General Water Licence Application
(Application for a new Water Licence)

Document Date: April 2013

Application Submission Date: **October/31/2017**
Month/Day/Year

P.O. BOX 119
GJOA HAVEN, NUNAVUT
XOB 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

kNK5 wmoEp5 vtmpq
NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 4	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)	Update NWB logo	April 2013
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		

P.O. BOX 119
GJOA HAVEN, NU X0B 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

kNK5 wmoEp5 vtmp5
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

GENERAL WATER LICENCE APPLICATION
(APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

Transition Metals Corp.
410 Falconbridge Road, Unit 5
Sudbury, ON P3A 4S4

Phone: **(705) 669-1777 ext 203**
Fax: **(705) 669-1100**
e-mail: **info@transitionmetalscorp.com**

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Tara Gunson
APEX Geoscience Ltd.
110 8429-24 Street NW
Edmonton, AB T6P 1L3

Phone: **(780) 467-3532**
Fax: **(780) 467-4025**
e-mail: **tgunson@apexgeoscience.com**
See attached "Transition letter of authorization"

3. NAME OF PROJECT (including the name of the project location)
Arcadia Bay Project

4. LOCATION OF UNDERTAKING

Project Extents
All work will be strictly within IOL CO-31

NW: Latitude: (**67° 44' 39" N**) Longitude: (**111° 27' 10" W**)
NE: Latitude: (**67° 44' 39" N**) Longitude: (**111° 20' 10" W**)
SE: Latitude: (**67° 40' 30" N**) Longitude: (**111° 20' 10" W**)
SW: Latitude: (**67° 40' 30" N**) Longitude: (**111° 27' 10" W**)

Camp Location(s)

Latitude: (**67° 43' 12.9" N**) Longitude: (**111° 23' 6.9" W**)

5. MAP - Attach a topographical map, indicating the main components of the undertaking.
See "Property Location" Figure

NTS Map Sheet No.: **76M/11** Map Name: **Anialik River** Map Scale: **1:50,000**

6. NATURE OF INTEREST IN THE LAND - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

X Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: **June 8, 2015** Date of expiry: **April 30, 2017**
Extension request has been submitted to the KIA with respect to Land Use Licence KTL113B001

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other: _____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:
Transition Metals Corp.

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
X West Kitikmeot

Is a land use plan conformity determination required?

☐ Yes **X** No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.
See attached NPC letter "148574 - 2017-05-19 - NPC Letter re Arcadia Bay Property" stating that this project is outside the area of an applicable regional land use plan

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

X Yes ☐ No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

See attached screening determination "170919-17EN059-Screening Decision Report-OT5E"

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

The Property, composed of Inuit-Owned Land (IOL) Parcel CO-31, is located on the shore of Arcadia Bay, on the Coronation Gulf, approximately 160 kilometres (km) east of Kugluktuk, 200 km west of Hope Bay, and 305 km southwest of Cambridge Bay.

Float or ski-equipped fixed wing aircraft access to the Property is via Salt Lake, located on the northern perimeter of the Property. Alternatively, an airstrip associated with the Ulu deposit is located approximately 95 km to the south or there is also an airstrip at the Tree River Lodge, located approximately 20 km to the west, which can also be utilized. A helicopter will remain onsite to move personnel and equipment around the project area. A barge landing site, located at the north end of the Property may also be utilized. Barge service is available on the Coronation Gulf for a short season in mid to late summer.

The proposed exploration activities on the project will include a 12 hole diamond drill program, totaling approximately 2,500 metres. A small (12-person) seasonal camp will be required to support the exploration activities at the project. The camp will be located approximately 2 km south of the barge landing, at a historic site used by Orofino Resources Ltd. in the late 1980's. The approximate location of the camp is 67°43'12.9" N and 111°23'6.9" W or 483701E/7511726N UTM NAD 83 Zone 12. The camp structures are expected to include 1 office tent (12X16'), 3 sleeping tents (12X16' each), 1 first aid tent (12X16'), 1 dry (16X20'), 1 generator/storage shack or Weatherhaven tent (14X16'), and 1 core logging/sample storage shack (16X20'). The majority of the structures will be insulated Weatherhaven tents, or similar, with plywood floors.

A fuel cache will be established on stable ground near the camp, primarily to store diesel (to a maximum of 100-205 litre (L) drums) and jet fuel (to a maximum of 50-205 L drums). Small quantities of gasoline (to a maximum of 10-205 L drums) and propane (to a maximum of 50-100 pound (lb) cylinders) will also be stored. Small temporary fuel caches (totaling less than 4,000 L) may also be required to support the exploration activities, such as staking, prospecting, geological sampling and geophysics at the Property.

