LICENCE NO: 2AM-JER1119

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TABLE OF CONTENTS

NUNAVUT WATER BOARD
WATER LICENCE

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

SHEAR DIAMONDS (NUNAVUT) CORP.
A WHOLLY OWED SUBSIDIARY OF SHEAR DIAMONDS LTD.

(Licensee)

SUITE 220 6 ADELAIDE STREET EAST, TORONTO, ON M5C 1T6

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	2AM-JER1119 Type "A"
Water Management Area:	NUNAVUT 07
Location:	JERICHO DIAMOND MINE KITIKMEOT REGION, NUNAVUT
Purpose:	WATER USE AND THE DEPOSIT OF WASTE
Description:	MINING AND MILLING
Quantity of Water use not to Exceed:	350,400 CUBIC METRES ANNUALLY
Date of Licence Issuance:	DECEMBER 21, 2011
Expiry of Licence:	DECEMBER 31, 2019

This Licence, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

Tomas Kabloona,
Nunavut Water Board
Chair

APPROVED BY:

Minister of Aboriginal Affairs and Northern Development Canada

DATE LICENCE APPROVED: _____

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

a. This Licence authorizes the Licensee to the use of Water and deposit of Waste associated with the Mining and Milling undertakings at the Jericho Diamond Mine as outlined in the Water Licence Application, submitted to the Board throughout the regulatory process.

The Licensee may conduct mining, milling and associated activities at the Jericho Diamond Mine in the Kitikmeot Region of Nunavut, (65°59'50" N, 111°28'30 W) including in general, as follows:

- Use of Water from Carat Lake for mining and milling, associated activities and domestic purposes;
- Use of Water from Lynne Lake and Contwoyto Lake for Winter Road construction;
- Quarrying of materials from specified locations;
- Operation of site facilities including camp, tank farm, processing plant, shops, offices, camp, explosive magazines, emulsion plant, ammonium nitrate storage pad;
- Construction and operation of the Winter Road, site roads, airstrip, and Water crossings;
- Extraction of overburden, waste rock and ore from the open pit and underground;
- Construction and operation of the Ore Stockpile, Low Grade Stockpiles, Waste Dumps 1 and 2, Coarse Processed Kimberlite Stockpiles, Recovery Circuit Rejects Processed Kimberlite Stockpiles areas;
- Construction and operation of a Divider Dyke A, Divider Dyke B, East Dam, South-East Dam, North Dam, West Dam, Settling Dam Pond, Cell A Coarse Processed Kimberlite Perimeter Berm needed for the operation of the Processed Kimberlite Containment Area;
- Diversion of a watercourse (Stream C1) for on-site water management;
- Construction and maintenance of water/sediment control infrastructure;
- Operation of Wastewater Treatment Plant and controlled discharge during operations;
- Construction and operation of a Landfill with a sludge disposal facility;
- Construction and operation of a Landfarm;
- Construction and operation of the Collection Ponds A, B, C;
- Management and disposal of Wastes associated with the Wastewater Treatment Plant, Processed Kimberlite Containment Area, Waste Rock Piles, Coarse Processed Kimberlite Stockpiles Facility, Incinerator, and other Wastes as described in the Waste Management Plan;
- Handling and storage of petroleum products and hazardous materials;
- the processing of Kimberlite, including the deposition of Processed Kimberlite into the Processed Kimberlite Containment Area;

- Dewatering and controlled discharge of Open Pit water to allow open pit mining; and
- Controlled and regulated Discharge of Effluent to Stream C3 and subsequently to Lake C3 from the Processed Kimberlite Containment Area.

a. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the depositing of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or existing Regulations are amended by the Governor in Council under the Act, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such Waste may be so deposited, this licence shall be deemed to be subject to such requirements.

b. Compliance with the terms and conditions of this licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

2. DEFINITIONS

The Licensee shall refer to Schedule A for definitions of terms used in this Licence.

3. ENFORCEMENT

a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*.

b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*.

c. For the purpose of enforcing this Licence and with respect to the use of Water and deposit or Discharge of Waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The amount of Water use fees shall be determined in accordance with the section 9(b) of the *Regulations* and payment of fees made in accordance with section 9(6)(b) of the *Regulations*.

2. The Licensee shall file an Annual Report with the Board no later than March 31th in the year following the calendar year being reported. The Annual Report shall be developed in accordance with Schedule B Item 1.

3. The Licensee shall submit to the Board for review, a Quarterly Report, thirty (30) days following the quarter being reported, which includes:

a. An update of compliance status with the Licence;
b. An update describing any proposed changes to any plans;
c. An update with respect to construction and production schedule;
d. A list of any correspondence within each quarter with regulatory authorities.

4. The Licensee shall ensure a copy of this Licence is maintained at the site at all times.

5. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing
Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nunawutwaterboard.org

6. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

7. The Licensee shall notify the NWB of any changes in development plans or conditions associated with this project, including the intent to begin Commercial Operation, at least sixty (60) days prior to any such changes.

8. The Licensee shall submit one (1) paper copy and one (1) electronic copy of all reports, studies, and plans to the Board unless otherwise requested by the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut and Inuinnaqtun.

9. This Licence is not assignable except as provided in section 44 of the *Act*.

10. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.

11. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities, Waste Disposal Facilities and Monitoring Stations. The signs shall be posted in English, Inuktitut and Inuinnaqtun.

12. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary

to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.

13. For all Plans, drawings, figures or other documentation submitted under this Licence and required to be stamped and/or sealed by an engineer or other accredited professional, the Board's approval of such documentation is expressly limited to only reviewing and verifying that the document fulfills the requirements of the Licence. The Board's approval does not constitute verification or any other form of approval with respect to the design, engineering controls, construction, operating plans or implementation measures included in such documentation.

14. In the event that a Plan is not found acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board.

15. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board.

16. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and condition imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.

17. The Licensee shall review the Plans or Manuals referred to in this Licence as required by changes in Operation and/or technology and modify the Plans or Manuals accordingly. Revisions to the Plans or Manuals are to incorporate design changes and adaptive engineering required and implemented during Construction and on the basis of actual site conditions and monitoring results over the life of the project. Revisions to the Plans are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made unless otherwise specified by the Board.

18. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall, within thirty (30) days of the effective date of the Licence, furnish and maintain a security in the amount of $3,389,074 in the form and nature in accordance with the Regulation or that is satisfactory to the Minister.

2. The Licensee shall furnish and maintain such further or other amounts of security as may be required by the Board based on annual estimates of current mine restoration liability in accordance with Part B, Item 2 and Schedule B, Item 1(y) of this Licence.

3. The Licensee may submit to the Board for approval in writing, a request for a reduction to the amount of security. The submission shall include supporting evidence to justify

the request.

4. The security referred to in Part C, Item 1 shall be maintained until such time as it is fully or in part refunded by the Minister pursuant to section 76(5) of the *Act*. This clause shall survive the expiry of this Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.

PART D: CONDITIONS APPLYING TO CONSTRUCTION

1. The Licensee shall submit to the Board for review, within sixty (60) days prior to resuming Commercial Operation, an updated Mine Plan which outlines timing of construction for all infrastructure components. The Plan shall identify measures to be taken should implementation deviate from the proposal. The Plan shall be updated and developed in accordance with Schedule D, Item1.

2. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to the construction, detailed design plans and drawings stamped by a Geotechnical Engineer for the Divider Dyke A, Divider Dyke B, West Dam, Southeast Dam, North Dam, Perimeter Berm, Settling Pond Dam or any dams, dykes or structures intended to contain, withhold, divert or retain Water or Waste. The Licensee shall ensure that such facilities are designed and constructed to engineering standards such that at a minimum they comply with the Dam Safety Guidelines (*Canadian Dam Association, 2007*).

3. All rock used in construction must meet the appropriate geochemical criteria as specified per Schedule D Item 3.

4. The Licensee shall submit to the Board for review, within twelve (12) months of the effective date of the Licence, a Borrow Management Plan. The plan shall be developed in accordance with Schedule D, Item 4.

5. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to construction, a final Landfill Design Plan for the Landfill and Sludge Pit, including detailed construction drawings. The plan shall be developed in accordance with Schedule D, Item 5.

6. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to construction, a final Landfarm Design Plan for the Landfarm, including detailed construction drawings. The plan shall be developed in accordance with Schedule D, Item 6.

7. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to the construction of any remaining or future Site Water Management Facilities, a final Design Plan, including detailed construction drawings. The Plan shall be developed in accordance with Schedule D, Item 7.

8. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to the construction of the Collection Ponds, a detailed Design Plan including design

drawings stamped by an Engineer. This report shall be developed in accordance with Schedule D, Item 7.

9. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to construction, any changes to the final Design Plan of the Ore Stockpile, Coarse Processed Kimberlite Stockpile, Recovery Rejects Stockpile, Waste Rock Dump No. 1 and Waste Rock Dump No. 2, including design drawings stamped by an Engineer. This plan shall be developed in accordance with Schedule D, Item 8.

10. The Licensee shall submit to the Board for approval in writing, at least ninety (90) days prior to the construction of the Fuel Storage Containment Facility Set 3, a final Fuel Storage Containment Facility Set 3 Design Plan including detailed design specifications and drawings. The plan shall be developed in accordance with Schedule D, Item 9 and all applicable legislation and industry standards, including:

    a. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003; CCME;* and
    b. *National Fire Code, 1995*.

11. The Licensee shall submit to the Board for review, at least two (2) months prior to Commercial Operation, an Explosives Management Plan. The plan shall be developed in accordance with Schedule D, Item 10.

12. The Licensee shall construct and maintain all containment and runoff control structures to prevent escape of wastes to the surface or ground water systems.

13. The Licensee shall implement sediment and erosion control measures prior to and during Construction, and Operations where necessary, to prevent entry of sediment into Water.

14. The Licensee shall inspect daily, all construction activities for signs of erosion.

15. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a Water body, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
Total Suspended Solids TSS)	50.0	100.0

16. The construction of engineered earthworks shall be supervised and field checked by a qualified Engineer. Construction records shall be maintained and available at the request of the Board and/or an Inspector.

17. The Licensee shall submit to the Board for review, within ninety (90) days of completion of any structure designed to contain, withhold, divert or retain waters or wastes, a

Construction Summary Report prepared by a qualified Engineer that shall include as-built drawings, documentation of field decisions that deviate from original plans and any data used to support these decisions. The report shall be prepared in accordance with Schedule D, Item 11.

18. The Licensee shall, through an appropriately qualified and experienced Engineer, supervise and field check all construction of engineered structures in such a manner that the project specification can be enforced and, where required, the quality control measures are followed. The Licensee shall also ensure that the construction records of all engineered Structures are maintained and made available at the request of the Board and/or an Inspector.

19. All detailed design plans referred to in this Part shall consider Adaptive Management strategies.

20. The Licensee shall prevent any chemicals, fuel or wastes associated with the undertaking from entering any Water body.

21. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of equipment and personnel around the site during construction activities.

22. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.

23. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, a distance of at least thirty one (31) metres above the ordinary high Water mark of any Water body in order to minimize impacts on surface drainage and Water quality.

24. The Licensee shall undertake necessary corrective measures to mitigate impacts on surface drainage resulting from the Licensee's activities.

PART E: CONDITIONS APPLYING TO WATER USE AND WATER MANAGEMENT

1. The Licensee shall obtain Water from Carat Lake at monitoring station JER-AEM-12 using the Fresh Water Supply Facilities for domestic camp use, mining and milling and associated activities, or as otherwise approved by the Board in writing. The Licensee is authorized to use Water for winter road construction from Lynne Lake and Contwoyto Lake, or as otherwise approved by the Board in writing.

2. The total volume of fresh Water for all uses and from all sources shall not exceed 350,400 cubic metres per year.

3. The Licensee shall equip all water intakes with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.

4. The Board has approved with the issuance of this Licence, the plan titled "Site Water Management Plan Care and Maintenance Jericho Diamond Mine, Nunavut" dated January, 2011.

5. The Licensee shall submit to the Board for approval in writing, prior to December 31, 2012 and at least sixty (60) days prior to resuming Commercial Operation, a revised Site Water Management Plan. The final detailed report shall be stamped by an Engineer and shall be developed in accordance with Schedule E, Item 1.

6. The Licensee shall operate and maintain the Site Water Management Facilities to engineering standards such that at a minimum, they comply where applicable to the *Dam Safety Guidelines (2007)*, and in accordance with the following (where applicable):

    a. the Licensee shall ensure that all containment and runoff control structures are constructed and maintained to prevent escape of wastes to the surface or ground water systems;

    b. a minimum freeboard limit of one (1) metre (where applicable) shall be maintained at all times or as recommended by a Geotechnical Engineer and as approved by the Board in writing;

    c. the Licensee shall carry out, at a minimum, weekly inspections, during periods of flow, and the records be kept for review upon request of an Inspector. Areas of deterioration and erosion shall be repaired immediately;

    d. any runoff accumulated and/or seepage that does not meet the Effluent quality criteria in Part F, Item 17 shall be collected and directed to the PKCA and measures shall be employed to reduce seepage;

    e. an inspection shall be carried out annually in summer by a Geotechnical Engineer. The engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a covering letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations; and

    f. the Licensee shall perform more frequent inspections of the Site Water Management Facilities at the request of an Inspector.

7. The Licensee shall, to the greatest practical extent, recycle water and use reclaim water from the Processed Kimberlite Containment Area.

8. The Licensee shall implement measures to prevent the generation and deposition of dust and/or sediment into Water.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND WASTE MANAGEMENT

1. The Licensee shall install meters for all structures used in the discharge of Effluent, to the

satisfaction of an Inspector or as otherwise approved by the Board.

2. The Licensee shall direct all Sewage and Greywater to the Wastewater Treatment Plant prior to discharge to the PKCA, or as otherwise approved by the Board in writing.

3. The Licensee shall dispose of all sludge removed from the Wastewater Treatment Plant to the sludge pit as described in the Landfill Management Plan, or as otherwise approved by the Board in writing.

4. All contact water collected within the fuel and waste containment berms and within landfarm sumps shall be treated prior to discharge to the PKCA, or as otherwise approved by the Board in writing. The treated effluent shall not exceed the following Effluent quality limits:

Paremeter	Maximum Average Concentration
Benzene (mg/L)	0.69
Ethylbenzene (mg/L)	41
Toluene (mg/L)	0.083
Xylenes (mg/L)	18
F1 (C6-C10) (mg/L)	9.8
F1-BTEX (mg/L)	9.8
F2 (>C10-C16) (mg/L)	1.3

5. The Board has approved with the issuance of this Licence, the plan titled "Processed Kimberlite Management Plan Jericho Diamond Mine, Nunavut" dated August, 2011. The Licensee shall, within twelve (12) months of the effective date of the Licence and at least sixty (60) days prior to Commercial Operation, which ever date comes first, submit to the Board for approval in writing, an updated revised PKCA Management Plan. This Plan shall be developed in accordance with Schedule F, Item 1.

6. The Licensee shall operate and maintain the Processed Kimberlite Containment Area to engineering standards such that:

   a. a minimum freeboard limit of one (1) metre below the lowest point of either the zero degree isotherm for the perimeter dams or the emergency spillway, whichever is lower, shall be maintained at all times; or as recommended by a Geotechnical Engineer and as approved by the Board;

   b. the minimum Freeboard limit of one (1) metre as defined in Part B shall be maintain at all times; or as recommended by a Geotechnical Engineer and as approved by the Board;

   c. the Licensee shall collect and return seepage from the PKCA and corrective measures shall be implemented;

   d. the Licensee shall carry out, at a minimum, weekly inspections including, but not limited to, dams, spillway, pipeline(s), and the records be kept for review upon request of an Inspector. Areas of deterioration and erosion shall be repaired

immediately;

e. the solids fraction of all Processed Kimberlite shall be deposited and permanently contained within the PKCA;

f. an inspection shall be carried out annually in summer by a Geotechnical Engineer. The engineer's report shall be submitted to the Board within sixty (60) days of the inspection, including a covering letter from the Licensee outlining an implementation plan addressing each of the Engineer's recommendations; and

g. the Licensee shall perform more frequent inspection of the PKCA at the request of an Inspector.

7. The Board has approved with the issuance of this Licence, the plan titled "Waste Rock Management Plan Jericho Diamond Mine, Nunavut" dated February, 2011. The Licensee shall, at least sixty (60) days prior to Commercial Operation or within twelve (12) months of the effective date of the Licence, which ever date comes first, submit to the Board for approval in writing, a revised Waste Rock Management Plan, to address the management of all rock that is disturbed, moved, stored, or otherwise affected by mining-related activity on the property over the term of the project. This Plan shall be developed in accordance with Schedule F, Item 2.

8. The Licensee shall submit to the Board for approval in writing, within twelve (12) months of the effective date of this Licence, a consolidated Waste Management Plan. The plan(s) shall be developed in accordance with Schedule F, Item 3 to include the general operation and maintenance for:

a. waste management for the Project;
b. Wastewater Treatment Management;
c. Landfill Management;
d. Landfarm Management that addresses a plan for the hydrocarbon-contaminated soils temporary storage facility; and
e. Incineration Management, considering best management practices for ash disposal.

9. The Licensee shall, following approval by the Board in writing under Part F, Item 8, and upon commissioning of the Landfill, dispose of and contain all solid waste at the Landfill, or as otherwise approved by the Board in writing.

10. The Licensee shall implement mitigation and control measures to minimize migration of leachate from the Landfill.

11. The Licensee shall dispose of and contain all identified hydrocarbon-contaminated soils in the Landfarm, following approval of the Board in writing under Part F, Item 8, and upon commissioning of the Landfarm, or as otherwise approved by the Board in writing.

12. The Licensee shall dispose of and contain all identified hydrocarbon-contaminated rock in a segregated area of Waste Dump No. 1, or as otherwise approved by the Board in writing.

13. The Licensee shall undertake a geotechnical inspection, to be carried out annually during the summer by a Geotechnical Engineer, as required by Part F, Item 6(f), Item 6(g). The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable and take into account all major earthworks, including:
    a. PKCA including all dams, dykes and berms;
    b. Open pit slopes;
    c. Landfill;
    d. Landfarm;
    e. Fuel containment facilities;
    f. Collection Ponds (if applicable);
    g. Stockpiles;
    h. C1 Diversion;
    i. Hazardous Waste Transfer Area;
    j. Site Water Management Facilities; and
    k. Waste Dump Nos. 1 and 2.

14. The Licensee shall carry out, at a minimum, a weekly (regular) inspection, including, all major earthworks. Records shall be kept for review upon request of an Inspector. Areas of deterioration and erosion shall be repaired immediately.

15. The Licensee shall provide at least ten (10) days written notice to an Inspector and the Board, prior to any planned discharges from the PKCA to Steam C3.

16. All Effluent discharged from the PKCA to Steam C3 at monitoring Station Number JER-AEM-04, shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Allowable Grab Sample Concentration
pH	6.0 to 8.8	6.0 to 8.8
Total Suspended Solids (TSS) (mg/L)	15	25
Total Dissolved Solids (TDS) (mg/L)	2000	4000
Chloride – Cl	500	1000
Total (T) -Al (mg/L)	1.5	3.0
Dissolved (D)-Al (mg/L)	1.0	2.0
T-As (mg/L)	0.05	0.1
T-Cd (mg/L)	0.0012	0.0024
T-Cr (mg/L)	0.087	0.17
T-Cu (mg/L)	0.02	0.04
T-Pb (mg/L)	0.01	0.02
T-Mo (mg/L)	0.73	1.5
T-Ni (mg/L)	0.05	0.1
U (mg/L)	0.5	1.0

T-P (mg/L)	0.2	0.4
T-Zn (mg/L)	0.25	0.50
NH_3-N (mg/L)	6	12
T-Ni (mg/L)	1	2
T-NO_3-N (mg/L) *	28*(20)	56*(40)
T-NO_2-N (mg/L)	2.5* (1)	5* (2)
Biological Oxygen Demand (5 day) BOD_5 (mg/L)	15	25
Oil and Grease (mg/L)**	3.0	5.0
Fecal Coliforms (CFU/100mL)	10	20
Total Extractable Hydrocarbons (mg/L)	3.0	6.0

*Indicates Effluent limits upon Commercial Operation or as otherwise approved by the Board. Note: These criteria shall be re-assessed by Shear through plume delineation studies and may be modified by the Board upon review.
** Regulatory sampling only required if untreated camp waste is discharged directly to PKCA.

17. All surface runoff during construction within the PKCA shall meet the criteria for TSS as required by Part D, Item 13.

18. All discharges to Stream C3 from the PKCA at Station Number JER-AEM-04 shall not be acutely toxic under the following tests to be conducted once prior to discharge and once prior to completion of discharge:

19. The Licensee shall ensure that effluent discharge from PKCA to Stream C3 is undertaken such that:

    a. Acute lethality to Rainbow Trout, *Oncorhynchus mykiss* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/13);

    b. Acute lethality to the crustacean, *Daphnia magna* (as per Environment Canada's Environmental Protection Series Biological Test Method EPS/1/RM/14);

    c. The discharge rate does not exceed 0.2 m^3/sec (12 m^3/min) or equivalent;

    d. If the flow rates from the PKCA exceed the rates calculated from the monthly surface water flow dispersion model, weekly sampling shall take place at the mixing zone in Lake C3 to verify that the 10 times dilution ratio is maintained and the maximum grab sample concentration of Nitrate-N is less than 3.6 mg/L;

    e. If the Nitrate-N concentration (grab sample) are 3.6 mg/L or greater at the mixing zone in Lake C3, the discharge flow rates from the PKCA must be reduced to respect the 10 times dilution ratio or the discharge must cease;

f. Erosion control mitigation shall be implemented where necessary;

g. If erosion is evident, pumping shall cease immediately until mitigation is complete; and

h. The Licensee shall not add flocculent directly to the PKCA.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:

   a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications to include requirements of Part G, Item 3;
   b. Such Modifications do not place the Licensee in contravention of the Licence or the Act;
   c. Such Modifications are consistent with the NIRB Project Certificate;
   d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
   e. The Board has not rejected the proposed Modifications.

