



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: *April 9, 2013* Approval No. AA13-045575B
Amendment Date: *February 2, 2016*
Expiration: *April 9, 2018* File No. 732.205.2

Proponent: **Iron Ore Company of Canada**
PO Box 1000
Labrador City, Newfoundland
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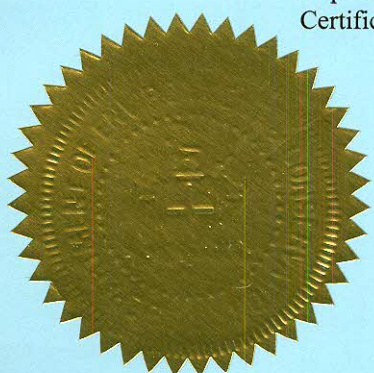
Attention: Mr. Mike Wickerstam, Vice President of Northern Operation

Re: **Iron Ore Company of Canada's Labrador Operation**

Approval is hereby given for: operation of the Iron Ore Company of Canada's Labrador Operation including open pit mines, concentrator, flotation plant, pellet plant and disposed tailings in Wabush Lake, excluding QNSL.

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, installation, or operation of the facility, including any future expansion of the works. 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 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.



Derek Poth
For MINISTER

TERMS AND CONDITIONS FOR APPROVAL No. AA13-045575B

Amended February 2, 2016

General

1. This Approval is for the operation of the Iron Ore Company of Canada's Labrador Operation including open pit mines, concentrator, flotation plant, pellet plant and disposal of tailings in Wabush Lake but excluding QNSL as per plans and specifications supplied by the Iron Ore Company of Canada for this Approval.
2. This Approval also covers the new overland conveyor system and In-Pit Crusher, as outlined in IOC's May 6, 2011 application and the proposed reactivation of Loraine South Pit.
3. 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).
4. In this Certificate of Approval:
 - **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;
 - **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;
 - **batch** means oil from one tank with nothing added to the tank between withdrawals;
 - **blanketed** means to cover a vessel with a lid that is specifically designed to contain vapours;
 - **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 5;
 - **EDC** means Effluent Discharge Criteria as outlined in Table 5;
 - **Flotation Plant Specifications** mean the current version of the *Pellet Plant Standard Operating Procedures – Edition 5, FP-10*;

- **grab sample** means a quantity of undiluted sample collected at any given time;
- **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;
- **IOC** means the Iron Ore Company of Canada;
- **licenced** means has a Certificate-of-Approval issued by the Minister to conduct an activity;
- **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;
- **MMER** means Metals Mining Effluent Regulations;
- **NO_x** means oxides of nitrogen;
- **NO₂** means nitrogen dioxide;
- **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;
- **ORICA** means ORICA Limited, a mining services company;
- **PM_{2.5}** means particulate matter with a diameter of 2.5 μm or less;
- **QA/QC** means Quality Assurance/Quality Control;
- **QNSL** means Quebec North Shore and Labrador Railway primarily used for the transport of ore from Labrador City, NL to Sept-Iles, QC and is owned and operated by IOC;
- **regulated substance** means a substance subject to discharge limit(s) under the *Environmental Control Water and Sewage Regulations, 2003*;
- **SO₂** means sulfur dioxide;
- **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;
- **TIA** means Tailings Impoundment Area;
- **TIE** means Toxicity Identification Evaluation;
- **TOC** means total organic carbon;
- **TOHs (as chlorine)** means total organic halogens (as chlorine);
- **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;
- **TSP** means total suspended particulate with diameters less than 100 μ m;
- **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; 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.

5. 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;*
- *Storage of PCB Wastes Regulations, 2003;*
- *Used Oil Control Regulations;*
- *Heating Oil Storage Tank System Regulations, 2003;*
- *Ambient Air Monitoring Guidance Document;*
- *Sampling of Water and Wastewater – Industrial Effluent Applications*

- *Guidance Document;*
- *Stack Emission Testing Guidance Document;*
- *Plume Dispersion Modelling Guidance Document;*
- *Compliance Determination Guidance Document; and*
- *Accredited Laboratory Policy.*

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.

6. 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, and considering the requirement for the eventual rehabilitation of disturbed areas when planning the development of any area on the facility property.
7. IOC shall provide to the Department, within a reasonable time, any information, records, reports or access to data requested or specified by the Department.
8. IOC shall keep all records or other documents required by this Approval at the Labrador Operation 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 the Service NL when requested.
9. Should IOC 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. 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. IOC shall comply with the most current terms and conditions until the Minister has authorized otherwise.

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.
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.
12. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment shall be confined to dry stable areas.
13. All vehicles and equipment shall be clean and in good repair, free of mud and 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. All areas affected by this project shall be restored to a state that resembles local

natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if necessary in the opinion of this Department.

16. Any alteration of a water body or work within 15 m of a water body shall be approved by the Water Resources Management Division of this Department. Alteration of a water body may include culvert installations, stream crossings, outfalls, infilling; or bridge, dam, and wharf construction.
17. All culvert installations, stream crossings and alterations of water bodies are to be approved by the Water Resources Management Division of this Department.