10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

Previous exploration has defined the area to be prospective for gold occurrences. More detailed exploration work, including diamond drilling, is justified. A small seasonal camp will be required in order to carry out the proposed exploration activities on the Property.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial
☐ Agricultural
X Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges)
☐ Recreational
☐ Power
☐ Miscellaneous (describe below):

_____

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing
☐ Tannery
☐ Tourist / Remote Camp
☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
☐ Onshore Oil and Gas Exploration Drilling
X Mineral Exploration / Remote Camp
☐ Advanced Exploration
☐ Mine Development
☐ Municipal
☐ General Water Works
☐ Power

12. WATER USE - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

X To obtain water for camp/ municipal purposes
X To obtain water for industrial purposes
☐ To cross a watercourse
☐ To alter the flow of, or store water
☐ Other: _____
☐ To divert a watercourse
☐ To modify the bed or bank of a watercourse
☐ Flood control

13. QUANTITY AND QUALITY OF WATER INVOLVED - For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Name of water source(s) (show location(s) on map):

All camp and exploration activities, including drilling, will be within IOL parcel CO-31. The water source for the camp will be a river adjacent the camp located at approximately 67°43'13"N and 111°23'6" W. The exact location of water sources for drilling is unknown at this stage as targets are still being defined. "Figure 3 Arcadia Bay Property Potential Field Areas," attached illustrates prospective areas for exploration including drilling. As soon as drill targets are confirmed NWB, NIRB, and KIA will be supplied with the coordinates and maps.

Describe the quality of the water source(s) and the available capacity:

The water on the Property is considered pristine. All water sources used for camp or drilling will contain sufficient volume so that there will be no drawdown associated with extracting water.

Provide the overall estimated quantity of water to be used:
42 m^3/day

Provide the estimated quantity(s) of water to be used from each source:
2m^3/day from river adjacent to camp for camp use
40m^3/day from numerous locations for drilling

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.)
2m3/day for camp use
40m3/day for drilling

Describe the method of extraction(s):
The water intakes for the camp will likely use an electrically powered submersible pump with a fine screen (<1/4" openings) on the intake. The drill pumps use a 1" inside diameter suction hose on the diesel pump with a fine screen on the foot valve. For drilling, a fibreglass window screen with a nominal opening size of less than 1/16" is also generally wrapped around the foot valve to prevent the intake of silt and sand into the pump, which can cause considerable damage to the pump chambers. In addition, it is common practice for the drilling contractor to place the foot valve of the intake hose in a perforated 20L pail, which further protects against harmful materials and fish being entrained into water intake hoses.

Estimated quantity(s) of water returned to source(s):
0 m^3/day

Describe the quality of water(s) returned to source(s):
Water used for camp and drilling will not be returned directly to the source, but placed in a sump to allow for slow infiltration into the soil and will be located at least 31 m away from a water body. A filter and grease trap will be installed on the kitchen drain to ensure solid food wastes do not enter the sump.

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

- **X** Sewage
- **X** Solid Waste
- **X** Hazardous
- **X** Bulky Items/Scrap Metal
- ☐ Animal Waste
- ☐ Other (describe): _____
- **X** Waste oil
- **X** Greywater
- ☐ Sludges
- ☐ Contaminated soil and/or water

15. QUANTITY AND QUALITY OF WASTE INVOLVED – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Human refuse	~ 12 people	Latrine (lime) or Pacto toilets and incineration	Latrine (lime) or Pacto toilets and incineration (with incinerator designed for sewage)
Camp grey water	Kitchen and shower water	~ 2 (m^3/day)	Sump	Sumps located adjacent to camp; allowed to percolate into overburden; minimum distance of 31 m from normal high water mark of any water source
Combustible solid waste	Food, paper, cardboard, untreated wood	~ 12 people	Incineration	Incineration
Incinerator	Ash from the incinerator	negligible	Stored in sealed containers	Removed and taken to approved disposal site
Non-combustible solid waste, bulky items, scrap metal	Scrap metal (ie. empty drums, nails/screws), glass (ie. bottles, jars), rubber products (ie. tires, floor mats), plastics (ie. bottles, packaging, bags), non-hydrocarbon contaminated equipment (ie. motors, fans, heaters, pumps, screens)	Variable	Stored in sealed containers or other appropriate and safe containment	Removed and taken to approved recycling or disposal site
Hazardous waste or oil	Used oil	Negligible/ minimal	Stored in sealed containers within Arctic Insta-Berms or similar	Removed and taken to approved disposal site
Contaminated soil/water	Soil/water plus hydrocarbons or other chemicals	Variable/ negligible	Stored in sealed containers within Arctic Insta-Berms or similar	Removed and taken to approved disposal site
Drilling Greywater	Drill cuttings & water	~ 40 m3/day	Sump	Sumps located adjacent to camp; allowed to percolate into overburden; minimum distance of 31 m from normal high water mark of any water source

