

Application for Water Licence Amendment

Application Submission Date: June 21 2013

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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT



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APPLICATION FOR WATER LICENCE AMENDMENT

The applicant is referred to the NWB's Guide 7: <u>Licensee Requirements Following the Issuance</u> of a Water Licence for more information about this application form.

Where possible, provide background information regarding the original licence application or attach previously submitted information.

EXISTING	G LICENCE NO: 2BE-HAK0915
1. L	ICENSEE CONTACT INFORMATION
Is the lic	ensee the same as that referred to on the existing licence?
	X Yes □ No
	icence assignment must be completed and approved by the NWB. An amendment will only be n the name of the current licensee in the absence of assignment of the licence.
If the lice	ensee is the same, but the <u>name</u> of the licensee has changed, attach a certificate of name change.
Name:	Xstrata Canada Corporation
Address	: 8801 Transcanadienne, Suite 400 St-Laurent, QC H4S 1Z6
Fax:	514-745-9357 514-745-9379 rprairie@xstratazinc.ca
2. L	ICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.
Name:	
Address:	
Phone: Fax: e-mail:	
(Attach a	authorization letter.)

3.	NAME OF PROJECT			
Has the	Has the name of the project changed?			
	☐ Yes X No			
If Yes,	indicate the name of the project including the name of the location:			
4.	LOCATION OF UNDERTAKING			
Does	the proposed amendment change the location of the amended undertaking?			
	☐ Yes X No			
Provid	le the project extents and camp locations. Identify proposed changes.			
Project	t Extents			
NE: NW: SE: SW:	Latitude: (° ' "N) Longitude: (° ' "W) Latitude: (° ' "N) Longitude: (° ' "W) Latitude: (° ' "N) Longitude: (° ' "W) Latitude: (° ' "N) Longitude: (° ' "W)			
Camp l	Location(s)			
Latitud	de: Longitude:			
5.	MAP			
Does th	ne proposed amendment change the locations of any of the main components of the undertaking?			
	☐ Yes X No			
Attach	a topographical map, indicating the main components of the undertaking. Identify proposed changes.			
NTS M	ap Sheet No.: Map Name: Map Scale:			

nes t	NATURE OF INTEREST IN THE LAND he proposed amendment change the nature of the i	interest in the land?
063		X No
Yes	indicate changes.	
	any of the following that are applicable to the propo ce' header must be checked).	osed undertaking (at least one box under the
	Sub-surface	
	☐ Mineral Lease from Nunavut Tunngavik Incorpo Date (expected date) of issuance:	
	X Mineral Lease from Indian and Northern Affairs (Date (expected date) of issuance:	
	Surface	
	X Crown Land Use Authorization from Indian and I Date (expected date) of issuance:	
	X Inuit Owned Land (IOL) Authorization from Kitikr Date (expected date) of issuance:	
	☐ IOL Authorization from Kivalliq Inuit Association Date (expected date) of issuance:	
	☐ IOL Authorization from Qikiqtani Inuit Association Date (expected date) of issuance:	
	Commissioner's Land Use Authorization Date (expected date) of issuance:	Date of expiry:
	Other	
	Date (expected date) of issuance:	Date of expiry:

Table 1. Leases, Permits and Licences Related to the Undertaking Associated With 2BE-HAK0915

Administrator	Item	Item #	Type	Expiry
NWB	Water licence	2BE-HAK0915	Type B	12/31/2015
KIA	Land use licence	KTL304C010	Level 3	3/13/2014
AANDC	Land use permit	N2010C0015	Class A	10/31/2013
AANDC	Mining lease	2894		1/4/2021
AANDC	Mining lease	2895		1/4/2021
AANDC	Mining lease	2964		1/15/2022
AANDC	Mining lease	2789		2/10/2018
AANDC	Mining lease	3018		2/24/2023
AANDC	Mining lease	3176		6/30/2031
AANDC	Mining lease	3000		6/26/2022
AANDC	Mining lease	2893		12/7/2020
AANDC	Mining lease	2958		9/19/2021
AANDC	Surface lease	076F16004		3/31/2017

Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?				
	X Yes No			
If No, a licence assignment must be completed	and approved by the NWB.			
Name of entity(s) holding authorizations:	· · · · · · · · · · · · · · · · · · ·			
7. NUNAVUT PLANNING COMMISSION ((NPC) DETERMINATION			
Indicate the land use planning area in which the	e existing project is located.			
☐ North Baffin ☐ South Baffin ☐ Akunniq	☐ Keewatin ☐ Sanikiluaq X West Kitikmeot			
Does the proposed amendment change the land	d use planning area?			
	☐ Yes X No			
If yes, indicate the land use planning area in which the amended undertaking is located.				
☐ North Baffin ☐ South Baffin ☐ Akunniq	☐ Keewatin ☐ Sanikiluaq X West Kitikmeot			

Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?
☐ Yes X No
If Yes, indicate date issued and attach copy
See attached. (Appendix 1. NPC Conformity Review).
Does the proposed amendment change the original NPC conformity determination or the need to obtain one?
☐ Yes X No
If Yes, indicate date issued (or expected) and attach a copy
Concurrent with this submission to the NWB, a request for confirmation will be submitted to the NPC.
8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION
Was a screening determination required from NIRB prior to the issuance of the existing water licence?
X Yes □ No
If Yes, indicate date issued and attach copy.
See attached. (Appendix 2. NIRB Ref. 04EN012)
Does the proposed amendment change the original NIRB screening determination or the need to obtain one?
☐ Yes X No
If Yes, indicate date issued (or expected) and attach a copy
Application for NIRB Screening Determination submitted concurrent with this Application.
9. DESCRIPTION OF UNDERTAKING
Does the proposed amendment change the description of the undertaking?
☐ Yes X No
List and attach plans and drawings or project proposal. Identify proposed changes.

10.	OPTIONS
	he proposed amendment change any of the alternative methods and locations that were considered yout the project?
	☐ Yes X No
	e a brief explanation of the alternative methods or locations that were considered to carry out the . Identify proposed changes.
11.	CLASSIFICATION OF PRIMARY UNDERTAKING
Indica boxes	te the primary classification of undertaking for the existing licence by checking one of the following ::
	☐ Industrial ☐ Agricultural X Mining and Milling (includes exploration/drilling/exploration camps) ☐ Conservation
	☐ Municipal (includes camps/lodges) ☐ Recreational ☐ Miscellaneous (describe below):
Does	the proposed amendment change the classification of primary undertaking?
	☐ Yes X No
If Yes,	, indicate the primary undertaking of the amendment:
	nation in accordance with applicable Supplemental Information Guidelines (SIG) must be updated and itted with an Application for Amendment. 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 ☐ Mineral Exploration / Remote Camp ☐ Advanced Exploration ☐ Mine Development ☐ Municipal ☐ General Water Works ☐ Power
12.	WATER USE
Indica	te, using the boxes below, the types of water use(s) approved in the existing licence.
	X To obtain water for camp/ municipal purposes To obtain water for industrial purposes To cross a watercourse To alter the flow of, or store water X Other: Exploration drilling purposes

Does the proposed amendment change the type(s) of water use(s)?
☐ Yes X No
If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of water use(s) noting any water use(s) that are to be added, continued, or removed.
☐ To obtain water for camp/ municipal purposes ☐ To obtain water for industrial purposes ☐ To cross a watercourse ☐ To modify the bed or bank of a watercourse ☐ To alter the flow of, or store water ☐ Other: ☐ Other:
13. QUANTITY OF WATER INVOLVED
Does the proposed amendment change the source of water?
Indicate the water source(s). Identify proposed changes:
(show location(s) on map)
Does the proposed amendment change the quality of the water source and/or its available capacity?
☐ Yes X No
Describe the quality of the water source(s) and the available capacity(s). Identify any changes.:
Does the proposed amendment change the overall quantity of water to be used?
X Yes □No
Provide the overall estimated quantity to be used. Identify proposed changes.: Request additional 49 m³/day for exploration drilling and camp use. Overall estimated quantity to be used will be 299 m³/day.
Does the proposed amendment change the quantity of water to be used from each source?
X Yes □No
Provide the estimated quantity(s) of water to be used from each source. Identify proposed changes. :
Water for camp use will be withdrawn from Camp Lake. Water for exploration drilling will be withdrawn from lakes and ponds proximal to drilling targets. Overall estimated quantity to be used will be 299 m³/day. Typically, camp water use ranges from 10-30 m³/day. Drill water use ranges from approximately 0-30 m³/day per drill.
Does the proposed amendment change the quantity of water to be used for each purpose?
X Yes No

Provide the estimated quantities to be used	for each purpose (camp, drilling, etc.). Identify p	proposed changes.:
Up to an additional 39 m ³ /day for explorat Up to an additional 10 m ³ /day for camp us		
Does the proposed amendment change the	method(s) of extraction?	☐ Yes X No
Describe the method(s) of extraction. Identif	fy proposed changes. :	
Does the proposed amendment change the	quantity(s) of water returned to source(s)?	
	☐ Yes X No	
Estimated quantity(s) of water returned to so	ource(s). Identify proposed changes. :	m³/day
Does the proposed amendment change the	quality(s) of water returned to source(s)?	
	☐ Yes X No	
Describe the quality(s) of water(s) returned t	o source(s). Identify any changes. :	
		
