of the *Environmental Protection Act*, and will make the proponent responsible for taking such remedial measures as may be prescribed by the Department. The Department reserves the right to add, delete or modify conditions to correct errors in the Certificate of Approval or to address significant environmental or health concerns.

For **MINISTER**

TERMS AND CONDITIONS FOR APPROVAL No. AA16-055636
May 19, 2016

General

1. This Certificate of Approval is for: the construction of an open pit mine complete with overburden storage, waste rock disposal sites, haulage roads, power supply, water supply, ditches, sedimentation ponds, site perimeter control and other related infrastructure as outlined in the February 11, 2016 application which also included the *Environmental Protection Plan*, *Fugitive Dust Management Plan*, *Water Management Plan* and *Contingency Plan*. Extensive future expansion or change of activities will require a separate Certificate of Approval.

2. Any inquiries concerning this approval shall be directed to the St. John's office of the Pollution Prevention Division (telephone: (709) 729-2556; or facsimile: (709) 729-6969).

3. In this Certificate of Approval:

- **accredited** means the formal recognition of the competence of a laboratory to carry out specific functions;
- **acutely lethal** means that the effluent at 100% concentration kills more than 50% of the rainbow trout subjected to it during a 96-hour period, when tested in accordance with the ALT;
- **acid mine drainage** means any flow or drainage of water having a pH of less than 5.5 from areas affected by mining activities;
- **air contaminant** means any discharge, release, or other propagation into the air and includes, but is not limited to, dust, fumes, mist, smoke, particulate matter, vapours, gases, odours, odorous substances, acids, soot, grime or any combination of them;
- **ALT (acute lethality test)** means a test conducted as per Environment Canada's Environmental Protection Service reference method EPS/1/RM-13 Section 5 or 6;
- **composite sample** means a quantity of undiluted effluent collected continually at an equal rate or at a rate proportionate to flow over a designated sampling period;
- **Department** means the Department of Environment and Conservation and its successors;
- **Director** means the Director of the Pollution Prevention Division of the Department;
- **discharge criteria** means the maximum allowable levels for the parameters listed in Table 3;

- **grab sample** means a quantity of undiluted sample collected at any given time. In this approval it refers to waste oil and effluent;

- **hazardous waste** means a product, substance or organism that is intended for disposal or recycling, including storage prior to disposal or recycling, and that:
  (a) is listed in Schedule III of the *Export and Import of Hazardous Waste Regulations under the Canadian Environmental Protection Act, 1999*;
  (b) is included in any of Classes 2 to 6, and 8 and 9 of the *Transportation of Dangerous Goods Regulations* under the *Transportation of Dangerous Goods Act, 1992*; or
  (c) exhibits a hazard classification of a gas, a flammable liquid, an oxidizer, or a substance that is dangerously reactive, toxic, infectious, corrosive or environmentally hazardous;

- **IOCC** means the Iron Ore Company of Canada;

- **licensed** means has a Certificate of Approval issued by the Minister to conduct an activity;

- **liquid waste** is defined by the *Slump Test* (Canadian Standards Association test method A23.2-5C for determining the slump of concrete). The liquid waste slump test involves placing the waste in a 30 cm open inverted cone. The cone is removed and the immediate decrease (slump) in height of the waste material is measured. If the material slumps such that the original height is reduced by 15 cm or more, the waste is considered liquid;

- **malfunction** means any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, wastewater treatment equipment, process equipment, or a process to operate in a normal or usual manner. Failures caused in part by poor maintenance or careless operation are not malfunctions;

- **Minister** means the Minister of the Department;

- **on-scene commander** means the person designated to co-ordinate and direct pollution control efforts at the scene of an existing spill of a toxic or hazardous material;

- **PCBs** means polychlorinated biphenyls;

- **Plan** means the specific plan as identified in the section of this Approval within which it is used. For example, in the *Waste Management Plan* section it refers to the Waste Management Plan;

- **QA/QC** means Quality Assurance/Quality Control;

- **register(ed)**, in the context of storage tanks, means that information regarding the storage tank system has been submitted to a Service NL office and a registration number has been assigned to the storage tank system;

- **regulated substance** means a substance subject to discharge limit(s) under the *Environmental Control Water and Sewage Regulations, 2003*;