Waste Management

18. All waste generated at the facility is subject to compliance with the *Environmental Protection Act*. All non-industrial, non-hazardous waste shall be placed in closed containers and, on at least a weekly basis, removed from the site or disposed of at an approved disposal site. Hazardous 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.
19. IOC shall ensure that all volatile chemical and solvent wastes, if they can not 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 considered an acceptable alternative.
20. Disposal of hazardous waste in a municipal or regional waste disposal sites 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 generator number issued by the Director and shall also complete the required information outlined in the Waste Manifest Form.

Waste Management Plan

21. IOC shall maintain a Waste Management Plan for their Labrador Operation. With the goal of minimizing adverse effects on the environment, the Plan shall: be comprehensive, including all operations within the IOC; identify the types of waste materials (i.e. boiler ash, sewage, empty chemical packaging, etc.); provide general direction in dealing with the handling, storage, transport, treatment and disposal of waste materials except waste rock and tailings; and incorporate the basic waste management principles of reduce, reuse, recycle, recover and residual disposal. 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.
22. In the Plan, IOC shall maintain a SOP for management/disposal of tires which have been taken out of service. The SOP shall include details including: tire sizes, quantity of each size and method of disposal which adheres to the prohibition against disposal of tires under section (23) of the *Waste Management Regulations, 2003* or its successor.
23. In the Plan, IOC shall maintain a SOP for the handling and storage of used oil. The SOP shall, as a minimum, detail procedures for the including: storage and handling

of used oil; recording of volumes of on-site generated used oil from each source; handling, sampling and storage of used oil generated on-site prior to determination of its suitability for combustion, specifically addressing the requirement to keep each batch of used oil segregated from possible use or contamination while awaiting analytical results; and determining percentage of used oil combusted.

Open Burning

- 24. Materials listed in Table 1 shall not be burnt in open fires.
- 25. Open burning is only permitted for fire-fighting training, brush burning for site clearing and disposal of empty cardboard boxes used for explosive packaging at the ORICA site.

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

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

Noise

- 27. Efforts shall be made to minimize and control noise resulting from the Labrador Operation operations and maintenance activities. All vehicles hauling materials within the facility shall have exhaust and muffling devices in good working order.

Dust Suppression

- 28. IOC shall control dusting resulting from construction and operational activities at the site. Use of dust suppressants other than water or calcium chloride shall require approval of the Director. Operators are encouraged to use best management practices when applying calcium chloride or any other approved dust suppressant.
- 29. Any incidence of dust lift off from the operational areas or tailings which results in a complaint from the public shall be recorded and reported to the Director as per the

Reporting section. Details to be recorded shall include wind speed, wind direction, severity of the event, impact on the Towns of Wabush and Labrador City, and actions taken to mitigate the event.

30. The SOP for dust suppression within the Labrador Operation shall address dust from the mines, haul roads, tailings, flux blending, bulk handling yard and pellet storage areas. Each year, by **October 1**, the effectiveness of the SOP shall be evaluated and any changes to the SOP shall be submitted to the Director for review.
31. Every 5 years, IOC shall submit a long term plan for tailings disposal, re-vegetation of tailings areas, and the minimization of dust lift-off. The Plan shall include details on an annual basis for the first 5 years, after which the planning may be shown in 5 year increments. The next Plan shall be submitted by **February 28, 2016**, to the Director for review.
32. Each year, by **March 15**, IOC shall submit, to the Director for review, a report of the activities of the previous year and the planned activities for the upcoming year with respect to tailings deposition, tailings re-vegetation, and the minimization of dust lift-off. The report shall include a summary of the status of the tailings including the area (hectares) that is: active, inactive, vegetated (total), vegetated during previous year, remaining to be vegetated and planned vegetation for the coming year.
33. Production and development drills require a wet dust suppression system to minimize employee's exposure to dust. In cold temperatures, these water injection systems may sometimes experience freeze-up. IOC may use the anti-freeze agent diluted ethylene glycol on a yearly basis during extreme weather conditions, as needed to maintain dust suppression system operability.

Spill Prevention & Containment

34. Areas in which chemicals/solutions/fuels are used or stored, including the entire silica flotation plant, 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 capacity of **110%** of the chemical/solutions/fuel tank capacity. 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. The above requirements may be modified for the dyke of Bunker C tanks only, where IOC has requested this in writing and documented the impermeability of the dyke and liner system, to the satisfaction of the Department.
35. 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 the Government Service Centre. All aboveground storage tanks shall be clearly and visibly labelled with their GAP registration numbers.
36. 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.

37. Every two (2) years, IOC shall submit an inventory of all petroleum and chemical storage tanks including a plan showing location, registration number, identification number, material stored, capacity, tank material, tank type, year of manufacture, date of installation, date of last inspection, failure history, maintenance history, dyke capacity and date of next planned inspection.
38. All equipment repair facilities are to have either an oil water separator or other similar collection device, and a concrete floor or other type of floor acceptable to the Director and shall be constructed so that drainage is directed to the oil water separator, or other similar collection device. All used or waste oils, hydraulic fluids or other used petroleum products shall be combusted or disposed of as per the ***Fuel & Consumption*** section.
39. IOC shall maintain a maintenance program for the prevention of leaks/spills of hydrocarbons from mobile equipment (i.e. from the hydraulic hoses and/or motors from the machine houses of the drills, excavators and trucks). All these preventive maintenance procedures records shall be made available for review by the Departmental representatives when requested.