2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.

3. Applications for modifications shall contain:

   a. A description of the facilities and/or works to be constructed;
   b. The proposed location of the structure(s);
   c. Identification of any potential impacts to the receiving environment;
   d. A description of any monitoring required, including sampling locations, parameters measured and frequencies of sampling;
   e. Schedule for construction;
   f. Drawings of engineered structures stamped by a Professional Engineer; and
   g. Proposed sediment and erosion control measures.

4. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING

1. The Licensee shall implement the Plan titled "Contingency Management Plan Jericho Diamond Mine, Nunavut" dated February, 2011, approved by the Board with the issuance of this Licence.

2. The Licensee shall submit to the Board for approval in writing, at least six (6) months prior to resuming Commercial Operation, a revised and consolidated Emergency Response Plan. The revised Plan shall cover the mine operation related activities taking into account as-built designs and emergency preparedness to include the consequences of failure of any dams and Dykes. The Plan shall be developed in accordance with Schedule H, Item 1.

3. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the project from entering Water.

4. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.

5. The Licensee shall perform weekly inspections of fuel containment facilities for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request.

6. The Licensee shall keep a copy of the Contingency Management Plan and the Emergency Response Plan at site of operation.

7. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste and prevent and contain spills.

8. If, during the period of this Licence, an unauthorized discharge of Waste and/or Effluent occurs, or if such a discharge is foreseeable, the Licensee shall:

    a. Employ as required, the Contingency Management Plan and/or the Emergency Response Plan;
    b. Report the incident immediately via the 24-Hour Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and
    c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill sit.

9. If, during the period of this Licence, the Licensee enters into Temporary Closure, the Licensee shall submit to the Board for approval in writing, an addendum to the Contingency Plan within thirty (30) days of providing notification to the Board. This shall be developed in accordance with Schedule H, Item 2.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

1. The Board has approved with the issuance of this Licence, the plan titled "General Monitoring Plan Care and Maintenance Jericho Diamond Mine, Nunavut" dated January, 2011. The Licensee shall submit to the Board for approval in writing, within six (6) months of the effective date of this Licence, a revised General Monitoring Plan (GMP). The Plan shall be developed in accordance with Schedule I, Item 1.

2. The Board has approved with the issuance of this Licence, the plan titled "Aquatic Effects Monitoring Plan Care and Maintenance Jericho Diamond Mine, Nunavut" dated January, 2011. The Licensee shall submit to the Board for approval in writing, within two (2) years of the effective date of this Licence, a revised comprehensive Aquatic Effects Management Program (AEMP). The Plan shall be developed in accordance with Schedule I, Item 2. An initial status update and clarification of the Plan is to be provided in accordance with Part B, Item 3, by April 1, 2012.

3. The Licensee shall undertake the Monitoring Program provided in the Tables 1 and 2 of Schedule I.

4. The Licensee shall, for the purposes of general monitoring, refer to Tables 1 – Water Quality Parameters and Table 2 – Receiving Environment Water Quality Monitoring Requirements, in Schedule I for the description of the locations to be monitored in the receiving environment and the required analytical parameters to be measured and frequency.

5. The Licensee shall, for the purposes of specific site water management monitoring, refer to Table 3 – Site Water Quality and Thermal Monitoring Requirements in Schedule I for the description of the locations to be monitored and the analytical parameters to be measured.

6. The Licensee shall collect the samples referred to in this Part without delay. If at any time, the period specified for collecting samples was extended due to unforeseen circumstances due to safety concerns or access problems and render the collection of samples impracticable, the Licensee shall notify an Inspector of the circumstances.

7. The Licensee shall increase sampling frequency if results of such sampling indicate that the Effluent Quality Requirements provided in Part F have been exceeded, or as requested by the Board or directed by an Inspector.

8. Additional monitoring may be requested by the Board or the Inspector.

9. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes, volumes of effluent discharged or waste deposited, as required under Part I, Item 16.

10. The Licensee shall install the appropriate hydrograph instrumentation to adequately monitor the Lake C3 water elevations.

11. The Licensee shall confirm the locations and GPS coordinates for all monitoring stations

referred to in Schedule I with an Inspector.

12. All analyses shall be conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Accredited Laboratory.

13. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.

14. The Licensee shall submit by April 29, 2012 for review of the Board, a revised Quality Assurance/ Quality Control Plan that includes field and laboratory procedures and requirements for independent third party sampling and analysis. The Plan shall include up to date sampling methods to all applicable standards, acceptable to an Accredited Laboratory as required by Part I, Item 12 and Part I, Item 13. The Plan shall include a covering letter from the accredited laboratory confirming acceptance of the Plan for analyses to be performed under this Licence and shall be developed in accordance with Schedule I, Item 3.

15. The Licensee shall annually review the approved QA/QC Plan and modify the Plan as necessary. Proposed changes shall be approved by an Accredited Laboratory.

16. The Licensee shall measure and record all flow and volume measurements on a monthly basis in cubic metres for the following:

    a. the daily volume of fresh Water obtained from Carat, Lynne and Contwoyto Lakes for all purposes;
    b. the volume of Water obtained from runoff collection, ponds or any other source used for any purpose;
    c. the volume of water reclaimed from the PKCA;
    d. the volume of the solids in tonnes and liquid fractions in cubic metres of each waste pumped to the PKCA;
    e. the daily volume of effluent discharged from the PKCA;
    f. the daily volume of mine-water and seepage pumped from the open pit, Ponds, or other Site Water Management facilities to the PKCA;
    g. the daily volume of treated effluent discharged from the hydrocarbon contact water remediation unit (if applicable);
    h. the daily volume of treated Sewage effluent discharged from the Wastewater Treatment Plant; and
    i. the volume of Sewage sludge removed from the Wastewater Treatment Plant.

17. The Licensee shall, on a monthly basis, measure and record the amounts in tonnes (unless otherwise stated) including the location of disposal for the following:

    a. the quantity of ore processed; and
    b. the quantity of waste rock, coarse processed Kimberlite, till and overburden.

18. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly monitoring Report of all data and information required by this Part and generated by the Monitoring Program in the Tables of Schedule I.

19. The Licensee shall submit to the Board for review, Site Water Management Plan reporting as specified below:

    a. Within sixty (60) days following completion of the annual seepage survey, a report discussing the results, analysis and recommendations. This report shall be developed in accordance with Schedule I, Item 4.
    b. Within two (2) years following the notification of Commercial Operation a revised pit water quality model;

20. The Licensee shall submit to the Board for review, within sixty (60) days of completion of the geotechnical inspection as required by Part F, Item 13, and the Geotechnical Engineer's Inspection Report including a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.

21. The Licensee shall submit to the Board for review, Waste Management Plan reporting as specified below:

    a. The Licensee shall undertake and submit a report outlining the results of a plume delineation study within two (2) years following the receipt of notice of Commercial Operation;
    b. If during dewatering of the pit, trace parameter concentration levels are such that they are good measurable indicators, the plume delineation study will be conducted late in the discharge season of the same year as pit dewatering and the results submitted to the Board in accordance with Part B, Item 3;
    c. Due diligence testing results with respect to flocculent and coagulants in the process water associated with the PKCA shall be reported to the Board in accordance with Part B, Item 3, when available;
    d. Acute toxicity testing as required under Part F, Item 19 shall be submitted to the Board in accordance with Part I, Item 18; and
    e. Chronic toxicity testing shall be undertaken in accordance with Schedule I, Item 2, and results submitted to the Board in accordance with Part I, Item 18;

22. The Licensee shall submit to the Board, within two (2) years of resuming Commercial Operation, an analysis report on nitrate and nitrite as a regulated discharge parameter based on the results of operations monitoring with respect to the mixing zone within Lake C3.

23. The Board may, subject to the results presented in Part I, Item 22, may modify at its discretion, regulated discharge limits for nitrate and nitrite.

24. The Licensee shall submit to the Board for review, within six (6) months following the first year of Commercial Operation, a report identifying the geochemical characteristics of the recovery plant rejects (and coarse PK), and the specifics of how they will be handled including final location, and rationale for appropriate blending ratio if required. The report may be submitted as an addendum to the Waste Rock Management Plan referred to in Part F, Item 7.

25. The Board may modify this Part, without a public hearing. Requests for changes to the General and Aquatic Effects Monitoring Program should be forwarded to the Board in writing and shall include the justification for the change.

PART J: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION

1. The Board has approved the Interim Closure and Reclamation Plan (Interim CRP) titled "Interim Closure and Reclamation Plan Jericho Diamond Mine, Nunavut" dated February, 2011 including the Care and Maintenance Plan titled "Care and Maintenance Plan Jericho Project, Nunavut", dated January 2011. The Licensee shall submit to the Board for approval in writing:
   a. Within one year of the issuance of the Licence, the Applicant will file an updated Interim CRP;
   b. Within two years of the issuance of the Licence, the Applicant will file a preliminary Human Health and Ecological Risk Assessment that will form the basis for the subsequent Interim and Final CRP's;
   c. Within three years of the issuance of the Licence (one year after Commercial Operation commences), the Applicant will file a comprehensive update to the Interim CRP to reflect changes (including modifications to the operating plan, as a result of the HHERA and as a result of modeling studies and monitoring); and
   d. At the time the renewal application is filed with the Board, the Applicant shall file the first draft of the Final CRP, which will be reviewed as part of the Licence renewal.

   The revisions, where applicable, at a minimum, shall be in accordance with the *Mine Site Reclamation Guidelines for the Northwest Territories, (INAC, 2007)* and consistent with the AANDC *Mine Site Reclamation Policy for Nunavut, 2002* or subsequent editions. The plan(s) shall be developed in accordance with Schedule J, Item 1.

2. The Licensee shall submit to the Board for approval in writing, at least sixty (60) days prior to the decommissioning of the Phase 1 Fuel Storage and Containment Facility, a detailed decommissioning plan, stamped by a qualified Engineer. This report shall be developed in accordance with Schedule J, Item 2.

3. The Licensee shall notify the Board in writing, at least thirty (30) days in advance of its intent to enter into a planned Temporary Closure, or as soon as practicable for any unforeseen Temporary Closure and shall include plans for maintaining compliance with the Terms and Conditions of the Licence and in accordance with Schedule J, Item 1.

4. The Licensee shall notify the Board in writing, as soon as practicable, **w**hen it ceases Commercial Operation without the intent to resume mining activities in the future.

5. The Licensee shall implement a progressive reclamation program including revegetation on areas as soon as practically possible once they are no longer utilized by the project;

6. The Licensee shall submit to the Board for review, as required by Schedule B, Item 1y, annually by March 31st, an updated estimate of the total mine closure restoration liability using the current version of RECLAIM, its equivalent, or other similar method approved

by the Board. The estimate shall be prepared in accordance with principles of AANDC's *Mine Site Reclamation Policy for Nunavut* (2002).