14. WASTE		
Check the appropriate box(s) to indicate the	types of waste(s) approved in the existing licence	ce.
X Sewage	X Waste oil	
X Solid Waste	X Greywater	
X Hazardous	X Sludges ☐ Contaminated soil and/or water	
X Bulky Items/Scrap Metal ☐ Animal Waste	Contaminated soil and/or water	
X Other (describe): Drill cuttings		
Does the proposed amendment change the	type(s) of waste(s) to be generated or deposited	?
	☐ Yes X No	
	proposed change(s) to the type(s) of waste(s) to all or continued generation and/or disposal of wa	
Sewage	☐ Waste oil	
☐ Solid Waste	Greywater	
☐ Hazardous	☐ Sludges ☐ Contaminated soil and/or water	
☐ Bulky Items/Scrap Metal ☐ Animal Waste	Contaminated soil and/or water	
Other (describe):		

15.	QUANTITY AND QUALITY OF WASTE INVOLVED
Does	the proposed amendment change the quantity(s) of the types of wastes involved?
	X Yes □ No
Does	the proposed amendment change the composition(s) of the types of wastes involved?
	☐ Yes X No
Does	the proposed amendment change the method(s) of treatment for the types of waste involved?
	☐ Yes X No
Does	the proposed amendment change the method(s) of disposal for the types of waste involved?
	☐ Yes X No
	to any of the above, describe the proposed changes: Increase in quantity of waste produced due cansion of exploration drill program and increased number of personnel in camp.
	-

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	Sewage (Pacto)	up to 90 kg/day	Incineration or backhaul to waste receiver in Yellowknife	Incinerator ash backhauled to waste receiver in Yellowknife
Solid Waste	Domestic garbage	up to 181 kg/day domestic garbage, 0.03 m3/day of incinerator ash	Incineration	Ash backhauled to waste receiver in Yellowknife
Hazardous waste	Oily rags, spent oil filters, batteries	up to 0.02 m3/day oily hazardous waste, 1.66 lbs/day dead vehicle batteries	Backhaul to waste receiver in Yellowknife	
Bulky Items/Scrap Metal	Scrap metal	up to 0.02 m3/day scrap metal	Backhaul to waste receiver in Yellowknife	
Grey Water	Grey water	up to 7 m3/day		Pumped to designated sump
Waste Oil	Waste oil	up to 0.006 m3/day	Incineration or backhaul to waste receiver in Yellowknife	Ash backhauled to waste receiver in Yellowknife
Drill Cuttings	Rock, calcium chloride, bio- degradable drill additives	up to 0.65-1.91 m3/drill hole	Settling to remove water for re-use at drill	Deposition in a sump or natural depression
Rock Saw Sludge	Rock	up to 0.007 m3/day	Settling, collecting, drying, placing in plastic bags or barrels	Backhauled to waste receiver in Yellowknife

16. OTHER AUTHORIZATIONS
Does the proposed amendment change the need for other authorizations in addition to the sub-surface and surface land use authorizations provided in Block 6?
☐ Yes X No
If Yes, indicate any additional authorizations required, which authorizations are no longer required, and which authorizations continue to be required.
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
Does the proposed amendment change the predicted environmental impacts of the undertaking or the mitigation measures?
☐ Yes X No
Describe direct, indirect, and cumulative impacts related to water and waste. Identify any changes.
18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS
Was compensation paid and/or an agreement(s) for compensation been entered into with any existing or other users of water during consideration of the existing licence?
☐ Yes X No
If Yes, provide the names, addresses and the nature of water use by those persons or properties.
Does the proposed amendment adversely affect any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized wasted 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?
☐ Yes X No
If Yes, provide the names, addresses and the nature of water use of those persons or properties.
Advise the Board if compensation has been paid and/or an agreement(s) for compensation has been reached with any existing or other water users with respect to the proposed amendment.

