

#### June 28, 2018

Mr. Richard Dwyer, Licensing Manager Nunavut Water Board P.O. Box 119 Gjoa Haven, Nunavut X0J 1J0 Ms. Sarah Forte, Water Management Specialist INAC – Water Resources PO Box 100 Iqaluit, NU X0A 0H0

Dear Mr. Dwyer & Ms. Forte:

#### RE: NANUQ PROJECT – RENEWAL OF 2BE-NAN1318

Peregrine Diamonds Ltd. ("Peregrine") holds NWB class "B" water use licence 2BE-NAN1318. This water licence authorizes the use of water for domestic and drill purposes at the **Nanuq Project** located 280 kilometres north-northeast of Rankin Inlet on 250K NTS map 56G. The licence was issued 2013 and expires on June 30<sup>th</sup>, 2018. Peregrine is also in the process of renewing the corresponding INAC class "A" land use permit N2012C0028.

Please find the following items enclosed:

- **Application** NWB Renewal Application 2BE-NAN1318
- **Map 1** 1:250,000 Project Location Maps
- **Map 2** 1:50,000 Camp Location Map
- **Schedule 1** Critical Locations & Coordinates
- Schedule 2 Letter from the NPC dated April 9, 2018
- Schedule 3 Nanuq Permit & Licence History
- **Schedule 4** Nanuq List of Authorized Activities
- Schedule 5 Waste Management Plan
- **Schedule 6** Environmental Impacts
- Schedule 7 Consultation Catalogue
- Schedule 8 Nanuq Security Information
- **Schedule 9** Financial Statements
- **Schedule 10** Corporate Certificates
- Schedule 11 Bibliography of Assessment Reports
- Schedule 12 English Summary of Application
- Schedule 13 Inuktitut Summary of Application
- Schedule 14 Spill Contingency Plan
- Schedule 15 Abandonment and Restoration Plan



The applicable fees are as follows:

**Water Use Application Fee** = \$30.00 paid to the Receiver General for Canada **Advanced Water Use Fee** =  $$219.00 (60 \text{m}^3 \text{ per day x } 365 \text{ days x } $0.01 \text{ per m}^3)$ 

**Total:** \$249.00

Fees will be paid by MasterCard directly to INAC Water Resources.

If you have any questions on this renewal application please do not hesitate to contact me at (604) 608-4524.

Best Regards,

#### PEREGRINE DIAMONDS LTD

David Willis, Manager Lands & Community



# Application for Water Licence Renewal

Document Date: April 2013

Application Submission Date:	
	Month/Dav/Year

P.O. BOX 119 GJOA HAVEN, NUNAVUT XOB 1J0

Tel: (867)360-6338 FAX:(867)360-6369 אבה אברת אין ארביי ארבי

# DOCUMENT MANAGEMENT

Original Document Date: April 2010

### **DOCUMENT AMENDMENTS**

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



P.O. Box 119

Tel: (867) 360-6338

FAX: (867) 360-6369

200 ALCOPO BOLPO GJOA HAVEN, NU XOB 1JO NUNAVUT WATER BOARD NUNAVUT IMALIRIYIN KATIMAYIT OFFICE DES EAUX DU NUNAVUT

#### APPLICATION FOR WATER LICENEC RENEWAL

Your application may be classified as a renewal only if all operations remain the same as previously licensed and only the term of the licence requires change. If your application contemplates:

- a change to the volume of water authorized for use;
- a new activity related to water use or waste disposal;
- a new component related to water use or waste disposal;
- a change in predicted environmental impacts(s); and/or
- a change to any term or condition of the original licence

your application is NOT classified as a renewal but rather an amendment and will require submission of an Application for Water Licence Amendment. Licensees applying for combined renewal / amendment are also referred to the Application for Water Licence Amendment.