SCHEDULES

The following schedules provide instructive detail to the conditions appearing in more general terms in the main body of the Licence and are spelled out in this format for greater clarity. If the Board determines that an item in the schedules requires revision in order to better reflect the conditions and intent of the Licence, the Board may, in its discretion, and upon providing notice to the Licensee of the revision, revise the item in the schedule. Unless the Board directs otherwise, such a revision will not be considered to be an "amendment" to the Licence.

Schedule A - Definitions

In this Licence: 2AM-JER1119

"**Act**" means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

"**Acid Rock Drainage (ARD)**" means the production of acidic leachate, seepage or drainage from underground workings, ore piles, waste rock, Processed Kimberlite, and overburden that can lead to the release of metals to groundwater or surface water during the life of the Project and after closure;

"**Accredited Laboratory**" means a Laboratory that has been evaluated and given approval by *Canadian Association for Laboratory Accreditation* (*CALA*) to perform analysis on environmental samples;

"**Acutely lethal effluent**" means effluent as defined in the *Metal Mining Effluent Regulations* SOR/2002-222 dated 6 June 2002;

"**Adaptive Management**" means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework for the mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded.

"**Aliquot**" means the amount comprising a known fraction of a whole and constituting a sample used for analysis;

"**Amendment**" means a change to any terms and condition of this Licence, through application to the NWB, requiring correction, addition or deletion of specific terms and conditions of the Licence;

"**Ammonium Nitrate Storage Area**" means the location designed to store Ammonium nitrate-Fuel oil (ANFO) explosives to be used for dry blasting. as described in the document titled "Ammonium Nitrate and Explosives Management Plan" by AMEC Earth & Environmental dated August 2004 and illustrated in Drawing 1CT004.06-G12 dated July 2004;

"**Analyst**" means an Analyst designated by the Minister under Section 85 (1) of the *Act*;

"**Aquatic Effects Monitoring Plan (AEMP)**" means a monitoring program designed to determine the short-and long-term effects in the aquatic environment resulting from the Project, to evaluate the accuracy of impact predictions, to assess the effectiveness of planned impact mitigation measures and to identify additional impact mitigation measures to avert or reduce environmental effects;

"**Board**" means the Nunavut Water Board established under Article 13 the *Nunavut Land Claims Agreement* and under Section 14 of the *Act*;

"**C1 Diversion**" means the engineered structures developed to divert natural flow around open pit mining activities, from C1 Lake to Carat Lake as described in the document titled "C1 Diversion Construction Summary, Jericho Diamond Mine, Nunavut" prepared by EBA Engineering Consultants, February 2011 and illustrated Figure 2 – Site Plan Construction Record, dated February 28, 2011, EBA Project Number E14101118;

"**Care and Maintenance**" means the status of a mine when it undergoes a temporary closure.;

"**Causeway**" means the infrastructure in Carat Lake designed to access and support the freshwater Water Supply Facilities;

"**Chief Administrative Officer**" means the Executive Director of the Nunavut Water Board;

"**Coarse PK Stockpile**" means the engineered facility designed to permanently store coarse processed Kimberlite as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine" by EBA Engineering Consultants, February 2011;

"**Collection Ponds A, B, and C**" means containment structures that may be designed to contain runoff and potential seepage from Waste Rock Dump sites, overburden stockpile, ore stockpile, coarse PK stockpile and plant site area as described in the document titled "Site Water Management Plan, Care and Maintenance, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, January 2011 and illustrated in DWGs: DBD-WL-1 to DBD-WL-3, dated January 31, 2011, EBA Project Number E14101118;

"**Commercial Operation**" in respect of a mine, means an average rate of production equal to or greater than 10% of the design-rated capacity of the mine over a period of 90 consecutive days;

"**Construction**" means any activities undertaken to construct or build any component of, or associated with, the development of the Jericho Diamond Project, as described in the Summary Document, Appendices and Addendum information submitted to the Board throughout the regulatory process;

"**Dam Safety Guidelines**" means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG), 2007* or subsequent approved editions;

"**Deleterious Substance**" means a substance as defined in Section 34(1) of the *Fisheries Act*

"**Deposit**" means the placement of waste rock, Processed Kimberlite or other solids materials on land or in water;

"**Discharge**" means the release of any water or waste to the receiving environment;

"**Divider Dyke**" means the embankment infrastructure(s) within the PKCA dividing it into two or more sections to limit the extent to which fine PK solids move into the western half of the PKCA as described in document "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011;

"**Domestic Waste**" means all solid waste generated from the accommodations, kitchen facilities and all other site facilities, excluding those industrial and hazardous wastes associated with the mining and processing of kimberlite;

"**East Dam**" means the embankment infrastructure utilizing a central frozen core as described in document titled "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011;

"**Effective Date of Licence**" means the date on which the Minister of Aboriginal Affairs and Northern Development Canada (AANDC) approves the Licence;

"**Effluent**" means the liquid discharge from all Site Water Management Facilities;

"**Emulsion Plant**" means the facility designed to manufacture on-site, emulsion explosives to be used for wet blasting as described in the document titled "Ammonium Nitrate and Explosives Management Plan" by AMEC Earth & Environmental dated August 2004 and illustrated in Drawing 1CT004.06-G10 dated July 2004;

"**Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut to practice in Nunavut in accordance with the *Engineering, Geological and Geophysical Act (Nunavut)* S.N.W.T. 1998, c.38, s.5;

"Fuel Storage and Containment Facility" means the facility designed for the bulk storage of fuel as illustrated in the Addendum to the submission to the NWB dated October 8, 2004 Drawing "Diesel Fuel Farm Preliminary Layout" dated July 10, 2004;

"Fuel Storage and Containment Facility Set 3" means the facility designed for the bulk storage of fuel as illustrated in the document titled "Fuel Storage Containment Facility Design Plan Set 3 Tank Farm" by EBA Engineering Consultants, dated February 2011 and illustrated in DWGs: DD/MM-JS-1, DD/MM-JS-TF-1 and DD/MM-JS-TF-2, dated February 25, 2011, EBA Project Number E1411118;

"**Geotechnical Engineer**" means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization with the engineering properties of earth materials in dealing with man-made structures and earthworks that will be built on a site. These can include shallow and deep foundations, retaining walls, dams, and embankments;

"**Engineered Structure**" means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

"**Environmental Assessment (EA)**" means, for the purpose of this licence, the totality of the Nunavut Impact Review Board (NIRB) Public Registry as established under the authority of Article 12 of the NLCA, this includes everything that was submitted by Tahera Diamond Corp. or Tahera Corp. Limited to the NIRB, the scope of which is consistent with the Water Licence Application;

"**Freeboard**" means the vertical distance between the water level and the top of the containment element (i.e. a liner), within a dam or any other channel or pond used for containment of site runoff;

"**Fresh Water Supply Facilities**" means the infrastructure required for extraction, storage, treatment and distribution of water as described in the Final Environmental Impact Statement, Project Description dated January 2003 and illustrated in Drawing Numbers 1CT004.06-G10 and 1CT004.06-W6 dated July 2004;

"**Frozen Core**" means a permafrost core comprising frozen ice-saturated aggregate material and functioning as an impervious seepage barrier within a dam or Dyke;

"**Grab Sample**" means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

"**Greywater**" means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), excluding sewage;

"**Ground Ice**" means ice that occupies fractures in rock and soil below the ground surface and may be present as ice inclusion in permafrost, soil or rock, as pore ice, lens ice or massive ice;

"**Ground Water**" means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

"**ICP Metal Scan**" means, for the purpose of the Licence, elements detected in an inductively coupled plasma (ICP) mass spectrometer including, but not limited to, aluminum, barium, boron, cadmium, chromium, copper, iron, lead, manganese, molybdenum, nickel, selenium, strontium, uranium and zinc;

"**Inspector**" means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

"**Landfill**" means a facility, designed to permanently contain inert solid waste materials, as described in the document titled "Landfill Management Plan, Jericho Diamond Mine, Nunavut" and "Preliminary Landfill Design Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011, and Technical Memorandum E "Landfill and Sludge Pit Location Addendum to the Landfill Management Plan", July 29, 2011 dated July 2011, EBA Project Number E14101140;

"**Kimberlite**" refers to the Jericho Kimberlite pipe with a length of ~300m, a width of up to 100m and a depth of at least 350m that was formed from multiple emplacement events comprising a precursor dyke (JDF2) and three diatreme intrusive stage consisting of a northern (JDF4N), central (JDF6) and southern lobe (JDF4s) as described in the FEIS Project Description prepared by Tahera Diamond Corp., dated January 2003 and illustrated in Maps A and D in Appendix E-Maps dated June 2000;

"**Landfarm**" means a facility, designed to temporarily contain and remediate hydrocarbon contaminated soil, as described in the document titled "Landfarm Management Plan, Jericho Diamond Mine, Nunavut" and "Preliminary Landfarm Design Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011 and illustrated in DWGs: DBD-GK-2 and DBD-GK-3, dated February 24, 2011, EBA Project Number E14101118;

"**Licence**" means this Type "A" Water Licence 2AM-JER1119, issued by the Nunavut Water Board in accordance with the *Act*, to Shear Diamonds (Nunavut) Corp. for the Jericho Diamond Mine;

"**Licensee**" means to whom Licence 2AM-JER1119 is issued to or assigned;

"**Low Grade Stockpile**" means the engineered facility designed to store low grade ore pending future assessment of economically feasibility for processing as described in the document titled "Waste Rock, Low Grade Ore and Coarse Processed Kimberlite Management Plan" by SRK Consulting dated August 2004 and illustrated in Drawing Numbers: 1CT004.06-M1 and 1CT004.06-M3 dated July 2004;

"Major Ions" means to include the following parameters: sulphate, nitrate, chloride, total magnesium, total sodium, total potassium and total calcium;

"Maximum Average Concentration" means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

"Metal Leaching" means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

"**Mine Plan**" means the document which describes actual mining activities (i.e. open pit and underground drilling and blasting, Kimberlite extraction, ground water control, backfilling) and other mining activities including the sequencing of the development, as may be updated and revised by the Licensee from time to time;

"**Mine Water**" means any water, including groundwater, that is pumped or flows out of any underground workings or open pit;

"**Minister**" means the Minister of Aboriginal Affairs and Northern Development Canada (AANDC);

"**Modification**" means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

"**North Dam**" means the embankment water retaining infrastructure as described in the documents; "North Dam Design Report, Jericho Diamond Mine" prepared by EBA Engineering

Consultants Ltd dated July 2007 and the "Processed Kimberlite Management Plan" by EBA Engineering Consultants, August 2011, EBA Project Number E14101140;

"**Nunavut Land Claims Agreement**" **(**NLCA) means the "*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada*," including its preamble and schedules, and any amendments to that agreement made pursuant to it;