19. INUIT	WATER RIGHT	s	
		n agreement(s) for compensatinsideration of the existing licen	on been entered into with any Designated Inuit ce?
If Yes, which	DIO(s)	☐ Yes X	No
Does the pro Inuit Owned		ent substantially affect the quali	ty, quantity or flow of waters flowing through
		☐ Yes X	No
			an agreement to pay compensation for any with respect to the proposed amendment.
held,	where and with	whom. Include a list of concer	Iltation meetings including when the meetings were ns expressed and measures to address concerns. Recember 14, 2009 and June 11, 2013
Date	Location	Attendees	Discussion Topics
October 22, 2012	Kugluktuk, NU	Open to the Public (Community Meeting)	 Introduction of Xstrata Zinc, and Hackett River Project Project description Environmental and socio-economic baseline study programs Environmental assessment process Timelines
October 23, 2012	Cambridge Bay, NU	Open to the Public (Community Meeting)	 Introduction of Xstrata Zinc and Hackett River Project Project description Environmental and socio-economic baseline study programs Environmental assessment process Timelines
October 24, 2012	Cambridge Bay, NU	Hamlet of Cambridge Bay	 Project update (distributed project information sheets) Potential community meetings in February 2013
October 24, 2012	Cambridge Bay, NU	KIA- Women Building Futures in the Kitikmeot	 Project presentation Anticipated jobs and preparation for employment
October 24, 2012	Kugaaruk, NU	Open to the Public (Community Meeting)	 Introduction of Xstrata Zinc and Hackett River Project Project description Environmental and socio-economic baseline study programs Environmental assessment process Timelines

Oatabarron	Televisis NU	0	Interded to the of West of Wes
October 25, 2012	Taloyoak, NU	Open to the Public (Community Meeting)	Introduction of Xstrata Zinc and Hackett River Project Project description
			Project description Fraging months and assis assessing.
			Environmental and socio-economic baseline study programs
			Environmental assessment process
			Timelines
October 26,	Gjoa Haven,	Open to the Public	Introduction of Xstrata Zinc and Hackett
2012	NU	(Community Meeting)	River Project
		(Community mooting)	Project description
			Environmental and socio-economic
			baseline study programs
			Environmental assessment process
			• Timelines
November	Yellowknife,	Multiple meetings at	Project update
13, 2012	NT	Geoscience Forum:	
		• KIA	
		• AANDC	
		• CanNor	
		NT Chamber of Mines	
		NU Chamber of Mines	
November 28, 2012	Iqaluit, NU	AANDC	Status of intervener funding
November	Iqaluit, NU	 Nunavut Planning 	Draft Nunavut Land Use Plan
28, 2012		Commission (attended	
Massamban	Localistic MIII	Open House)	
November 28, 2012	Iqaluit, NU	• CanNor	Lancaster Sound Marine Conservation
November	Igaluit, NU	• EC	Area
29, 2012	iqaiuit, NO	CanNorGN	Presentation on Hackett River
January 28,	Vancouver,	AANDC (RoundUp	Project update
2013	BC	2013)	Froject update
January 28,	Vancouver,	• NIRB (RoundUp 2013)	Project update
2013	BC	i mis (nounded 2010)	1 Tojout apaato
January 28,	Vancouver,	 NWB (RoundUp 2013) 	Project update
2013	BC	. ,	, ,
February 25,	Kugaaruk,	Open to the Public	Introduction of Xstrata Zinc
2013	NU	(Community Meeting)	Hackett River project update
			Project description
			Environmental and socio-economic
			baseline study programs
			Employment and training
			Environment and wildlife
			• Shipping
			Environmental assessment process
Folomore: 00	Televisial NO	Harris C. C.	• Timelines
February 26, 2013	Taloyoak, NU	Hamlet of Taloyoak	Project update

February 26, 2013	Taloyoak, NU Gjoa Haven,	Open to the Public (Community Meeting) Open to the Public	Introduction of Xstrata Zinc Hackett River project update Project description Environmental and socio-economic baseline study programs Employment and training Environment and wildlife Shipping Environmental assessment process Timelines
2013	NU	(Community Meeting)	 Hackett River project update Project description Environmental and socio-economic baseline study programs Employment and training Environment and wildlife Shipping Environmental assessment process Timelines
February 28,	Cambridge	Open to the Public	 Introduction of Xstrata Zinc Hackett River project update Project description Environmental and socio-economic baseline study programs Employment and training Environment and wildlife Shipping Environmental assessment process Timelines
2013	Bay, NU	(Community Meeting)	
March 1,	Kugluktuk,	Open to the Public	 Introduction of Xstrata Zinc Hackett River project update Project description Environmental and socio-economic baseline study programs Employment and training Environment and wildlife Shipping Environmental assessment process Timelines
2013	NU	(Community Meeting)	

Abbreviation	Definition
AANDC	Aboriginal Affairs and Northern Development Canada
BC	British Columbia
CanNor	Canadian Northern Economic Development Agency
EC	Environment Canada
GN	Government of Nunavut
KIA	Kitikmeot Inuit Association
NIRB	Nunavut Impact Review Board
NT	Northwest Territories
NU	Nunavut
NWB	Nunavut Water Board

23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

Reports and studies completed since the licence renewal in 2009 include those listed below.