- **SOP** means Standard Operating Procedure;
- **spill or spillage** means a loss of gasoline or associated product in excess of 70 litres from a storage tank system, pipeline, tank vessel or vehicle, or an uncontrolled release of any volume of a regulated substance onto or into soil or a body of water;
- **storage tank system** means a tank and all vent, fill and withdrawal piping associated with it installed in a fixed location and includes a temporary arrangement;
- **TDS** means total dissolved solids;
- **toxic pass** means a fish mortality rate of no more than 50% during the acute lethality test (ALT);
- **TPH** means total petroleum hydrocarbons, as measured by the Atlantic PIRI method;
- **TSS** means total suspended solids;
- **used lubricating oil** means lubricating oil that as a result of its use, storage or handling, is altered so that it is no longer suitable for its intended purpose but is suitable for refining or other permitted uses;
- **used oil** means a used lubricating oil or waste oil;
- **Wabush 3 construction** means Wabush 3 Open Pit Mine construction; and
- **waste oil** means an oil that as a result of contamination by any means or by its use, is altered so that it is no longer suitable for its intended purpose.

4. All necessary measures shall be taken to ensure compliance with all applicable acts, regulations, policies and guidelines, including the following, or their successors:

- *Environmental Protection Act*;
- *Water Resources Act*;
- *Air Pollution Control Regulations, 2004;*
- *Environmental Control Water and Sewage Regulations, 2003;*
- *Halocarbon Regulations;*
- *Storage and Handling of Gasoline and Associated Products Regulations, 2003;*
- *Used Oil Control Regulations;*
- *Heating Oil Storage Tank System Regulations, 2003;*
- *Storage of PCB Waste Regulations, 2003;*
- *Ambient Air Monitoring Guidance Document;*
- *Sampling of Water and Wastewater - Industrial Effluent Applications Guidance Document;*
- *Accredited Laboratory Policy;*
- *Compliance Determination Guidance Document;*
- *Stack Emission Testing Guidance Document;*
- *Plume Dispersion Modelling Guidance Document;*
- *Precipitation Drainage of Dyke Areas Guidance Document;* and
- *Environmental Guidelines for Controlling Emissions of Volatile Organic*

- *Compounds from Above Ground Storage Tanks.*

This Approval provides terms and conditions to satisfy various requirements of the above listed acts, regulations, Departmental policies and guidelines. If it appears that all of the pertinent requirements of these acts, regulations, policies and guidelines are not being met, then a further review of the works shall be conducted, and suitable pollution control measures may be required by the Minister.

5. All reasonable efforts shall be taken to minimize the impact of the operation on the environment. Such efforts include minimizing the area disturbed by the operation, minimizing air or water pollution, finding alternative uses, acceptable to the Director, for waste or rejected materials, removing equipment or structures when they no longer have further use, and considering the requirement for the eventual rehabilitation of disturbed areas when planning the development of any area on the facility property.

6. IOCC shall provide to the Department, within a reasonable time, any information, records, reports or access to data requested or specified by the Department.

7. IOCC shall keep all records or other documents required by this Approval at the Wabush 3 construction location for a period of not less than three (3) years, beginning the day they were made. These records shall be made available for review by officials of the Department or Service NL when requested.

8. Should IOCC wish to deviate in any way from the terms and conditions of this Certificate of Approval, a written request detailing the proposed deviation shall be made to the Minister. IOCC shall comply with the most current terms and conditions until the Minister has authorized otherwise. In the case of meeting a deadline requirement, the request shall be made at least 60 days ahead of the applicable date as specified in this Approval or elsewhere by the Department.

Environmental Protection Plan

9. All construction activities shall be subjected to the requirements of the Environmental Protection Plan (***February 2016 or as revised***) for all phases of the construction activities. All proposed revisions to the plan shall be submitted to the Director for review.

Construction

10. Any work that must be performed in a body of water below the high water mark shall be carried out during a period of low water levels, unless otherwise permitted in writing by the Department.

11. All construction operations shall be carried out in a manner that minimizes damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water in excess of applicable regulatory limits.

12. The use of heavy equipment shall be confined to dry stable areas and shall not be carried out in streams or bodies of water, unless otherwise permitted in writing by the Department.

13. All vehicles and equipment shall be in good repair, and shall be free of leaks of oil or

other harmful substances that could impair water quality.