"**Nutrients**" means to include the following measurements: total ammonia-N, nitrate-N, nitrite-N, total phosphorus, orthophosphate, total carbon and total organic carbon;

"**Operations**" means the entire set of site activities (excluding construction and commissioning activities) associated with mining, processing and recovery of diamonds at the Jericho Diamond Mine, as described in the Water Licence Renewal Application, submitted February 28, 2011;

"**Operator**" means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

"**Ore Stockpile**" means the above-ground facility designated for the temporary storage of ore to be processed in the processing plant using conventional diamond extraction methods as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011, EBA Project Number E14101118;

"**Overburden**" means the material, excluding waste rocks, that were removed to gain access to the ore in the development of the Open Pit. Material was stored at Waste Dumps as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011, EBA Project Number E14101118;

"**Perimeter Dykes**" means the embankment infrastructure required at four shallow depressions located around the PKCA (i.e. two of the north side of the PKCA and two on the south side) as described in document titled "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011, EBA Project Number E14101140;

"Physical Parameters" means to include the following measurements: alkalinity, turbidity, conductivity, pH and Hardness;

"**Pit Water**" means the water that seeps into and or is collected within the open pit;

"**Processed Kimberlite**" means material (solid/liquid), considered to have no current value, which is rejected from the process plant after the recoverable minerals have been extracted;

"**Processed Kimberlite Containment Area (PKCA)**" means the containment basin and the engineered structures that are designed to contain the Fine Processed Kimberlite as described in the document titled "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011, EBA Project Number E14101140;

"**Project**" means the Jericho Diamond Project as outlined in the FEIS submitted by Tahera Diamond Corp. (formerly Tahera Corp. Limited) to the Nunavut Impact Review Board NIRB

and supplemental information, and updated in the Submission to the NWB summary Document and Appendices and Addendum information, comprising an open pit and underground mine, surface processing facilities, surface waste containment, water collection and treatment facilities and other infrastructure; updated in the submition by Shear Diamonds (Nunavut) Corp. to the NWB in a Water Licence Renewal Application with supporting Management Plans including Appendices and Addendum information, February 28, 2011;

"**Reclamation**" means the process of returning a disturbed site to its natural state or one for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety;

"**Receiving Environment**" means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

"**Recovery Circuit Rejects Stockpile**" means the engineered facility designed to permanently store Recovery Rejects Processed Kimberlite (RRPK) as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine" by EBA Engineering Consultants, February 2011, EBA Project Number E14101118;

"**Regulations**" means the *Northwest Territories Water Regulations sor/93-303 8th June, 1993,* omitting Section 5, Water Use or Waste Deposit Without a Licence.

"Seepage" means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged from the toe, or as a result of runoff from overburden storage areas, waste rock storage facilities, coarse kimberlite reject areas and ore stockpile areas;

"**Sewage**" means all toilet wastes and greywater;

"**Site Water Management Facilities**" means the sumps, ponds, ditches and associated piping and pumps used for collection and handling of surface runoff, minewater and seepage as described in the document titled "Site Water Management" by SRK Consulting dated August 2004 and illustrated in Drawing Number 1CT004.06-W1 dated July 2004 and further updated with the document titled "Site Water Management Plan, Care and Maintenance, Jericho Diamond Mine, Nunavut; January 2011, EBA Engineering Consultants;

"**Southeast Dam**" means the embankment infrastructure as described in document titled "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011and previously in the document titled "Jericho Project East and Southeast Dam Design Report", by EBA Engineering Consultants, dated August 2005;

"**Surface Drainage**" means all surface waters resulting from the flow over, through or out of an Operations area and is collected by means of engineered structures considered under the Site Water Management Facilities as described in the document titled "Site Water Management" by SRK Consulting dated August 2004 and illustrated in Drawing Number 1CT004.06-W1 dated

July 2004 and further in the document titled "Site Water Management Plan, Care and Maintenance, Jericho Diamond Mine, Nunavut; January 2011, EBA Engineering Consultants;

"**Surface Water Dispersion Model**" means the model used to calculate parameters in Lake C3 and estimate dilution factors from the Stream C3 discharge;

"**Talik**" means a layer or body of *unfrozen* ground occurring in a permafrost area due to a local anomaly in thermal, hydrological, hydrogeological or hydrochemical condition;

"**Temporary Closure**" means when a mine ceases operations with the intent to resume mining activities in the future. Temporary closures can last for a period of weeks, or for several years, based on economical, environmental, political, or social factors;

"**Traditional Knowledge**" means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;

"Total Metals" means to include at a minimum: arsenic, aluminum, barium, beryllium, boron, cadmium, chromium, cobalt, copper, iron, lead, mercury, manganese, molybdenum, nickel, selenium, strontium, uranium, vanadium and zinc. Total metals shall be analyzed on an un-filtered sample;

"**Uncontrolled Surface Runoff**" means the runoff that is not controlled by site Water Management Facilities as described in the document titled "Site Water Management" by SRK Consulting dated August 2004 and illustrated in Drawing Number 1CT004.06-W1 dated July 2004;

"**Use**" means use as defined in section 4 of the *Act*;

"**Waste**" means waste as defined in section 4 of the *Act*;

"**Waste Dump No. 1**" means the engineered facility designed for the disposal of waste rock as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011, EBA Project Number E14101118;

"**Waste Dump No. 2**" means the engineered facility designed for the disposal of overburden with a waste rock buttress as described in the document titled "Waste Rock Management Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, February 2011, EBA Project Number E14101118;

"**Waste Rock**" means all unprocessed rock materials that are or were produced as a result of mining operations and having no current economical value;

"**Wastewater**" means the water generated by site activities or originates on-site that requires treatment or any other water management activity;

"**Wastewater Treatment Plant (WWTP)**" means the engineered system designed for the containment and treatment of sewage during the construction and operation phase of the project as described in the report "Wastewater Treatment Management Plan, Jericho Diamond Mine, Nunavut" by EBA Engineering Consultants, dated February 2011, EBA Project Number E14101118;

"**Water**" means water as defined in section 4 of the *Act*;

"**Water Licence Application**" for the purposes of this Licence includes the totality of the NWB and NIRB Public Registries as establishes as a result of the filing of the application dated February 28, 2011;

"**West Dam**" means the embankment water retaining infrastructure utilizing a central frozen core backed by a geosynthetic clay liner as described in document titled "Processed Kimberlite Management Plan, Jericho Project, Nunavut" by EBA Engineering Consultants, August 2011, EBA Project Number E14101140.

1. The Annual Report referred to in Part B Item 2 shall include, the following:

   a. the monthly and annual quantities in cubic metres of water obtained from all sources: Carat Lake, Lynne Lake and Contwoyto Lake;
   b. the monthly and annual quantities in cubic metres of recycled water identifying both the source and use;
   c. the monthly and annual quantities of solids in tonnes and liquid fractions in cubic metres of each waste stream discharged to the Processed Kimberlite Containment Area;
   d. the monthly and annual quantities in cubic metres of any discharges from the Processed Kimberlite Containment Area;
   e. the monthly and annual quantities in cubic metres of mine pit water, and dyke seepage pumped from all facilities to the Processed Kimberlite Containment Area;
   f. the monthly and annual quantities in cubic metres of treated effluent discharged from the Wastewater Treatment Facility;
   g. the monthly and annual quantities in cubic metres of Sewage solids removed from the Wastewater Treatment Facility;
   h. the monthly and annual quantities in cubic metres of treated effluent discharged from the Hydrocarbon Contact Water Remediation Unit;
   i. the annual quantities in cubic metres of overburden, waste rock, ore stockpiled, ore processed stored;
   j. a summary report which includes all data and information generated under the Monitoring Program in an electronic and printed format acceptable to the Board;
   k. a summary of construction activities conducted and an update to the Mine Plan;
   l. a summary of any modification and/or major maintenance work and/or demolition work carried out and any associated structures;
   m. a summary of all work carried out under the Management Plans;
   n. where applicable, revisions as Addendums, with an indication of where changes have been made to all Plans, Reports, and Manuals requiring revision;
   o. a progress report and revisions (if applicable) to any studies requested by the Board that relate to water use, waste management or reclamation and a brief description of any future studies planned by the Licensee including, an executive summary in terms understandable to the general public, translated into Inuktitut and Inuinnaqtun;
   p. a report on identifying whether recycle will be implemented at the PKCA for the remaining years of operation, and if not, providing a detailed rationale and water balance, for why recycle is not considered a valid management practice at this site for that time;
   q. the results of the Aquatic Effects Monitoring Program in accordance with Part I including QA/QC measures;
   r. annual seepage survey results;
   s. any revisions to the approved Emergency Response Plan;

t. a list and description of all un-authorized discharges and spills, including volumes, Spill report Line identification number and summaries of follow-up actions taken;
u. an outline of any spill training exercises carried out by the Licensee;
v. any revisions to the approved Interim Closure and Reclamation Plan;
w. a summary of any closure and reclamation work and studies undertaken and an outline of any work and studies anticipated for the next year, including any changes to implementation and scheduling;
x. Pit water quality model updating after 2 years of Commercial Operation;
y. an updated estimate of the total current mine restoration liability based upon the results of mine reclamation research, and any modification to the mine plan;
z. a summary report describing public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events/information sessions;
aa. a summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector;
bb. a report on the status of the water compensation agreement with the Kitikmeot Inuit Association or other water users.
cc. an assessment of overall compliance with respect to the Licence, including:
    i. licence conditions,
    ii. reporting,
    iii. monitoring/analysis (review of the AEMP and water quality);
    iv. current status of studies to be completed and implementation;
    v. review and confirmation or otherwise of the predictive modeling
    vi. review of the mine plan; and
    vii. comprehensive assessment of items i-vi to be provided with a renewal application.
dd. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported;

Schedule C – Conditions Applying to Security

No schedule required

Schedule D – Conditions Applying to Construction

1. The Mine Plan referred to in Part D Item 1 of the licence, shall include the following:

    a. Schedule of commissioning of all facilities and infrastructure;
    b. Proposed schedule for mine development (open pit, and underground);
    c. Plan for dealing with pit water;
    d. Monitoring to be done during construction/development;
    e. Adaptive Management strategy for construction phase; and
    f. Stability assessment planning.

2. The detailed design plans and drawings for water retention structures referred to in Part D Item 2 shall include any facilities and infrastructure not captured under conditions applying to construction.

3. The rock used for construction referred to in Part D, Item 3 of the Licence, shall meet the following geochemical criteria:

    a. Non acid generating;
    b. Provide a complete characterization of the rock properties (including thermal) of both in-situ and placed materials within the appropriate detailed design report for which material is to be use and confirm the material will to meet performance objectives or alternative shall be outlined; and
    c. Should any material be found unacceptable as a construction material the Licensee shall confirm in the Plan referred to in Part F, Item 5, procedures to be followed upon identification of any unacceptable materials, that includes reporting, removal, replacement, specifications for in-situ remediation and/or replacement of material.