Spill Contingency Plan

40. The Spill Contingency Plan shall clearly describe the actions to be taken in the event of a spill of a toxic or hazardous material. It shall include, as a minimum: notification and alerting procedures; duties and responsibilities of the “on-scene commander” and other involved staff; spill control and clean-up procedures; restoration of the spill site; information on disposal of contaminants; and resource inventory. Copies of the Plan shall be placed in convenient areas throughout the facility so that employees can easily refer to it when needed. IOC 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 effect implementation of the Plan.
41. Every time IOC implements the 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 & Restoration Plan

42. The Rehabilitation and Closure Plan for the operation and expansion shall be submitted to the Director for review following approval by the Department of Natural Resources. The Plan shall detail the proposed actions to restore the biological, chemical and physical qualities of the environmental resources affected by the operation and expansion of the Labrador Operation project. The Plan shall be reviewed annually by IOC and revised as necessary. All proposal revisions to the Plan shall be submitted to the Director.

For guidance on preparation of the Plan refer to Appendix A.

Fuel & Consumption

43. Prior to delivery, IOC shall obtain a Bunker C certificate-of-analysis per batch for the constituents listed in Column 2 of Table 2.
44. Prior to blending used oil with Bunker C, IOC shall obtain a used oil certificate-of-analysis per batch for the constituents listed in Column 3 of Table 2.

Table 2 – Fuel Assay Parameters		
Column 1 Parameter	Column 2 Bunker C	Column 3 Used Oil
A.P.I. Gravity @ 60 °F	•	
Density (kg/m ³ @ 15°C)	•	
Flash Point	•	
Pour Point	•	
Viscosity SFS @ 122 °F	•	
Sulfur % by weight	•	•
BTU's per US Gallon	•	
Ash % by weight	•	•
Sediment % by weight	•	
Water % by volume	•	
Vanadium	•	
Polychlorinated Biphenyls (PCBs)		•
Total Organic Halogens (as chlorine)		•
Cadmium		•
Chromium		•
Lead		•

45. On-site generated used oil may only be added to Bunker C if the certificate-of-analysis indicates there are no exceedances of the parameters as indicated in Table 3. Otherwise, the used oil is deemed unsuitable for combustion it shall be disposed by a licenced used oil collector.

Table 3 – Combustible Used Oil	
CONTAMINANT	CONCENTRATION (mg/kg)
Polychlorinated Biphenyls (PCBs)	5
Total Organic Halogens (as chlorine)	1000
Cadmium	2
Chromium	10
Lead	100
Ash	9,000
Sulphur	5,000

46. The maximum volume of used oil (restricted to on-site sources) added to the Bunker C bulk storage tanks shall be less than 10% of the Bunker C combusted during the previous year. This percentage shall not be increased until IOC has requested, in writing, an increase and written permission from the Director has been given. Additional conditions may be required for such an increase.
47. IOC shall maintain and submit to the Director on a monthly basis the following:
- supplier, date, volume and of Bunker C unloaded;
 - daily volume of Bunker C, diesel fuel and used oil combusted;
 - percentage of used oil substituted for Bunker C;
 - volume of used oil deemed unsuitable for combustion;
 - amount (by weight) of anthracite, coke breeze and other solid fuel delivered and combusted;
 - certificate-of-analysis for each batch of Bunker C, anthracite, coke breeze and batch of used oil to be combusted; and
 - the name of the laboratory where the assays were performed.

When necessary, best estimates may be used. These shall be submitted as per the **Reporting** section

48. In the event that problems develop with respect to used oil analysis or combustion, the Director may give IOC written notice prohibiting further combustion of used oil. IOC shall be capable of ceasing the combustion of used oil upon notification of the Director.
49. When required by Service NL, IOC shall notify them that the used oil suitable for combustion is being mixed with Bunker C. The written notification shall include the tank identification number(s), tank location, and the anticipated maximum percentage used oil content. A copy of the notification shall be provided to the Director.
50. IOC is permitted to accept and burn alternative fuel only with the written approval of the Department.

Boiler Ash

51. All boiler ash generated by IOC shall be considered as hazardous waste. IOC shall ensure all the boiler ash is disposed of by a licensed operator at a location acceptable to this Department. Disposal of hazardous waste in a municipal or regional waste disposal site in this Province is prohibited.

Silica Flotation Plant

52. Unless otherwise required in these Terms and Conditions, the silica flotation plant and related works shall be operated in accordance with the Flotation Plant Specifications. In situations where the plans were revised and such changes have been documented in one of the Specifications, then the silica flotation plant and related works shall be operated to comply with the most recent of the plans.

Effluent Monitoring & Discharge

53. IOC shall perform an Effluent Monitoring Program as per **Table 4**. Refer to **Table 5** for the Effluent Discharge Criteria (EDC). The applicable limits are in **Table 5**.

Analytical results shall be submitted as per the **Reporting** section.