14. During the construction of concrete components, formwork shall be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.

15. Prior written permission is required from the Department for all work that takes place in a body of water, including but not limited to bridges, culverts, fording, stream modifications, infilling and dredging.

Waste Management

16. All waste generated at the facility is subject to compliance with the ***Environmental Protection Act***. All non-industrial waste shall be placed in closed containers and, on at least a weekly basis, removed from the site. If required, industrial waste shall be disposed of by a licensed operator. These wastes shall be disposed of at an authorized waste disposal site with the permission of the owner/operator of the site.

17. IOCC shall ensure that all volatile chemical and solvent wastes, if they cannot be reused, are placed in suitable covered containers for disposal in a manner acceptable to the Department. Disposal of liquid wastes at waste disposal sites in the province is not permitted.

18. Disposal of hazardous waste in a municipal or regional waste disposal site in this Province is prohibited. Transporters of hazardous waste shall have an approval issued by the Minister. Those generating hazardous waste shall have a waste generators number issued by the Director and shall also complete the required information outlined in the Waste Manifest Form.

Waste Management Plan

19. The IOCC (Labrador Operation) Waste Management Plan shall include the Wabush 3 construction. Every year the Plan shall be reviewed and revised as necessary, accounting for expanding or alteration of activities. All proposed revisions shall be submitted to the Director for review. The Department will acknowledge receipt of the Plan and/or revisions, and shall provide any review comments within a reasonable time frame.

Acid Generating Waste Rock

20. Only non-acid generating waste rock shall be reused on the surface. If waste rock is identified as potentially acid generating or metal leaching, an appropriate waste rock management program shall be developed to handle, store, and appropriately dispose of the material.

21. This identification shall be in accordance with MEND Report 2.20.1, ***Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials***.

Open Burning

22. Materials listed in Table 1 shall not be burned in open fires.

Table 1 - Material Not Approved for Open Burning	
tires	manure
plastics	rubber
treated lumber	tar paper
asphalt and asphalt products	railway ties
drywall	paint and paint products
demolition waste	fuel and lubricant containers
hazardous waste	used oil
biomedical waste	animal cadavers
domestic waste	hazardous substances
trash, garbage, or other waste from commercial, industrial or municipal operations	materials disposed of as part of the removal or decontamination of equipment, buildings or other structures

23. Materials not listed in Table 1 may be burned on site only with the approval of the Department.

Noise

24. Efforts shall be made to minimize and control noise resulting from the Wabush 3 construction activities. All vehicles hauling materials within the facility shall have exhaust and muffling devices in good working order.

Dust Suppression

25. IOCC shall control dusting resulting from Wabush 3 construction. Use of dust suppressants other than water or calcium chloride shall require approval of the Director. IOCC are encouraged to use best management practices when applying calcium chloride or any other approved dust suppressant.

26. The *Wabush 3 Fugitive Dust Management Plan (February 2016 or as revised)* which outlines hydroseeding and progressive rehabilitation shall be implemented by IOCC and a yearly summary of activities shall be provided to the Department.

Spill Prevention and Containment

27. Areas in which chemicals are used or stored shall have impermeable floors and dykes or curbs and shall not have a floor drain system, nor shall it discharge to the environment. Areas inside the dykes or curbs shall have an effective secondary containment capacity of at least ***110%*** of the chemical storage tank capacity, in the case of a single storage container. If there is more than one storage container, the dyked area shall be able to retain no less than ***110% of the capacity of the largest container or 100 %*** **of the capacity of the largest container plus 10% of the aggregate capacity of all additional containers, whichever is greater**. These dyked areas shall be kept clear of material that may compromise the capacity of the dyke system. Once a year, the dykes shall be visually inspected for their liquid containing integrity, and repairs shall be made when required. Once every ten years,

the dykes shall be inspected, by a means other than visual inspection, for their liquid containing integrity, and repairs shall be made when required.

28. All on site storage of petroleum shall comply with the ***Storage and Handling of Gasoline and Associated Products Regulations, 2003***, or its successor. Storage tank systems shall be registered with Service NL. All aboveground storage tanks shall be clearly and visibly labelled with their GAP registration numbers.

29. Where applicable, all tanks and fuel delivery systems shall be inspected to appropriate American Petroleum Institute or Underwriters' Laboratories of Canada standards, or any other standards acceptable to this Department. The required frequency of inspections may be changed at the discretion of the Director.