4. The Borrow Management Plan referred to in Part D, Item 4 of the Licence, shall be revised to include an outline the environmental management measures for at least the following:

    a. Results of 2011 borrow sites survey;
    b. Implementation plan for use of the resource;
    c. Drainage and erosion control;
    d. Contingency options for dealing with massive ice;
    e. Air quality management;
    f. Wildlife management;
    g. Treatment and or disposal of meltwater;
    h. Overview of reclamation measures including operational and post closure monitoring.

5. The detailed design plan for the Landfill referred to in Part D, Item 5 of the Licence, shall include the following:

a. Consideration for the "Guidelines for the Planning, Design, Operation and Management, of Modified Solid Waste Sites in NWT" (Ferguson, Simek, Clark, April 2003).
b. Detailed Implementation schedule;
c. Design criteria and Material specifications;
d. Estimates of cover thickness to ensure encapsulation in permafrost;
e. Consideration of global warming effects;
f. Overview Operation and Maintenance needs;
g. Runoff and seepage control measures; and
h. Monitoring requirements during construction.

6. The detailed design report for the Landfarm referred to in Part D, Item 6 of the Licence, shall include the following:

a. Detailed Implementation Schedule;
b. Site baseline information (local features, site drainage patterns, location);
c. Comprehensive design details, including the dimensions, materials of construction and installation/construction procedures of all landfarm facility components are required such as: retaining structures, liner properties, monitoring equipment);
d. Measure for runoff, leachate or seepage control;
e. Environmental monitoring equipment;
f. Overview of Operation and Maintenance needs; and
g. Operational monitoring to assess treatment efficiency;
h. Proposed soil quality remedial objective to be achieved; and
i. Closure and reclamation summary.

7. The detailed design report for the Site Water Management Facilities or design plan for the Collection Ponds referred to in Part D, Item 7 and 8 respectively of the Licence, shall include the following:

a. Detailed Implementation schedule for construction of all facilities;
b. Design Criteria and parameters;
c. The effect of roads on surface drainage;
d. Monitoring requirements for each facility during construction; and
e. Overview of general operation and maintenance requirements.

8. The detailed design report for the Ore Stockpile, Coarse Processed Kimberlite, Recovery Rejects Stockpile, Waste Rock Dump No. 1 and Waste Rock Dump No. 2, referred to in Part D, Item 9 of the Licence, shall include the following:

a. Detailed Implementation for construction of each facility;
b. Plans in this part may be submitted individually depending upon the overall implementation strategy for construction;
c. Design Criteria and parameters for each stockpile and/or dump;
d. Design plan for the waste rock buttress or justification as to why it was not constructed;
e. Operational volumes of materials projected for each pile;

f. The Licensee shall ensure maintenance of a 200m buffer between the toe waste rock dump site 1 and Carat Lake;
g. Stability assessment based on projected volumes; and
h. Monitoring to be done during construction.

9. The detailed design report for the Fuel Storage and Containment Facility Set 3 referred to in Part D, Item 10 of the Licence, shall include the following:

a. Detailed Implementation schedule for construction of the facility;
b. Design Criteria and parameters;
c. Hydrostatic testing procedures for new tanks (water source and wash water disposal location);
d. Primary and secondary containment measures;
e. Monitoring to be done during construction; and
f. A Construction Summary Report in accordance with Part D, Item 17, shall include: an assessment of performance; Location, environmental setting and the potential for leaks or Seepage that could impact Water; An assessment of the need for, and if required, the design for installation, monitoring, and maintenance of vertical Ground Water monitoring wells; and Recommended sampling for ongoing monitoring of the integrity of the secondary containment.

10. The Explosives Management Plan referred to in Part D, Item 11 of the Licence, should include:

a. Consideration of the "Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters" (Wright & Hopky, 1998);
b. Blasting and Explosive handling procedures;
c. Effective blasting techniques to minimize the impact on water quality;
d. Mitigation measures into the blasting plan to ensure impacts to fish habitat are minimized; and
e. Measures to control runoff from storage areas.

11. The Construction Summary Report referred to in Part D, Item 17 shall include the following:

a. A summary of construction activities including photographic records before, during and after construction;
b. As-built drawings;
c. Documentation of field decisions that deviate from original plans and any data used to support these decisions;
d. Discussion of mitigation measures implemented during construction and effectiveness;
e. Any monitoring undertaken;
f. Blast vibration monitoring for quarrying activity carried out in close proximity to fish bearing waters; and
g. Monitoring for sediment release from construction areas.

12. The detailed Site Water Management Plan referred to in Part E, Item 5 of the Licence, shall include the following:

a. results and interpretation of surface water dispersion model in Carat Lake;
b. measures that will be undertaken to minimize the amount of raw water required from Carat Lake, that includes consideration of alternative water sources;
c. the projected amount of water to be obtained from Carat Lake in the upcoming year;
d. assess drawdown on Carat Lake based on water use;
e. Lake C3 water quality dilution model's confirmation;
f. a summary of plans for managing water to be stored in the PKCA and for management of all other waters in the project area;
g. a seepage survey results;
h. the storage pad, explosive magazines, emulsion plant;
i. an overall water balance for the project, including the specific water balance for the PKCA updated with current information respecting:
    i. on-site precipitation, evaporation and runoff;
    ii. volumes for recycled/reclaimed water and raw water utilized during the previous year;
    iii. ground water inflows to the pit; and
    iv. volumes of runoff redirected to the PKCA from the open pit and water management facilities (i.e. ponds, ditches, diversions).

1. The PKCA Management Plan referred in Part F, Item 5 of the Licence, shall include but not necessarily limited to the following:

   a. consider operational guidelines provided in "A Guide to the Management of Tailings Facilities (Mining Association of Canada, 1998)" and the "Dam Safety Guidelines (CDA, 2007)"
   b. detail how effluent discharge rates will be managed to ensure a minimum 10:1 dilution at the edge of the mixing zone in Lake C3. This plan shall not rely on estimating receiving environment outflow rates from changes in Carat Lake level unless monitoring data is provided that shows that the procedure will work as a means of calibrating effluent discharge rates.
   c. stage-volume curves and water, solids and ice balance calculations showing life expectancy of the PKCA Facility;
   d. results of flocculants due diligence tests to determine toxicity dosing limits; and
   e. any operational and/or structural modifications which may be implemented that will affect the management of the PKCA Facility and associated wastewater operations.

2. The detailed Waste Rock Management Plan referred to in Part F, Item 7 of the Licence, shall include but not necessarily limited to the following:

   a. the Plan shall be developed in accordance with the Aboriginal Affairs and Northern Development Canada (AANDC) "Guidelines for Acid Rock Drainage Protection in the North, September 1993" or subsequent editions.
   b. the Plan shall include the results of all ARD/ML testing;
   c. the Plan shall describe decision criteria and operating procedures of how all rock will be placed and managed during construction, mining and post closure and shall include a description of rock placement and segregation;
   d. evaluation of the suitability of site water and seepage management infrastructure within Waste Dumps;
   e. an annual schedule for ore stockpiling, processed kimberlite generation and waste rock production by rock type, tonnage, and destination over the term of the project including sources and volumes of each rock type;
   f. a description of operational procedures that will be used to segregate and manage the rock that is identified for construction;
   g. a description of the sampling design and analytical methods that will be used to support the operational classification of all rock types;
   h. clarification on the target layer thickness of the granitic pad and CPK to maintain the foundation in a frozen state;
   i. a schedule for installation of multi-thermistor ground temperature cables (GTC) in the Waste Dumps.

3. The detailed consolidated Waste Management Plan including the Wastewater Treatment Plant, Landfill, Landfarm and PHC contaminated soils temporary storage facility referred to in Part F, Items 8 of the Licence, shall include the following:

Wastewater Treatment Management

a. consideration for the "Guidelines for the Preparation of an Operations and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories", (Diep Duong and Ron Kent, 1996) (where applicable);
b. the procedures to determine if soils may be accepted including (soil characterization, treatability and sampling);
c. procedures to be used during active land farming including (cell development, soil thickness, method of aeration, oversize material management, surface water management);
d. procedures to be used during the hydrocarbon-contaminated soils temporary storage and disposal off-site at an approved disposal facility; and
e. surface and groundwater monitoring program including QA/QC measures.

Landfill Management

f. Consideration for the "Guidelines for the Planning, Design, Operation and Management, of Modified Solid Waste Sites in NWT" (Ferguson, Simek, Clark, April 2003);
g. Detailed implementation schedule;
h. Design criteria and material specifications;
i. Estimates of cover thickness to ensure encapsulation in permafrost;
j. Consideration of global warming effects;
k. Overview operation and maintenance needs;
l. Runoff and seepage control measures; and
m. Monitoring requirements during construction.

Landfarm Management

n. The remediation guidelines used for hydrocarbon contaminated soil, how the guidelines will be used and what parameters will be measured;
o. Landfarm location, foundation conditions and local topography;
p. Confirmation of estimated contaminated soil volume and characterization;
q. Procedures to be used during active land farming including cell development, soil thickness, method of aeration, oversize material management, surface water management;
r. Clarification on the heavy end hydrocarbons will be treated or shipped off site.
s. Clarification on groundwater monitoring methods;
t. Contingency plans, should contaminated soil and/or snow/ice exceed expected volumes;
u. Details describing the design components/specifications of the spillway;
v. Contingency planning and monitoring to ensure sump volumes are not exceeded during the snow melt period; and
w. Measures to prevent damage to the liner during mechanical operation of the Landfarm.

Schedule G – Conditions Applying to Modifications

No schedule required.

Schedule H – Conditions Applying to Contingency Planning

1. The detailed Contingency Plan referred to in Part H, Item 1 of the Licence, shall include the following:

    a. The Plan shall comply with the Dam Safety Guidelines, address the construction and development phases;
    b. Introduction, scope of plan, when the plan is active, description of project and site;
    c. Name, address and title of person in charge;
    d. Name, job title and 24 hour number of person responsible; on site;
    e. Chain of command and organizational chart;
    f. Location, size and capacity of facility; Map showing all potential spill locations and materials storage;
    g. Types and amounts of materials stored on site;
    h. Current Materials Safety Data Sheets for all hazardous materials/petroleum products on site
    i. Analysis of potential spills, fate and effects identified;
    j. Site map, showing sensitive areas and potential for contamination;
    k. Steps taken to report, contain, clean up and respond;
    l. Response Team identification giving lines of authority and responsibility;
    m. Reporting and communication procedures;
    n. Site contact list with names, titles, phone and pager numbers;
    o. Off-site contact list including all relative regional contacts; Designated Inuit Organization, AANDC Water Resources Inspector, EC, Fisheries Oceans, Government of Nunavut Department of Environment, special assistance contacts;
    p. How plan is activated;
    q. Description of training provided to employees/designated responders; including the initial training and active response training;
    r. Response Action Plans and countermeasures (i.e. fuel storage and transfer protocols, explosives transfers) in the event of a spill; this would include potential spills from the PKCA, process pipelines, material storage areas (fuels, chemicals, explosives)
    s. Clean-up and disposal practices; hazardous waste transportation and removal;
    t. Inventory and location of response equipment and supplies;
    u. Copy of NWT/NU Spill Report Form;
    v. Date plan was prepared.