Table 4 - Effluent Monitoring Program			
Ref.	Location	Parameters	Frequency
PD-11	Sherwood Pit Discharge from In-Pit Shallow Well	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-12	Sherwood Pit Discharge from In-Pit Sump	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-19	Smallwood Pit Dewatering	TPH	Monthly (at least 15 days apart)
PD-20	Pumping discharge from Leila Wynne	pH, TPH, and TSS	Weekly (at least 24 hours apart) with discharge
PD-24	Humphrey South Dewatering (Sherwood Pond)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-25	Sherwood Pit Sump (which discharges to Humphrey South)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-26	Magy Lake	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-32	Discharge from Lorraine South	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
FDP-MD5	Drainage from mine garage	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-TIA	Julienne Narrows	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT	Monthly (at least 15 days apart)
FDP-HC	Hakim Culvert	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-MD30	Lorraine Lake at Spooks Pit	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)

54. Refer to Table 5 for the Effluent Discharge Criteria (EDC).

Table 5 – 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		

55. 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.
56. 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.
57. 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.
58. 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.
59. If a sample is determined to be acutely lethal, an aliquot of the failing sample shall be analyzed for the parameters outlined in **Table 6** without delay.
60. 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 4**.

61. If effluent is determined to be acutely lethal for three consecutive ALTs, IOC shall implement a Toxicity Identification Evaluation (TIE) to identify the toxin, and from this develop measures to prevent or reduce the toxin. The report, written as a result of these identification activities, shall be submitted to the Director for review, **within 60 days** of the third consecutive failed acutely lethal test result. After review of the report, the Director may place additional requirements upon the proponent for treatment of effluent prior to discharge.
62. All oil water separators shall be checked routinely to ensure they are working properly. A log of these checks shall be maintained by IOC.
63. 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

64. Four times per calendar year and not less than thirty (30) days apart, IOC shall perform Water Quality Analysis as per **Table 6**. Refer to Table 6 for the locations and required parameters. Analytical results shall be submitted as per the **Reporting** section.

Table 6 - Water Chemistry Analysis Program		
Reference	Location	Parameters
RW-TIA	Julienne Lake	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-HC	Luce Lake at Hakim Culvert	
RW-Reference	Shabogamo Lake	
RW-BB	Wabush Lake at Beaver Bay	
RW-MD5	Luce Lake	
MD-1	Tributary to Lorraine Lake	
MD-7	Luce Creek. at crossing nearest mine	
White Diversion	Outflow of Diversion Channel into Luce lake	
FDP-MD30	Lorraine Lake at Spooks Pit	
LPDW	Luce Pit Deep Wells adjacent to Hakim Culvert	
FDP-TIA	Julienne Narrows	
FDP-MD5	Drainage from mine garage area	
FDP-HC	Hakim Culvert	
MT	Course Tailings Line sample taken after flocculant addition	
FT	Fine tailing Line Sample taken after flocculent addition	
LN	Lorraine North	
DB	Dumbell Lake	
BV	Beverly Lake	
RW-LWDQ	Leila Wynne Lake	

Environmental Effects Monitoring

65. Study designs and subsequent reports for Environmental Effects Monitoring (EEM, under MMR) shall be developed by IOC and a copy of the study designs and reports shall be submitted to the Department.

Ambient Air

66. IOC shall operate an ambient air monitoring program as per the conditions in this Approval and its amendments. Approval shall be obtained from the Director prior to purchase or installation of any monitoring equipment.

67. Parameters to be monitored are outlined in **Table 7**.

Table 7 - Ambient Air Monitoring Program		
Station	Site	Parameters
1	Smokey Mtn Ski Resort (relocated)	TSP (BAM), PM _{2.5} , SO ₂ , NO _x , NO ₂
2	Field near the Town Hall (relocated)	TSP (BAM), PM _{2.5} , SO ₂ , NO _x , NO ₂
3	Labrador City Dog Park	TSP (BAM), PM _{2.5} , SO ₂ , NO _x , NO ₂

68. Ambient air monitoring shall be done in accordance with the *Ambient Air Monitoring Guidance Document (GD-PPD-065)*, or its successors.

69. IOC shall operate and maintain meteorological stations at the ambient air monitoring stations #1 and #2 in accordance with the guidelines specified in the United States EPA document: *Quality Assurance Handbook for Air Pollution Measurement Systems - Volume IV: Meteorological Measurements Version 2.0 (Final)*, EPA-454/B-08-002, March 2008, or its successors. Parameters to be measured and recorded shall include: wind speed, wind direction, ambient air temperature and relative humidity.

Pellet Production

70. On a monthly basis for the preceding calendar month IOC shall submit the daily production data as per the *Reporting* section for the following:

- Quantities and type of pellets produced;
- Quantities of concentrate produced; and
- Operational hours of the induration machines.

Pollution Control Equipment

71. All pollution control equipment shall be maintained and operated per the manufacturer's specifications for best performance.

72. The Director reserves the right to require the installation of additional pollution control equipment by IOC within a reasonable time frame, as necessary to bring IOC

into compliance with the *Air Pollution Control Regulations, 2004*.