30. IOCC shall maintain an inventory of all petroleum and chemical storage tanks. This inventory shall include a plan showing location, registration number (where applicable), identification number, material stored, capacity, annual throughput, tank material, tank type, tank diameter, tank height, tank colour, roof type, year of manufacture, date of installation, date of last inspection, failure history, maintenance history, dyke capacity and date of next planned inspection. Every two (2) years, an update of any significant changes to the inventory shall be submitted to the Director.

31. Refuelling and maintenance of vehicles and equipment shall, whenever possible, be undertaken on a prepared impermeable surface with an oil containment or collection system. When this is not possible, due care shall be taken to prevent spillage on the ground and to the surrounding environment, particularly streams and other water bodies. The Contingency Plan for fuel storage shall detail the specific response actions in the event of a spill from refuelling or maintenance activities.

32. IOCC contractor shall develop and implement the maintenance program for the prevention of leaks/spills of hydrocarbons from mobile equipment (ie. from the hydraulic hoses and/or motors from the machine houses of the drills, excavators and trucks).

Contingency Plan

33. IOCC shall continue to implement the Contingency Plan (***February 2016***) for the Wabush 3 construction. This Plan describes the actions to be taken in the event of a spill of a toxic or hazardous material. Copies of the Plan shall be placed in convenient areas throughout the facility so that employees can easily refer to it when needed. IOCC shall ensure that all employees are aware of the Plan and understand the procedures and the reporting protocol to be followed in the event of an emergency. An annual response exercise is recommended for response personnel. Every year, as a minimum, the Plan shall be reviewed and revised as necessary. Any proposed significant revisions shall be submitted to the Director for review. Changes which are not considered significant include minor variations in equipment or personnel characteristics which do not affect implementation of the Plan.

34. Every time IOCC implements the Contingency Plan, information shall be recorded for future reference. This will assist in reviewing and updating the Plan. The record is to consist of all incidents with environmental implications, and include such details as: date; time of day; type of incident (i.e. liquid spill, gas leak, granular chemical spill, equipment malfunction, etc.); actions taken; problems encountered; and other relevant information that would aid in later review of the Plan performance. Each incident report shall be submitted to the Director as per the

Reporting section.

Site Decommissioning and Restoration Plan

35. The *Rehabilitation and Closure Plan (2010)* to restore areas disturbed by IOCC's Labrador Operation has been submitted to the Department. This plan shall be revised in 2016 to include the Wabush 3 construction and operations.

Effluent Monitoring and Discharge

36. IOCC shall perform an Effluent Monitoring Program as per **Table 2**. Refer to **Table 3** for the Effluent Discharge Criteria (EDC). The applicable limits are in **Table 3**. Analytical results shall be submitted as per the ***Reporting*** section.

Table 2 - Effluent Monitoring Program

Reference	Location	Parameters	Frequency
FDP-W3-06	Discharge from waste rock pile sedimentation pond which flows into Leg Lake	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-W3-03	Discharge from sedimentation pond from overburden stockpile into Drum Lake	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-W3-02	Outflow of Pumphouse Pond	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-W3-10	Discharge from in-pit sump construction	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)

37. Refer to Table 3 for the Effluent Discharge Criteria (EDC).

Table 3 – Effluent Discharge Criteria

Parameter	Maximum Authorized Monthly Mean Concentration	Maximum Authorized Concentration in a Composite Sample	Maximum Authorized Concentration in a Grab Sample
Arsenic	0.50 mg/L	0.75 mg/L	1.00 mg/L
Copper	0.30 mg/L	0.45 mg/L	0.60 mg/L
Lead	0.20 mg/L	0.30 mg/L	0.40 mg/L
Nickel	0.50 mg/L	0.75 mg/L	1.00 mg/L
Zinc	0.50 mg/L	0.75 mg/L	1.00 mg/L
Total Suspended Solids	15.00 mg/L	22.50 mg/L	30.00 mg/L
Radium 226	0.37 Bq/L	0.74 Bq/L	1.11 Bq/L
Acute Lethality	Toxic Pass		

pH	5.5 to 9 pH units

38. IOC may reduce the frequency of testing for a parameter that is set out in the EDC with the exception of pH, TSS, ALT and Radium 226 to not less than once in each calendar quarter if that parameter's monthly mean concentration in the effluent is less than 10 percent of the maximum authorized monthly mean concentration for the 12 months immediately preceding the most recent test. IOC shall notify the Director in writing, at least 30 days in advance of a reduction in the frequency of testing.