2. The detailed Contingency Plan during Temporary Closure referred to in Part H, Item 10 of the Licence, shall include the following:
    a. Any changes to the Operations resulting from the move to Temporary Closure;
    b. Any changes in the personnel on site;
    c. Response Team identification and responsibility;
    d. Any changes to the availability of response equipment; and
    e. Any changes with respect to access at the site and access to the site from the nearest location for assistance.

Schedule I – Conditions Applying to General and Aquatic Effects Monitoring

Table 1 - Water Quality Parameters

Group	Parameters	Units
Routine - R	Alkalinity, acidity, chloride, carbonate, bicarbonate, total hardness, hydroxide, sulphate, total suspended solids (TSS), total dissolved solids (TDS), total organic carbon (TOC), total inorganic carbon (TIC) pH (field and lab) ORP (field) Conductivity (field and lab) Temperature (field) Turbidity (field)	mg/L pH units mV µS/cm °C NTU
Metals (Total – Unfiltered) – **MT** Metals (Dissolved – Filtered) **MD**	T-Aluminum, T-Arsenic, T-Cadmium, T-Chromium, T-Copper, T-Lead T-Molybdenum, T-Nickel, T-Uranium, T-Zinc Aluminum	mg/L
ICP-T, **ICP-D**; ICP Metals Scan (Total and Dissolved) 24 or 32 metal scan or equivalent that shall include at a minimum	Ca, Mg, Na, K, Al, As, Ba, B, Be, Cd, Cr, Co, Cu, Fe, Hg, Pb, Mn, Mo, Ni, Se, Sr, U, V, Zn	mg/L
Nutrients – **N**	Ammonia-N, Nitrate-N, Nitrite-N Total Phosphorus, Orthophosphate	mg N/L mg/L
Biological –**B**	Biochemical Oxygen Demand Fecal Coliform	mg/L CFU/100mL (colony forming units)
Potable Water - **PW**	Fecal Coliform ICP Metals (Total and dissolved) Total Suspended Solids –TSS	CFU/100mL mg/L mg/L
Dissolved Oxygen Profile - **DO**		
Organic Compounds - **OC**	Benzene, Ethylbenzene, Toluene, Xylenes, F1, F1 – BTEX, F2, total petroleum hydrocarbons (TPH), oil and grease	mg/L

Table 2 - Receiving Environment Water Quality Monitoring Requirements[1]

Station	Location	Phase	Test Group Water Chemistry (refer to Table 1)	Frequency	Flow Measurement	Flow Frequency	
		Pre-construction	DO				
		Construction					
JER-AEM-01	Cigar Lake (Reference Lake 1)	Operation	R, ICP-T, ICP-D, N	A1, A2			
JER-AEM-02	N/A (Reference Lake 2)	Pre-construction	R, ICP-T, ICP-D, N	A1, A2			
		Construction					
		Operation					
			DO				
		Construction					
JER-AEM-03	Control Lake	Operation	R, ICP-T, ICP-D, N	A1, A2			
		Construction					
JER-AEM-04	PKCA Discharge in Stream C3	Operation	R, ICP-T, ICP-D, N B Tox1	W M2 M2	M^3/day	C	

[1] Notes: A1=Annual Once in Winter
A2=Annual once in summer
M1=Montly; Mid-Apr, Jun, Jul, Aug, Sept, and Mid-Dec at a minimum 3 weeks apart
M2=Monthly; once during Jun, Jul, Aug, Sep at a minimum 3 weeks apart

W=Weekly D=Daily C=Continuous CS=Continuous Seasonal

Table 2 - Receiving Environment Water Quality Monitoring Requirements[1]

Station	Location	Phase	Test Group Water Chemistry (refer to Table 1)	Frequency	Flow Measurement	Flow Frequency	
		Pre-construction					
		Construction					
JER-AEM-05	Stream C3 upstream of Lake C3	Operation	R, ICP-T, ICP-D, N B	A2		C	
		Pre-construction	DO	A1		C	
JER-AEM-06	Lake C3 near Stream C3 outlet	Operation	R, ICP-T, ICP-D, N	A1, A2		C	
		Pre-construction	DO				
		Construction					
JER-AEM-07	Lake C3 South Basin	Operation	R, ICP-T, ICP-D, N	A1, A2		C	
		Pre-construction					
		Construction					
JER-AEM-08	Lake C3 Outlet	Operation	R, ICP-T, ICP-D, N	A1, A2	M[3]	C	
		Pre-construction					
		Construction					
JER-AEM-09	Lake C1	Operation	R, ICP-T, ICP-D, N	A2			
		Pre-construction					
		Construction					

Table 2 - Receiving Environment Water Quality Monitoring Requirements[1]

Station	Location	Phase	Test Group Water Chemistry (refer to Table 1)	Frequency	Flow Measurement	Flow Frequency	
JER-AEM-10	Stream C1 Upstream of Carat Lake	Operation	R, ICP-T, ICP-D, N	A2	Yes	C S	
		Construction					
		Operation					
JER-AEM-11	Stream C1 outlet in Carat Lake	Operation		A2	Yes	C S	
			PW	M2	M^3/day		
JER-AEM-12	Carat Lake-Freshwater Intake	Operation	R, ICP-T, ICP-D, N B	M1		C	
		Pre-construction					
		Construction					
JER-AEM-13	Lake C4	Operation	R, ICP-T, ICP-D, N	A2		C	
		Pre-construction					
		Construction					
JER-AEM-14	Stream C2 upstream of Carat Lake	Operation	R, ICP-T, ICP-D, N	A2		C	
		Pre-construction	DO	A1			
		Construction					

Table 2 - Receiving Environment Water Quality Monitoring Requirements[1]

Station	Location	Phase	Test Group Water Chemistry (refer to Table 1)	Frequency	Flow Measurement	Flow Frequency	
JER-AEM-15	Carat Lake Centre Basin	Operation	R, ICP-T, ICP-D, N	A1, A2		C	
		Pre-Construction	DO				
		Construction					
JER-AEM-16	Carat Lake Outlet	Operation	R, ICP-T, ICP-D, N	A1, A2			
		Pre-construction	DO				
		Construction					
JER-AEM-17	Jericho Lake North Basin	Operation	R, ICP-T, ICP-D, N	A1, A2			
		Pre-construction					
		Construction					
JER-AEM-18	Jericho River Downstream of Jericho Lake	Operation	R, ICP-T, ICP-D, N	A1, A2			
		Pre-construction					
		Construction					
JER-AEM-19	Lake O1 N/A	Operation	R, ICP-T, ICP-D, N	A2			
		Pre-construction					
		Construction					
JER-AEM-20	Lake O2 N/A	Operation	R, ICP-T, ICP-D, N	A2			

Table 2 - Receiving Environment Water Quality Monitoring Requirements[1]

Station	Location	Phase	Test Group Water Chemistry (refer to Table 1)	Frequency	Flow Measurement	Flow Frequency	
			DO				
		Pre-construction					
		Construction					
JER-AEM-21	Lake O4 N/A	Operation	R, ICP-T, ICP-D, N	A2			
		Pre-construction					
		Construction					
JER-AEM-22	Ash Lake	Operation	R, ICP-T, ICP-D, N	A2			
		Pre-construction					
		Construction					
JER-AEM-23	Key Lake	Operation	R, ICP-T, ICP-D, N DO	A2			
		Pre-construction					
		Construction					
JER-AEM-24	Lynne Lake	Operation	R, ICP-T, ICP-D, N	A2			
		Pre-construction					
		Construction					
JER-AEM-25	Contwoyto L near Stream D1 Mouth	Operation	R, ICP-T, ICP-D, N	A2			

Table 3 - Site Water Quality and Thermal Monitoring Stations[2]

Station	Location	Phase	Test Group Water Chemistry	Frequency	Flow Measurement	Frequency	
		Pre-construction					
		Construction					
JER-SWQ-01	Wastewater Treatment Effluent	Operation	R, ICP-T, ICP-D, N, B	W	M[3]	C	
		Pre-construction					
		Construction					
JER-SWQ-02	Pit Sump	Operation	R, ICP-T, ICP-D, N	W, M2	M[3]	C	
		Pre-construction					
		Construction					
JER-SWQ-03	Process Plant Supernatant	Operation	R, ICP-T, ICP-D, N	W, M1	M[3]	C	
		Pre-construction					
		Construction					
JER-SWQ-04	Processed Kimberlite Containment Area Pond	Operation	R, ICP-T, ICP-D, N	W, M			

[2] Notes: A3=Annual during seepage survey
M=Monthly
M1=Montly; Mid-Apr, Jun, Jul, Aug, Sept, and Mid-Dec at a minimum 3 weeks apart
M2=Monthly once during Jun, Jul, Aug, Sep at a minimum 3 weeks apart
M3=during periods of flow

W=Weekly D=Daily C=Continuous CS=Continuous Seasonal

Table 3 - Site Water Quality and Thermal Monitoring Stations[2]

Station	Location	Phase	Test Group Water Chemistry	Frequency	Flow Measurement	Frequency	
	Water						
JER-SWQ-05	Temporary/permanent Collection Ditches	When in use	R, ICP-T, ICP-D, N	M3			
JER-SWQ-06	Collection Pond A	When in use	R, ICP-T, ICP-D, N	M2			
JER-SWQ-07	Collection Pond B	When in use	R, ICP-T, ICP-D, N	M2			
JER-SWQ-08	Collection Pond C	When in use	R, ICP-T, ICP-D, N	M2			
JER-SPG-01	Waste Rock Dump 1 Seepage	Under Development	R, ICP-T, ICP-D, N	A3			
JER-SPG-02	Waste Rock Dump 2 Seepage	Under Development	R, ICP-T, ICP-D, N	A3			
JER-SPG-03	Coarse PK Stockpile 1	Not Developed					
JER-SPG-04	Coarse PK Stockpile 2	Not Developed					

Table 3 - Site Water Quality and Thermal Monitoring Stations[2]

Station	Location	Phase	Test Group Water Chemistry	Frequency	Flow Measurement	Frequency	
JER-SPG-05	Coarse PK Stockpile 3	Not Developed					
JER-SPG-06	Coarse PK Stockpile 4	Under Development	R, ICP-T, ICP-D, N	A3			
JER-SPG-07	Ore Stockpile	Under Development	R, ICP-T, ICP-D, N	A3			
JER-SPG-08	Low Grade Ore Stockpile	Not Developed					
	West Dam Thermistor 1	Operation	Temperature	M			
	West Dam Thermistor 2	Operation	Temperature	M			
	West Dam Thermistor 3	Operation	Temperature	M			
	East Dam Thermistor 1	Operation	Temperature	M			

Table 3 - Site Water Quality and Thermal Monitoring Stations[2]

Station	Location	Phase	Test Group Water Chemistry	Frequency	Flow Measurement	Frequency	
	East Dam Thermistor 2	Operation	Temperature	M			
	Southeast Dam Thermistor 1	Operation	Temperature	M			
	Southeast Dam Thermistor 2	Operation	Temperature	M			
	Southeast Dam Thermistor 3	Operation	Temperature	M			
	Waste Dump 1 Thermistor 1	Under Development	Temperature	M			
	Waste Dump 1 Thermistor 2	Under Development	Temperature	M			
	Waste Dump 2 Thermistor 1	Under Development	Temperature	M			
	Waste Dump 2 Thermistor 2	Under Development	Temperature	M			
	Coarse PK Stockpile Thermistor 1	Under Development	Temperature	M			

Table 3 - Site Water Quality and Thermal Monitoring Stations[2]

Station	Location	Phase	Test Group Water Chemistry	Frequency	Flow Measurement	Frequency	
	Coarse PK Stockpile Thermistor 2	Under Development	Temperature	M			

Schedule I – Conditions Applying to General and Aquatic Effects Monitoring

1. The General Monitoring Plan, referred to in Part I, Item 1 of the Licence, shall include the following:

General

a. updated operation monitoring plan which reflects the requirements of this licence;
b. describe the assessment of Stream C3 and, if required, erosion protection measures should be in place prior to dewatering or discharge from the PKCA; and
c. the Licensee shall monitor the condition of channels occupied by flow released from PKCA; and record water levels and discharges near outlet of Stream C3 at Lake C3.