Continuous Opacity Monitoring System

73. Opacity of emissions shall be continuously measured and recorded using a Continuous Opacity Monitoring System (COMS) that meets all the requirements of *Performance Specification 1 (PS-1) - Specifications and Test Procedures for Opacity Continuous Emission Monitoring Systems in Stationary Sources*, of the United States Code of Federal Regulations - 40 CFR Part 60, Appendix B. Minimum QA/QC requirements are specified to assess the quality of COMS performance. Daily zero and span checks, quarterly performance audits, and annual zero alignment checks are required to assure the proper functioning of the COMS and the accuracy of the COMS data. These shall be recorded in a written log and a copy made available on request.
74. IOC shall conduct continuous opacity monitoring at induration machine stacks 1, 2, 4 and 5; crusher stacks 1 and 2; and the steam plant stack.
75. The United States EPA Federal Register Test Method 203 - Determination of the Opacity of Emissions from Stationary Sources by Continuous Opacity Monitoring Systems shall be used to determine compliance with Section 9 of the *Air Pollution Control Regulations, 2004*.
76. Monthly opacity data reports, in digital format, shall be submitted in the form of six minute arithmetic averages of instantaneous readings, as per the *Reporting* section. Each six minute average data point shall be identified by date, time and average percent opacity.

Stack Emissions Testing & Dispersion Modelling

77. Stack emissions testing shall be done in accordance with the *Stack Emission Testing Guidance Document (GD-PPD-016.1)*. Dispersion Modeling shall be done in accordance with the *Plume Dispersion Modeling Guidance Document (GD-PPD-019.2)*. Determination of frequency of stack emissions testing and dispersion modeling shall be done in accordance with the *Compliance Determination Guidance Document (GD-PPD-009.4)*.
78. IOC shall be required to complete stack emissions testing once every four years if it has been shown, via a registered dispersion model, that the operation is in compliance with section 3(2) and Schedule A of the *Air Pollution Control Regulations, 2004*. If it has been shown, via a registered dispersion model, that the operation is not in compliance with section 3(2) and Schedule A of the *Air Pollution Control Regulations, 2004*, then the facility shall complete stack emissions testing every two years.
79. Plume dispersion modelling results shall be submitted to the Department within **120 days** of acceptance of the stack emissions testing results by the Department.
80. The ambient air quality standards specified in Schedule A of the *Air Pollution Control Regulations, 2004*, shall apply to all points outside of IOC's administrative boundary. The administrative boundary is defined as the area encompassed by the coordinates contained in Appendix B, a total area of approximately 12.409 km². All coordinates are referenced to NAD83, UTM zone 19.

Analysis & QA/QC

81. 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 IOC 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.
82. If IOC wishes 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 Monitoring & Discharge* section. If using a commercial laboratory, IOC shall contact that commercial laboratory to determine and to implement the sampling and transportation QA/QC requirements for those activities.
83. The exact location of each sampling point shall remain consistent over the life of the monitoring programs. Using a GPS or similar device, the northing and easting of each sampling location shall be recorded and made available when requested.
84. IOC shall bear all expenses incurred in carrying out the environmental monitoring and analysis required under conditions of this Approval.

Monitoring Alteration

85. 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.
86. IOC 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

87. Monthly reports containing the environmental compliance monitoring and sampling

information required in this Approval, as summarized in Table 8, 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>>

Table 8 – Summary of Reporting & Submission Requirements	
Section	Condition(s)
Waste Management Plan	
General WMP requirements	21
Used tires SOP	22
Used oil SOP	23
Dust Suppression	
Public complaints	29
SOP	30
5 yr re-vegetation plan	31
1 yr recap and 1 yr plan	32
Spill Prevention & Containment	
Petroleum and chemical tank inventory	37
Spill Contingency Plan	
General SCP requirements	40
Incident reporting	41
Site Decommissioning & Restoration Plan	42
Fuel & Consumption	
Bunker C, diesel, used oil, anthracite, coke breeze data	47
Notification to Service NL that used oil is mixed with Bunker C	49
Boiler Ash	
Manifest of an assumed hazardous waste	51
Effluent Monitoring & Discharge	
EDC results for various sites. Table 4 versus Table 5	53
Reduction of EDC testing frequency	55
Reduction of Radium 226 testing frequency	56
Increase of EDC testing frequency	57
Reduction of ALT frequency	58
Failed ALT	61
Spill into a water body	63
Water Chemistry Analysis	
Quarterly sampling at various sites	64
EEM	65
Ambient Air	
Information regarding calibrations, site visits and maintenance for all continuous ambient air monitors	66
Pellet Production	71
COMS	74
Stack Emission Testing & Dispersion Modelling	80
Reporting	87 to 90
Expiration	93

88. 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 IOC related to the Labrador Operation, whether or not they are received anonymously;

shall be immediately reported, within one working day, to this Department 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

89. Any spillage of gasoline or associated product that is known or thought to be in excess of 70 litres shall be reported immediately through the Canadian Coast Guard at 1-(709)-772-2083.

Any leakage of gasoline or associated product from a compromised storage tank or piping system shall be reported immediately to the Canadian Coast Guard at 1-(709)-772-2083.

Liaison Committee

90. The Department recognizes the benefits, and at times the necessity, of accurate, unbiased communication between the public and industrial operations which have an impact on the properties and residents in the area. The Department encourages the formation and regular meeting of a Liaison Committee comprised of representatives of IOC, the Department and independent members of the general population of Labrador City and Wabush. Regular meetings of the Liaison Committee will provide a clear conduit of communication between concerned citizens and IOC. The Director reserves the right to require the formation of a Liaison Committee should it is deemed necessary.

Expiration

91. This Approval expires *April 09, 2018*.

92. Should the proponent wish to continue to operate the IOC Labrador Operation

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 ***October 9, 2017***.