39. IOC may reduce the frequency of testing for Radium 226 to not less than once in each calendar quarter if that substance's concentration in the effluent is less than 0.037Bq/L in 10 consecutive tests. IOC shall notify the Director in writing, at least 30 days in advance of a reduction in the frequency of testing.

40. IOC shall increase the frequency of testing to the originally prescribed frequency for a parameter that is set out in the EDC with the exception of pH, TSS and ALT, if the parameter's monthly mean concentration is equal to or greater than 10 percent of the maximum authorized monthly mean concentration.

41. IOC may reduce the frequency of conducting ALT's to once in each calendar quarter if the effluent is determined not to be acutely lethal over a period of 12 consecutive months. IOC shall notify the Director in writing, at least 30 days in advance of a reduction in the frequency of testing.

42. If a sample is determined to be acutely lethal, an aliquot of the failing sample shall be analyzed for the parameters outlined in **Table 4** without delay.

43. If a sample is determined to be acutely lethal, IOC shall collect from the final discharge point of the failing site, a grab sample twice per month and conduct an ALT in accordance with Section 6 of the Reference Method. Samples shall be collected twice per month, not less than 7 days apart, and an ALT shall be conducted on each sample, until it is determined that the effluent is not acutely lethal for three consecutive tests. Following the third consecutive non-acutely lethal test, IOC shall conduct ALT's as per the original prescribed frequency outlined in **Table 2**.

44. Reports submitted under section 31 of MMER as a result of a deposit out of the normal course of events shall be provided to the Department.

Water Chemistry Analysis

45. Four times per calendar year and not less than thirty (30) days apart, IOC shall perform Water Quality Analysis as per **Table 4**. Refer to **Table 4** for the locations and required parameters. Analytical results shall be submitted as per the ***Reporting*** section.

Table 4 - Water Chemistry Analysis Program		
Reference	**Location**	**Parameters**
W3-01	Dumbell Lake Stream	**General Parameters:** temperature, dissolved oxygen (DO), nitrate + nitrite, nitrate, nitrite, pH, TSS, colour, sodium, potassium, calcium, sulphide, magnesium, ammonia, alkalinity, sulphate, chloride, turbidity, reactive silica, orthophosphate, phosphorous, DOC, conductance, TDS (calculated), phenolics, carbonate ($CaCO_3$), hardness ($CaCO_3$), bicarbonate ($CaCO_3$) **Metals Scan:** aluminium, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, mercury, nickel, selenium, silver, strontium, thallium, tin, titanium, uranium, vanadium, zinc
RW-W-01	Dumbell Lake	
DB	Outflow of Dumbell Lake (existing in Current Operations COA)	
FDP-W3-02	Outflow of Pumphouse Pond	
FDP-W3-03	Discharge from sedimentation pond from overburden stockpile into Drum Lake	
W3-04	Stream into Leg Lake	
W3-05	Stream out of Leg Lake	
FDP-W3-06	Discharge from waste rock pile sedimentation pond which flows into Leg Lake	
W3-07	Un-named lake south-west of Overburden Stockpile	
W3-08	Trout Lake	
W3-09	Headwater lake into Beverly Lake	
BV	North Pond (existing in Current Operations COA)	
FDP-W3-10	Discharge from in-pit sump construction	
RW-W3-02	Receiving waters in Leg Lake downstream from Pumphouse Pond/Overburden Sed Pond.	
RW-W3-06	Receiving waters in Leg Lake downstream from the waste rock pile sedimentation pond	
W3-MW-01a	Shallow Groundwater Monitoring Well #1 - by headwater lake flowing into Beverly Lake	
W3-MW-01b	Deep Groundwater Monitoring Well #1 - by headwater lake flowing into Beverly Lake	
W3-MW-02	Groundwater Monitoring Well #2 by headwater lake flowing into Beverly Lake	
W3-MW-03a	Shallow Groundwater Monitoring Well #3 on Smokey Mountain Road	
W3-MW-03b	Deep Groundwater Monitoring Well #3 on Smokey Mountain Road	
*TSS not required for groundwater locations.		