The applicant is referred to the NWB's Guide 7: Licensee Requirements Following the Issuance 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 LICENCE NO:** 2BE-NAN1318

Please see Schedule 3 - Nanuq Permit & Licence History

1. LICENSEE CONTACT INFORMATION
Is the licensee the same as that referred to on the existing licence?
X Yes
If No, a licence assignment must be completed and approved by the NWB. A renewal will only be issued in the name of the current licensee in the absence of assignment of the licence.
If the licensee is the same, but the <u>name</u> of the licensee has changed, attach a certificate of name change.
Name: Peregrine Diamonds Ltd.
Address: Suite 654 – 999 Canada Place, Vancouver, BC, V1M 1G9
Phone: 604-608-4514 Fax: 604-408-8881 e-mail: dave@pdiam.com
2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.
Name: David Willis
Address: Suite 654 – 999 Canada Place, Vancouver, BC, V1M 1G9
Phone: 604-608-4514 Fax: 604-408-8881 e-mail: dave@pdiam.com
(Attach authorization letter.) Nothing has changed this should already be on file with the NWB
3. NAME OF PROJECT
Is the name of the project the same as that considered in the existing water licence?
X Yes
Indicate the name of the project including the name of the location: Nanuq Project

4. L	4. LOCATION OF UNDERTAKING			
Is the lo	Is the location of the undertaking the same as that considered in the existing water licence?			
		X Yes	□No	
Project I	Extents - Datum WGS-84		_	
NE:   SE:	Latitude: 65° 37' 58.91" Latitude: 65° 36' 1.6992" Latitude: 65° 9' 40.91" Latitude: 65° 10' 30.59"	Longitude: -9 Longitude: -9 Longitude: -9 Longitude: -9	90° 27' 40.6692" 90° 22' 23.17"	
Camp Lo	ocation(s) - Datum WGS84			
Latitude	Latitude: 65° 13' 42.89" Longitude: -91° 5' 25.66"			
Please s	ee Schedule 1 – Criti	cal Location	ns and Coordinates	
5. I	MAP			
Are the lo	ocations of the main components	of the undertaking th	he same as those considered in the existing	
		X Yes	No	
Note: The quantity of claims has decrease from 129 mineral claims to a total of 125 claims (309,875.55 hectares) . Please see <b>Schedule 16 – List of Claims</b>				
Attach a	topographical map, indicating the	main components o	of the undertaking.	
Please see the following two maps:  1) Map 1 - 250K NTS Map 56G 2) Map 2 - 50K NTS Map 56G03				
NTS Map	o Sheet No.: Ma	ap Name:	Map Scale:	

6.	NATURE OF INTEREST IN THE LAND
Is the	nature of the interest in the land the same as that considered in the existing water licence?
	X Yes  No
	k any of the following that are applicable to the proposed undertaking (at least one box under the ace' 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 Indigenous and Northern Affairs Canada (INAC)  Date (expected date) of issuance: Date of expiry:
	neral Claims from <i>Indigenous</i> and North Affairs Canada (INAC) – Please see attached <b>Schedule</b> - <b>List of Claims</b>
	Surface
	X Crown Land Use Authorization from Indian Indigenous and Northern Affairs Canada (INAC)  Date (expected date) of issuance: Date of expiry:
	N2012C0028 – Issued June 14, 2013 and expires June 13, 2018, a new application was submitted to INAC Land Administration on June 1, 2018. Expected Date of Issuance/Renewal is unknown.
Please	e see Schedule 3 – Nanuq Permit & Licence History
	☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)  Date (expected date) of issuance: Date of expiry:
	☐ 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:
	Date (expected date) of issuance: Date of expiry:
Is the	Date (expected date) of issuance: Date of expiry:
Is the	Date (expected date) of issuance: Date of expiry:  Date (expected date) of issuance: Date of expiry:
	Date (expected date) of issuance: Date of expiry:  Other  Date (expected date) of issuance: Date of expiry:  name of the entity(s) holding authorizations the same as that considered in the existing water licence?

7.	NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION
Is the	undertaking located in the same land use planning area as that considered in the existing licence?
	X Yes No
Indicat	e the land use planning area in which the project is located.
	North Baffin ☐ Keewatin   X South Baffin ☐ Sanikiluaq   ☐ Akunniq ☐ West Kitikmeot
Was a	land use plan conformity determination required from NPC prior to the issuance of the existing water e?
	X Yes  No
	indicate date issued and attach copy. Please see Schedule 2 – Letter from NPC ed April 9, 2018
Does	the proposed renewal change the original NPC conformity determination or the need to obtain one?
	☐ Yes X No
If Yes, If No,	indicate date issued (or expected) and attach a copyprovide written confirmation from NPC confirming that a land use plan conformity review is not required.
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. 03EN002 (circa 2008) & 03EN099 (Circa 2003)
Please	see Schedule 3 – Nanuq Permit & Licence History
Does	the proposed renewal 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 copyprovide written confirmation from NIRB confirming that a screening determination is not required.