APPENDIX A

Abandonment & Restoration Plan Guidelines

This Appendix is intended to provide guidance for the development of the 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 IOC shall undertake at the time of final closure and/or abandonment of the Labrador Operation 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. IOC 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

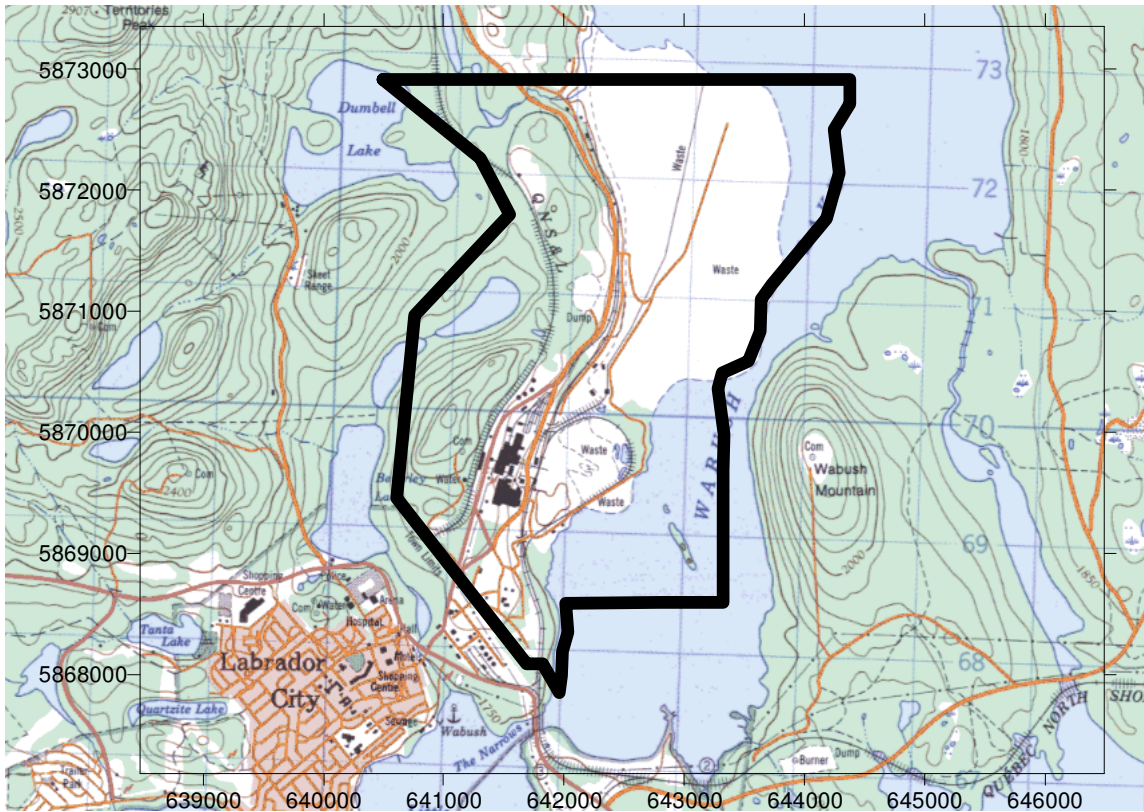
- The tailings impoundment areas should be left in a condition, acceptable to this Department, to prevent the generation of acid mine drainage and dust. Runoff from impoundment areas is to be directed to an outflow where drainage from the area can be monitored.

Tires

- Tires shall be disposed / reused in accordance with the *Waste Management Regulations, 2003* or its successor.

APPENDIX B

Administrative Boundary Graphic and Coordinates



Note: The graphic is provided as an approximate illustration of the administrative boundary and is not intended for compliance determination.

Coordinates *			
Easting	Northing	Easting	Northing
Starting at coordinate		Continued	
640495.3	5872917.2	643319.9	5868591.0
644377.9	5872917.2	642794.2	5868591.0
644377.8	5872716.9	642010.9	5868585.8
644247.1	5872502.1	642032.2	5868351.3
644292.1	5872142.2	641985.6	5868192.6
644181.3	5871768.9	641975.8	5867984.4
643726.6	5871217.2	641965.9	5867843.3
643643.2	5871093.2	641824.6	5868086.3
643630.2	5870832.4	641690.7	5868086.3
643538.5	5870591.4	640613.4	5869458.6
643315.2	5870494.9	640762.3	5870962.7
643280.8	5870356.8	641548.5	5871804.0
643330.8	5869984.5	641304.6	5872264.2
643319.7	5869678.9	640495.3	5872917.2
Continued		End of coordinates	

* Where the coordinates are NAD 83, UTM zone 19

cc: Ms. Maria Dober - Head
Expert Support & Contaminated Sites
Environment Canada – Atlantic Region
45 Alderney Avenue
Dartmouth, NS
B2Y 2N6

Mr. Ken Russell
Service NL
13 Churchill Street
Happy Valley Goose Bay, NL
P. O. Box 3014 - Stn. B
A0P 1E0

Mr. Alex Smith, P. Eng. – Director
Mineral Development Division
Department of Natural Resources
P.O. Box 8700
St. John's, NL
A1B 4J6

Ms. Karen Oldford - Mayor
Town of Labrador City
P.O. Box 280
317 Hudson Drive
Labrador City NL
A2V 2K5