Analysis and QA/QC

46. Unless otherwise stated herein, all solids and liquids analysis performed pursuant to this Approval shall be done by either a contracted commercial laboratory or an in-house laboratory. Contracted commercial laboratories shall have a recognized form of accreditation. In-house laboratories have the option of either obtaining accreditation or submitting to an annual inspection by a representative of the Department, for which IOCC shall be billed for each laboratory inspection in accordance with Schedule 1 of the ***Accredited Laboratory Policy (PD:PP2001-01.02)***. Recommendations of the Director stemming from the annual inspections shall be addressed within 6 months, otherwise further analytical results shall not be

accepted by the Director.

47. If IOCC wish to perform in-house laboratory testing and submit to an annual inspection by the Department then a recognized form of proficiency testing recognition shall be obtained for compliance parameters for which this recognition exists. The compliance parameters are listed in the ***Effluent and Monitoring*** section. If using a commercial laboratory, IOCC shall contact that commercial laboratory to determine and to implement the sampling and transportation QA/QC requirements for those activities.

48. The exact location of each sampling point shall remain consistent over the life of the monitoring programs, unless otherwise approved by the Director. Using a GPS or similar device, the northing and easting of each sampling location shall be recorded and submitted by ***October 31, 2016*** to the Director.

49. IOCC shall bear all expenses incurred in carrying out the environmental monitoring and analysis required under conditions of this Approval.

Monitoring Alteration

50. The Director has the authority to alter monitoring programs or require additional testing at any time when:

- pollutants might be released to the surrounding environment without being detected;
- an adverse environmental effect may occur; or
- it is no longer necessary to maintain the current frequency of sampling and/or the monitoring of parameters.

51. IOCC may, at any time, request that monitoring program or requirements of this Approval be altered by:
- requesting the change in writing to the Director; and
- providing sufficient justification, as determined by the Director.

The requirements of this Approval shall remain in effect until altered, in writing, by the Director.

Reporting

52. Monthly reports containing the environmental compliance monitoring and sampling information required in this Approval shall be received by the Director, in digital format (e-mail or CD), within 30 calendar days of the reporting month. All related laboratory reports shall be submitted with the monthly report, in spreadsheet format (Microsoft Excel or a format easily transferable to Excel), and either Adobe Portable Document Format (PDF) or hardcopy format. Digital report submissions, if e-mailed, shall be sent to the following address: <<statenv@gov.nl.ca>>

53. All incidents of:

- *Contingency Plan* implementation; or

- non-conformance of any condition within this approval; or
- spillage or leakage of a regulated substance; or
- whenever discharge criteria is, or is suspected to be, exceeded; or
- verbal/written complaints of an environmental nature from the public received by IOCC related to the Wabush 3 construction, whether or not they are received anonymously;

shall be immediately reported, within one working day, to this Department (St. John's office) by phoning (709) 729-2556.

A written report including a detailed description of the incident, summary of contributing factors, and an Action Plan to prevent future incidents of a similar nature, shall be submitted to the Director. The Action Plan shall include a description of actions already taken and future actions to be implemented, and shall be submitted within thirty days of the date of the initial incident. The address for written report submission is:

Director, Pollution Prevention Division
Department of Environment and Conservation
P.O. Box 8700
St, John's, NL
A1B 4J6

54. Any spillage or leakage of gasoline or associated product shall be reported immediately through the Canadian Coast Guard at 1-(709)-772-2083.

Expiration

55. This Certificate of Approval expires ***December 31, 2017.***

56. Should the proponent wish to continue to construct Wabush 3 beyond this expiry date, a written request shall be submitted to the Director for the renewal of this approval. Such request shall be made prior to ***June 30, 2017.***

APPENDIX A

Abandonment and Restoration Plan Guidelines

This appendix is intended to provide guidance for the development of an Abandonment and Restoration Plan and to identify areas that are of particular concern or interest. The points presented are not set and are open to interpretation and discussion.