16. OTHER AUTHORIZATIONS – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.

All potential environmental effects associated with the proposed Arcadia Bay Project are considered minor, localized effects that can be mitigated. No significant residual impacts to the environment are expected to occur as a result of the implementation of this program. While individually no significant effects are anticipated, consideration should be made to the combination of all existing or known planned activities within the vicinity of the project area. Some cumulative effects can be positive, such as the case with the establishment of the diamond mines in the NWT, more residents are finishing high school and earning higher salaries. Other positive cumulative effects can be increased employment rate, infrastructure and potential for investment in communities by government. Cumulative effects may also be negative and therefore attention should be given to the potential for these to occur in advance of project growth. Cumulative effects on the land might include changes to the number of wildlife, increases in non-native plants, or the melting of permafrost. Other potential or current projects in the area include MMG's proposed port in nearby Grays Bay and their High Lake Deposit, approximately 40 km to the southeast.

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

The Arcadia Bay Property is located on IOL Parcel CO-31, approximately 305 km south of Cambridge Bay and 160 km east of Kugluktuk. All exploration activity planning will take into account any possible impacts to the cultural value, including subsistence harvesting, of the area and quality of water.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

The Kitikmeot Inuit Association notified Transition Metals Corporation that there would be no requirement for a community consult as the project requires a consult of the Kitikmeot Inuit Association with the Community Beneficiary Committee's, who act as their land advisors. It was noted that the meeting with them is part of the application process.

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

Estimation of the total financial security to cover the highest liability based on the cost of having the necessary reclamation work done by a third party contractor are approximately 48,600.00

Activity	Quantity	Days	Cost	Total
Crew	3	4	$500.00	$6,000.00
Food	3	4	$50.00	$600.00
Helicopter	1	4	$3,000.00	$12,000.00
Flights	1.5	4	$5,000.00	$30,000.00
				$48,600.00

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

See attached statement of financial responsibility "Financial Statements for 6 months ending 28Feb2017"

If the applicant is a business entity, provide a list of the officers of the company.

Scott McLean - President and CEO
Alan Hutchison - Secretary
Greg Collins - Chief Operating Officer
Chris Chadder - Chief Financial Officer

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

See attached "XTM Nunavut Registration"

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

No studies have been completed for this project to date.

24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

*** The initial proposed started dates (as reflected in other application documents related to this project submitted to other agencies, including NPC, NIRB and the KIA) of the summer of 2017 will have to be amended to reflect the delay in receiving other authorizations. The project is now anticipated to likely commence in the spring of 2018.**

Construction
Proposed Start Date: **March/2018** (month/year) Proposed Completion Date: **March/2018** (month/year)

Operation
Proposed Start Date: **March/2018** (month/year) Proposed Completion Date: **May/2018** (month/year)

Closure
Proposed Start Date: **May/2018** (month/year) Proposed Completion Date: **May/2018** (month/year)

Post - Closure
Proposed Start Date: _____ (month/year) Proposed Completion Date: _____ (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction
☐ Winter **X** Spring **X** Summer **X** Fall ☐ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall **X** All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall **X** All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall **X** All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): **5 years**

Requested Date of Issuance: **March/2018** (month/year) Requested Expiry Date: **April/2023** (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. **ANNUAL REPORTING –** If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

27. **CHECKLIST –** The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

X Yes ☐ No If no, date expected _____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

X Yes ☐ No If no, date expected _____

Completed General Water Licence Application form.

X Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG), where applicable (see Block 11)

X Yes ☐ No If no, date expected _____

English Summary of Application.

X Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Application.

X Yes ☐ No If no, date expected _____

Application Fee of $30.00 CDN (Payee Receiver General for Canada).

X Yes ☐ No If no, date expected _____

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

X Yes ☐ No If no, date expected _____

28. **SIGNATURE**

Tara Gunson	Geologist		October 31, 2017
Name (Print)	**Title (Print)**	**Signature**	**Date**