Specific

a. details on data management and implementation;
b. include field parameters such as conductivity, pH and visual estimation of turbidity where visible flow is observed;
c. include potential mitigation measures to collect and divert seepage back to PKCA, if seepage flows are visible; and
d. description of training programs for site staff for the monitoring program.

2. Aquatic Effects Monitoring Plan referred to in Part I, Item 2 of the Licence, shall include the following;

General

a. clearly identifiable objectives;
b. a description of the area to be monitored including maps showing all sampling and
c. a description of the sampling program that will be conducted throughout the term of the license to achieve the objectives of the AEMP including the variables, sample media, monitoring protocols and Quality Assurance/Quality Control (QA/QC) protocols;

Specific

a. specifically, the AEMP shall include, but not necessarily be limited to, the following;
    i. water quality;
    ii. sediment quality;
    iii. fish and fish habitat;
    iv. chronic testing done once one week following the start of discharge and once prior to completion of discharge, on samples taken at the edge of the Lake C3 mixing zone, using Ceriodaphnia dubia (EPS/1/RM/21) and Pseduokirchneriella subcapita (EPS/1/RM/25);
    v. chronic testing done once one week prior to the start of discharge and once prior to completion of discharge, with 100% strength effluent , using Ceriodaphnia dubia (EPS/1/RM/21) and Pseduokirchneriella

subcapita (EPS/1/RM/25);
vi. surface and shallow groundwater regimes;
vii. fish migration routes;
viii. water levels in Carat Lake with relation to water usage, lake recharge;
ix. structure, abundance and biomass of phytoplankton, zooplankton, benthic macro invertebrates and fish communities;
x. contaminant levels in fish and procedures that will minimize impacts to fish populations;
xi. establishment of control sites;
xii. details of actions to be taken if exceedences are observed;
xiii. transparent accounting of how outliers were handled when reporting on aquatic effects monitoring results;
xiv. confirmation of sediment data and other water quality criteria comparability;
xv. procedures to assess the accuracy of the Licensee's impact predictions and effectiveness of mitigation measures;
xvi. statistical design criteria, including a description of sampling frequencies for each parameter that ensures both accurate characterization of short-term variability and the collection of sufficient data to establish long-term trends;
xvii. a description of procedures to analyze and interpret data collected;
xviii. a description of evaluation criteria for the AEMP and approaches to revise and refine the Program;
xix. description of how the results of the AEMP will be incorporated in the overall Adaptive Management strategies employed by the Licensee. This description shall include details related to any new monitoring requirements for the evaluation of the effects to the Receiving Environment, the management of the risk to the Receiving Environment and any mitigation/treatment methods that will be implemented;
xx. description of the QA/QC protocols. QA/QC protocols must ensure that any future changes in monitoring protocols will be calibrated to initial monitoring protocols and data sets so that continuity, consistency, validity, and applicability of monitoring results will be maintained;
xxi. a description of the measures that will be taken to identify and address any information deficiencies; and
xxii. how the AEMP will minimize the impacts of the Project.

3. The detailed QA/QC plan referred to in Part I, Item 14 of the Licence shall include the following:

a. consideration of the AANDC "QA/QC Guidelines for Type "A" Licenses";
b. approval of the plan by an analyst;
c. information on the analyst;
d. introduction on Quality Assurance/Quality Control and its principles and how the Plan elements will be implemented on site;
e. field sampling, locations, frequency, sample types, sample containers;
f. logging of samples, sample handling, preservation, transportation requirements,

information requirements, chain of custody;
g. field measurements, calibration of field equipment;
h. sampling and analysis, use of field blanks, replicate samples, spiked samples and split samples;
i. laboratory analysis and information methods used for analysis; and
j. laboratory QC and reporting of data.

4. The detailed Annual Seepage Survey during the summer, referred to in Part I, Item 19a shall include the following:

a. to include routine monitoring of all surface storage facilities identified in Table 3;
b. to include the explosives storage and emulsion plant areas;
c. to include seepage chemistry results from any sumps in the plant area;
d. to include seepage survey from the toe of the recovery plant rejects stockpile along with the annual seepage survey results for all other waste and low grade ore stockpile; and
e. to include any seepage at the base of the West Dam and all other dams around the perimeter of the PKCA.

Schedule J – Conditions Applying to Closure and Reclamation

1. The Interim Closure and Reclamation Plan referred to in Part J, Item 1 of the Licence, shall include the following:

Standard requirements of the Interim CRP

a. Temporary Closure (Care and Maintenance provisions) if applicable;
b. The combined use of a Inukshuk built by Elders, berms, and signs to warn people and animals about the unfilled open pit. The edge of the Pit Lake shall be contoured and controlled-blasted on a shallow 5:1 angle into the lake for a 10 meter distance so as not pose a hazard to people or wildlife;
c. Maintenance of the diversion channel, as a permanent structure beyond closure should water quality dictate. This issue shall be further addressed during operation and resolve the issue prior to closure, when water quality concerns and the options available to re-instate the flows in the channel are better understood;
d. the implementation of revegetation through the abandonment and restoration planning;
e. an evaluation of groups and individual native plant species that are able to establish and survive on a variety of substrates;
f. to conduct re-vegetation research on the kimberlite to determine if the post-closure conditions can be improved;
g. details of the proposed methodology for recovering the stockpiled overburden materials for reclamation purposes;
h. address how meltwater from the stockpile is managed to prevent release of suspended sediment;
i. revisions based on all monitoring data collected to that time;
j. an updated prediction of pit fill rate and effluent discharge quality after closure;
k. contingency measures to facilitate filling of the pit, if it is not found to be filling to schedule;
l. scenarios and options for infilling of the pit;
m. a plan to remove and dispose all chemicals and regulated materials in a manner that meets all current regulations.
n. an evaluation of alternative closure and reclamation measures for each project component, including the rationale for selection of the preferred measures, to include, but not be limited to all site facilities/infrastructure as defined in this licence.
o. detailed description, including maps and other visual representations, of the pre-disturbance conditions for each site, accompanied by a detailed description of the proposed final landscape, with emphasis on the restoration of surface drainage over the restored units;
p. an assessment of materials suitability, including geochemical and physical characterization, and schedule of availability for restoration needs, with attention on to cover materials, including maps where appropriate, showing sources and stockpile locations of all reclamation construction materials;

q. an assessment of the long-term physical stability of project components;
r. an assessment and description of any required post-closure treatment for drainage water that is not acceptable for discharge from any of the reclaimed mine components including a description for handling and disposing of post-closure treatment facility sludges;
s. monitoring programs to assess reclamation performance and environmental conditions including, but not limited to, monitoring locations for surface water and groundwater, parameters, schedules and overall timeframes;
t. contingency measures for all reclamation components including action thresholds that are linked to the monitoring programs;
u. a description of the proposed means for providing long-term maintenance of each reclaimed project component, including the water collection and distribution systems, retaining structures and spillways;
v. an evaluation of the potential to re-vegetate disturbed sites that includes the identification of criteria to be used to determine technical feasibility and alternative restoration options;
w. a description of how Waste Rock Dumps and the PKCA could use a geomorphic approach to simulate surrounding landscape conditions, rather than the highly engineered closure designs;
x. an identification of the research needs for reclamation;
y. a description of how progressive reclamation will be employed and monitored throughout the life of the mine, plus reclamation scheduling and coordination of activities with the overall sequence of the project; details of restoration scheduling and procedures for coordinating restoration activities within the overall mining sequence and materials balance; and

<u>Preliminary Human Health and Ecological Risk Assessment</u>

a. in accordance with the Canadian Council of Ministers of the Environment (CCME) taking into account baseline conditions, comparison to current site along with future predictions, Canadian Environmental Quality Guidelines (ie Soil Quality Remediation Objectives (SQRO's) and/or other acceptable industry standards.

<u>Comprehensive Update to Interim CRP</u>

a. Implications of any updated water balance and water quality modeling of long term pit water quality prediction results and any adaptive management measures that may be required;
b. Scenarios and options for infilling;
c. Comprehensive update of all information presented in the Interim Closure and Reclamation Plan based on data collected and proposed closure concepts (above); and
d. Weatherability of the Coarse PK and observations on how it will behave over time.

<u>Final CRP</u>

a. A description of closure and reclamation measures for underground mine component , if it remains in mine plan;
b. An update of all information presented in the Interim Closure and Reclamation Plan

based on data collected and proposed closure concepts;

c. Inclusion of a long-term pit water quality model for the projected infill rate;
d. Contingency measures to assess filling of the pit should it not proceed as projected with scenarios and options for infilling;
e. An assessment of the potential formation of a talik at the bottom of the open pit upon cessation of mining and the potential for hydraulic connection to Carat Lake;
f. Weatherability of the Coarse PK and observations on how it will behave over time;
g. Rock piles and PKCA closure design plans and sections including the types of material placed and volumes;
h. An re-evaluation of the Human Health and Ecological Risk Assessment associated with final closure options;
i. Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut *Environmental Guideline for Site Remediation*;
j. All results and the analysis of mitigation measures and close-out options;
k. Multi-stage (Phase I, II) Environmental Site Assessments in accordance with Canadian Standards Association (CSA) criteria;
l. A closure and reclamation cost estimate prepared for implementation for final closure, reclamation and abandonment; and
m. On-site reclamation monitoring (closure, reclamation and eventual long term monitoring).

2. The detailed design report for the Phase 1 Fuel Storage Facility decommissioning referred to in Part J, Item 2 of the Licence, shall include the following:

   a. Detailed Implementation schedule for decommissioning of the facility;
   b. Design Criteria and parameters; and
   c. Monitoring to be done during construction