The Plan is intended to present the scope of activities that IOCC shall undertake at the time of final closure and/or abandonment of Wabush 3 properties. Where it is useful and practical to do so the company is encouraged to begin undertaking some of the activities outlined in the Plan prior to final closure and abandonment. The objectives of the restoration work to be undertaken can be summarized as follows:

- to ensure that abandoned mine facilities do not endanger public health or safety;
- to prevent progressive degradation and to enhance the natural recovery of areas affected by mining activities;
- to ensure that mine facilities, wastes and tailings are abandoned so that the requirement for long term maintenance and monitoring is minimized;
- to mitigate, and if possible prevent, the continued loadings of contaminants and wastes to the environment. The primary objective shall be to prevent the release of contaminants into the environment. Where prevention is not practical due to technical or economic limitations then activities intended to mitigate the consequence of such a release of contaminants shall become the objective of restoration work;
- to mitigate, and if possible prevent, the formation of acid mine drainage. The primary objective shall be to prevent the formation of acid mine drainage. Where prevention is not practical due to technical or economic limitations, then activities intended to mitigate the consequences of the formation of acid mine drainage shall become the objective of restoration work; and
- to return affected areas to a state compatible with the original undisturbed condition, giving due consideration to practical factors including economics, aesthetics, future productivity and future users.

In particular the following areas should be addressed in the Plan:

Mill & Service Buildings

- The mill processing equipment shall be washed and cleaned of all ore residues. This activity shall remove all concentrate and chemical bearing residues from the milling circuit with the washed residues being treated through the effluent treatment plant and ultimately discharged into the tailings impoundment area.
- The equipment and internal fittings contained in both the mill and service buildings shall be dismantled, removed and sold for their salvage value. Items with no salvage value shall be disposed of according to section 30 of the Environmental Protection Act.
- All buildings are to be dismantled and removed from the site. All concrete walls, footings, foundations or floor slabs of the mill and service buildings should be

demolished to ground level. All openings or indentations below ground level are to be backfilled to ground level. Fill material shall be non-contaminated soil or concrete from demolition. All other outbuildings and pipe racks in the immediate vicinity of the mill and service buildings, and elsewhere on the property should be removed using the same philosophy.

- All buried pipelines and electrical cables may be left in place in the ground. Where these pipes or cables come to surface they should be cut off below ground level and buried with local fill. If oil filled power cables are to be left in place in the ground they shall be purged. Pipelines are to be purged of all residual materials and capped before backfilling. IOCC shall provide the Department with drawings showing the location of all buried pipes and cables which are to remain after the mine's closure.

Fuel Storage Facilities

- All of the fuel storage facilities, including fuel handling equipment and pipelines, at the mine site shall be emptied and removed from the site according to the Storage and Handling of Gasoline and Associated Products Regulations, 2003.

Tailings

- The tailings impoundment areas should be left in a condition, acceptable to this Department, to prevent the generation of acid mine drainage and dust. Runoff from impoundment areas is to be directed to an outflow where drainage from the area can be monitored.

Till Borrow Areas/Quarries

- The till borrow areas/quarries used by IOCC should be graded to ensure natural runoff patterns and then revegetated to mitigate future erosion. Till borrow areas/quarries shall be closed out in accordance with the permits already issued by this Department and the Department of Natural Resources.

cc: Ms. Maria Dober - Head
Compliance Promotion and Expert Support
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Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Municipal Affairs & Environment

Pollution Prevention Division

October 17, 2017

Jody Wentzell, P.Eng., Engineer – Environment and Sustainable Development
Iron Ore Company of Canada
2 Avalon Drive, Labrador City (NL)
Canada
A2V 2V6

Dear Mr. Wentzell:

RE: Amendment to Certificate-of-Approval AA16-055636

As per your October 3, 2017 request to the Department, the following changes to approval conditions are granted:

- *FDP-W3-03 will no longer be a Final Discharge Point, and be removed as a sample point completely, as this pond is no longer in the plan for construction. Alternatively, the natural land will be used to drain this runoff in order to minimize disturbance.*
- *FDP-W3-10 will no longer be a Final Discharge Point and instead will be a pipe discharge, 100 m from the stream. It will remain a sample point and follow the Water Chemistry Analysis Program. This location is now referred to as W3-10.*
- *W3-10 requires monthly TPH analysis in addition to the Water Chemistry Analysis Program.*
- *The approval is extended to April 30, 2018.*

If you have any questions or comments regarding this matter, please contact Stephen Dyke at (709) 729-2738 or myself.

DEXTER PITTMAN, P.ENG.
Manager of Industrial Compliance