January 17, 2017

Mr. Patrick Lauziere,
Manager – Environment and Sustainable Development
Iron Ore Company of Canada
2 Avalon Drive
Labrador City, NL
A2V 2V6

Dear Mr. Lauziere:

RE: Amendment to Certificate of Approval AA13-045575B

IOC's Certificate of Approval AA13-045575B is hereby amended as follows:

- Further to IOC's October 4, 2016 notification of the relocation of the Magy Pit pipe discharge PD-33, Table 4 of the existing Approval (AA12-045575B) is revoked and replaced with the attached table to include sampling point PD-33 Magy Lake (South).
- Condition #47 is revised to add monthly reporting of:
 - amount (tonnage) of bentonite delivered;
 - certificate-of-analysis (including percent sulphur content) for each bentonite delivery.

Further to your request of October 26, 2016, the Department approves of the deferment of 2016 stack testing and dispersion modelling activities to 2017. Compliance determination dispersion modelling based on the 2014 stack testing campaign shall be completed and submitted to the Department by March 31, 2017.

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

Sincerely,



Dexter Pittman, P.Eng.
Manager, Industrial Compliance

Table 4 - Effluent Monitoring Program

Ref.	Location	Parameters	Frequency
PD-11	Sherwood Pit Discharge from In-Pit Shallow Well	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-12	Sherwood Pit Discharge from In-Pit Sump	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-19	Smallwood Pit Dewatering	TPH	Monthly (at least 15 days apart)
PD-20	Pumping discharge from Leila Wynne	pH, TPH, and TSS	Weekly (at least 24 hours apart) with discharge
PD-24	Humphrey South Dewatering (Sherwood Pond)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-25	Sherwood Pit Sump (which discharges to Humphrey South)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-26	Magy Lake (North)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-32	Discharge from Lorraine South	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-33	Magy Lake (South)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
FDP-MD5	Drainage from mine garage	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-TIA	Julienne Narrows	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT	Monthly (at least 15 days apart)
FDP-HC	Hakim Culvert	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-MD30	Lorraine Lake at Spooks Pit	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)

March 8, 2017

Ms. Sonya Flynn
Senior Advisor Environment
Iron Ore Company of Canada
2 Avalon Drive
Labrador City, NL
A2V 2V6

Dear Ms. Flynn:

RE: Amendment to Certificate of Approval AA13-045575B

IOCC's February 20, 2017 request to establish sampling point PD-34 at Magy Pit has been approved by the Department. Please find attached the amended Table 4 of Approval (AA13-045575B) which includes this third sampling point at Magy Pit. Please note, PD-26 and PD-33 have been re-labelled with your agreement.

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

Sincerely,



Dexter Pittman, P.Eng.
Manager, Industrial Compliance

Table 4 - Effluent Monitoring Program

Ref.	Location	Parameters	Frequency
PD-11	Sherwood Pit Discharge from In-Pit Shallow Well	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-12	Sherwood Pit Discharge from In-Pit Sump	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-19	Smallwood Pit Dewatering	TPH	Monthly (at least 15 days apart)
PD-20	Pumping discharge from Leila Wynne	pH, TPH, and TSS	Weekly (at least 24 hours apart) with discharge
PD-24	Humphrey South Dewatering (Sherwood Pond)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-25	Sherwood Pit Sump (which discharges to Humphrey South)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-26	Magy Pit (North) (Inactive)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-32	Discharge from Lorraine South	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-33	Magy Pit (South)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
PD-34	Magy Pit (North-East)	TPH	Monthly (at least 15 days apart)
		pH, TDS, TSS and Fe	Four times per calendar year (at least 30 days apart)
FDP-MD5	Drainage from mine garage	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-TIA	Julienne Narrows	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT	Monthly (at least 15 days apart)
FDP-HC	Hakim Culvert	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)
FDP-MD30	Lorraine Lake at Spooks Pit	EDC (except for ALT)	Weekly (at least 24 hours apart)
		ALT and TPH	Monthly (at least 15 days apart)



Government of Newfoundland and Labrador
Department of Municipal Affairs & Environment

Pollution Prevention Division
(Environment)

April 9, 2018

File No. 732.205.2

Patrick Lauziere
Manager – Environment and Sustainable Development
Iron Ore Company of Canada
2 Avalon Drive
Labrador City, NL
A2V 2Y6

Dear Patrick,

RE: Extension of Certificates of Approval AA13-045575B and AA16-055636

The Iron Ore Company of Canada (IOC) has submitted an application for the renewal of Certificate of Approval AA13-045575B for the continued operation of IOC's Labrador Operation. The new Approval will consolidate the existing Approvals for Wabush 3 (AA16-055636) and Luce Lake North Diversion and Dewatering (AA17-075643).

To allow sufficient time for the processing of this application, the Certificates of Approval AA13-045575B and AA16-055636 are hereby extended to September 30, 2018 or until the issuance of a new Certificate of Approval, whichever occurs sooner.

If you have any questions please contact Stephen Dyke or myself.

Sincerely,

A handwritten signature in blue ink that reads "Dexter Pittman".