Study Theme	Baseline Study	Study Years	
Physical Processes	Atmospherics (and Meteorology)	2007, 2008, 2009, 2010, 2012	
	Hydrology (surface water)	2007, 2008, 2012	
	Hydrogeology	2012	
	Geochemistry	2007, 2008, 2010, 2011, 2012	
	Terrain and Soils	2007, 2012	
Physical Processes	Wetlands	2012	
and Biological	Terrestrial Ecosystems and Vegetation	2007, 2012	
	Aquatics Resources	2004, 2005, 2006, 2007, 2008, 2012	
Biological	Fish and Fish Habitat	2007, 2008, 2010, 2012	
	Wildlife	2007, 2008, 2010, 2012	
	Marine Mammals		
Socio-economic	Socio-economics	2012	
	Land Use	2012	
	Country Foods	2012	
	Traditional Knowledge (produced by KIA)		
	Community Consultation	2012	
	Visual Landscape		
	Archaeology	2007, 2010, 2012	

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

Compliance assessment is attached (Appendix 3). Licensee response to 2013 AANDC inspection is attached (Appendix 4).

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.

4.	PROPOSED TIME SCH	EDULE		
Wher	n are proposed amendmer	nts scheduled to be u	ndertaken: Immediately	
	the proposed amendmen opment?	t change the time sch	nedule considered in the existing	g licence for any phase
		П	es X No	
	ate the start and completion re, and post closure). Ider		licable phase of development (c es.	onstruction, operation,
	Construction Proposed Start Date:	(month/year)	Proposed Completion Date:_	(month/year)
	Operation Proposed Start Date:			
	Closure		Proposed Completion Date:	
	Post - Closure		Proposed Completion Date:_	
or ea			hich season(s) activities occur.	(monarycar)
	Construction ☐ Winter ☐ Spring	Summer F	all	
	Operation ☐ Winter ☐ Spring	Summer F	all	
	Closure ☐ Winter ☐ Spring	Summer F	all	
	<u>Post - Closure</u> ☐ Winter ☐ Spring	Summer F	all	

25. PROPOSED TERM OF LICENCE				
On what date does the existing licence expire?	December 31, 2015			
Is the Licensee applying for a combined renewal and amendment of the existing licence?				
	☐ Yes X No			
If Yes, indicate the proposed term of the renewa	al (maximum of 25 years):			
Requested date of renewal issuance:(mont	Requested Expiry Date: (month/year)			
licence and <u>at least</u> one (1) year from the date of applicence application. These timeframes are approxima use planning or development impact requirements, time accordance with any project specific guidelines issued	<u>least</u> three (3) months from the date of application for a type B water lication for a type A water licence, to allow for processing of the water and do not account for the time to complete any pre-licensing land he for the applicant to prepare and submit a water licence application in d by the NWB, or the time for the applicant to respond to requests for hessing Water Licence Applications for more information)			
26. ANNUAL REPORTING				
Will the proposed amendment change the content	nt of annual reports or the annual report template?			
	☐ Yes X No			
If Yes, provide details regarding the content of ar report.	nnual reports and a proposed outline or template of the annual			

27.	CHECKLIST						
The foll	The following must be included with the application for Amendment for the water licensing process to begin.						
	Completed Application for Water Licence Amendment form.						
	X Yes						
	Information addressing Supplement Information Guideline (SIG), where applicable (see Block 11)						
	☐ Yes ☐ No If no, date expected Not Applicable						
	Compliance Assessme	ent / Status Report ((see Block 23).				
	X Yes	□No	If no, date exp	pected			
	Indication of Renewal	Requirement (see E	Block 26)				
	☐Yes	□No	If no, date ex	pected Not Applicable			
	English Summary of A	mendment Applicat	tion.				
	X Yes						
	X Yes See Appendix 6	No If no, date expected					
	Application fee of \$30.00 CDN (Payee Receiver General for Canada).						
	X Yes						
	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 expe	ected			
28.	SIGNATURE						
ı	Robert Prairie	Director Eco Effects Asse		Robert Prairie	June 21 st , 2013		
	Name (Print)	Title (Pr	int)	Signature	Date		