Dexter Pittman, P.Eng.
Manager, Industrial Compliance

June 27, 2018

Ms. Sonya Flynn
Senior Advisor Environment
Iron Ore Company of Canada
2 Avalon Drive
Labrador City, NL
A2V 2V6

Dear Ms. Flynn:

RE: Amendment to Certificate of Approval AA13-045575B

IOCC's June 04, 2018 request to amend the approval with the revised *Table 4 – Effluent & Discharge* and *Table 6 – Water Chemistry Analysis Program* has been approved by the Department. Please note that *Table 5 – Effluent Discharge Criteria* remains unchanged and these revised combine the sampling points for approvals AA13-045575B, AA16-055636 and AA17-075643. Please find attached the amended Tables.

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

Sincerely,



Dexter Pittman, P.Eng.
Manager, Industrial Compliance

Effluent Monitoring & Discharge

Table 4 - Effluent Monitoring Program				
Reference	EDMS Code	Location	Parameters	Frequency
FDP-W3-02	00021	Outflow of Pumphouse Pond	EDC (except for ALT)	Weekly (at least 24 hours apart)
			ALT and TPH	Monthly (at least 15 days apart)
FDP-W3-06	00023	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-LLND	00637	Luce Lake North Dewatering pump discharge into White Lake Diversion Channel Extension	EDC (except for ALT)	Weekly (at least 24 hours apart)
			ALT and TPH	Monthly (at least 15 days apart)
FDP-TIA	00025	Julienne Narrows	EDC (except for ALT)	Weekly (at least 24 hours apart)
			ALT and TPH	Monthly (at least 15 days apart)
FDP-HC	00026	Hakim Culvert	EDC (except for ALT)	Weekly (at least 24 hours apart)
			ALT and TPH	Monthly (at least 15 days apart)
FDP-MD30	00020	Lorraine Lake at Spooks Pit	EDC (except for ALT)	Weekly (at least 24 hours apart)
			ALT and TPH	Monthly (at least 15 days apart)
PD-11	00008	Sherwood Pit Discharge from In-Pit Shallow Well	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-19	00010	Smallwood Pit Dewatering	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-24	00012	Humphrey South Dewatering (Sherwood Pond)	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-25	00013	Sherwood Pit Sump (which discharges to Humphrey South)	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-26	00014	Magy Lake Discharge	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-32	00015	Discharge from Lorraine South	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-33	00016	Magy Pit (South)	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-34	00238	Magy Pit (North-East)	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
MD5	00017	Drainage from Mine Garage	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)
PD-W3-10	00024	Luce Lake North Dewatering pump discharge into White Lake Diversion Channel Extension	pH, TSS and TPH	Four times per calendar year (at least 30 days apart)

Table 5 – 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		

Table 6 - Water Chemistry Analysis Program

Reference	EDMS Code	Location	Parameters
FDP-W3-02	00021	Outflow of Pumphouse Pond	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)
FDP-W3-06	00023	Discharge from waste rock pile sedimentation pond which flows into Leg Lake	
FDP-LLND	00637	Luce Lake North Dewatering pump discharge into White Lake Diversion Channel Extension	
FDP-TIA	00018	Julienne Narrows	
FDP-HC	00019	Hakim Culvert	
FDP-MD30	00020	Lorraine Lake at Spooks Pit	
RW-W3-02	00042	Receiving waters in Leg Lake downstream from Pumphouse Pond/Overburden Sed Pond.	
RW-W3-06	00043	Receiving waters in Leg Lake downstream from the waste rock pile sedimentation pond	
RW-LLS	00638	Luce Lake South receiving waters at the end of White Lake Channel Extension	
RW-TIA	00025	Julienne Lake	
RW-MD30	00038	Lorraine Lake at Spooks Pit	
RW-BB	00028	Wabush Lake at Beaver Bay	
RW-Reference	00027	Shabogomo Lake	
RW-LWDQ	00037	Leila Wynne Lake	
MT	00034	Coarse Tailings Line sample taken after flocculent addition	
FT	00035	Fine Tailings Line sample taken after flocculent addition	

Metals Scan:

aluminium, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, mercury, nickel, selenium, silver,

Table 6 - Water Chemistry Analysis Program

Reference	EDMS Code	Location	Parameters
DB	00040	Outflow of Dumbell Lake	strontium, thallium, tin, titanium, uranium, vanadium, zinc
BV	00039	Beverly Lake	
White Lake	00032	Outflow of White Lake	
W3-01	00044	Dumbell Lake Stream @ Real Time Station	
W3-04	00045	Steam into Leg Lake	
W3-07	00047	Un-named lake south-west of Overburden Stockpile	
W3-08	00048	Trout Lake	
W3-09	00049	Headwater lake into Beverly Lake	
LPDW	00033	Luce Pit Deep Wells	
W3DW	00683	Wabush 3 Deep Wells	
W3-MW-01a	00050	Shallow Groundwater Monitoring Well #1 – by headwater lake flowing into Beverly Lake	
W3-MW-01b	00051	Deep Groundwater Monitoring Well #1 – by headwater lake flowing into Beverly Lake	
W3-MW-02	00052	Groundwater Monitoring Well #2 by headwater lake flowing into Beverly Lake	
W3-MW-03a	00053	Shallow Groundwater Monitoring Well #3 on Smokey Mountain Road	
W3-MW-03b	00054	Deep Groundwater Monitoring Well #3 on Smokey Mountain Road	