9.	DESCRIPTION OF UNDERTAKING		
Is the d	s the description of the undertaking the same as that considered in the existing water licence?		
	X Yes  No		
List and	d attach plans and drawings or project proposal.		
•	<ul> <li>Exploration drilling (up to 600 meters per year), small diameter core and RC drilling, on both land and water</li> <li>Collection of water quality samples for baseline surveys</li> </ul>		
10.	OPTIONS		
	alternative methods and locations that were considered to carry out the project the same as those ered in the existing water licence?		
	☐ Yes ☐ No		
Provide	e a brief explanation of the alternative methods or locations that were considered to carry out the project.		
	None; This is an exploration project using exploration techniques that are necessary to find and analyze mineral deposit and anomalies.		
11.	CLASSIFICATION OF PRIMARY UNDERTAKING		
Is the p	primary undertaking the same as that considered in the existing water licence?		
	X Yes  No		
Indicat	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 Scl	hedule II of the Northwest Territories Waters Regulations for Description of Undertakings.		

12.	WATER USE
Is the	type(s) of water use(s) the same as that considered in the existing water licence?
	X Yes  No
Chec	k the appropriate box(s) to indicate the type(s) of water use(s) being applied for.
	<ul> <li>X To obtain water for camp/ municipal purposes</li> <li>To obtain water for industrial purposes</li> <li>To divert a watercourse</li> <li>To modify the bed or bank of a watercourse</li> <li>To alter the flow of, or store water</li> <li>X Other: Mineral Exploration Drilling</li> </ul>

13. QUANTITY OF WATER INVOLVED	
Is the source of water the same as that considered in the existing lice	ence? X Yes ☐ No
Name of water source(s):	
<ol> <li>Camp Water Source - Lorillard River</li> <li>Drill Water Source - local water sources close to drill</li> </ol>	targets when targets identified
(show location(s) on map)	
Is the quality of the water source and its available capacity the same	e as that considered in the existing licence?
X Yes No	
Describe the quality of the water source(s) and the available capacity there has been no drawdown of water sources from occasional usag	
Is the overall estimated quantity of water to be used the same as that	at considered in the existing licence?
X Yes ☐ No	
Provide the overall estimated quantity of water to be used: 60 m <sup>3</sup> /da for domestic.	$y = 50 \text{ m}^3/\text{day for drilling and } 10 \text{ m}^3/\text{day}$
Are the quantity(s) of water to be used from each source the same a licence?	as those considered in the existing
X Yes ☐ No	
Provide the estimated quantity(s) of water to be used from each sour Lorillard River for domestic purposes and 50 m³/day for drilling from	
Are the quantity(s) of water to be used for each purpose the same as	s those considered in the existing licence?
X Yes No	
Provide the estimated quantities to be used for each purpose (camp,	, drilling, etc.): see above
Are the method(s) of extraction the same as those considered in the	e existing licence? X Yes No
Describe the method(s) of extraction: Water pump with fish screen	S
Are the quantity(s) of water returned to source(s) the same as those	considered in the existing licence?
X Yes ☐ No	
Estimated quantity(s) of water returned to source(s): 0 m³/day return	ed to source
Are the quality(s) of water(s) returned to source(s) the same as thos	e considered in the existing licence?
X Yes ☐ No	
Describe the quality(s) of water(s) returned to source(s): None return	ned to the source
NWB Renewal Application 2BE-NAN1318130401 8	

14.	WASTE		
Are the type(s) of waste(s) to be generated and/ or deposited the same as those considered in the existing licence?			
		X Yes  No	
Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.			
X Sewage X Waste oil X Solid Waste X Hazardous X Bulky Items/Scrap Metal Animal Waste Other (describe):			

licence?

treatment and method of disposal.

#### 15. QUANTITY AND QUALITY OF WASTE INVOLVED

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X Yes No

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of

Are the method(s) of disposal for the types of waste involved the same as those considered in the existing

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Toilet Waste to outhouses	40 litres/day	Lime to pit	
Greywater	Wash Water	2 m <sup>3</sup> /day	Liqui-Bac	
Solid	Food, Misc. paper	242 litres/day		Incineration
Bulky/Scrap	Drill metal waste	500kg		Returned to contractor or landfill for recycling
Waste Oil/Hazardous	Oil/Filters/Rags/Fuel pads	Total 410 litres	Rags & pads incinerated with small quantities of waste oil	Filters & waste oil collected for waste handling
Empty Barrels	Fuel drums	200 diesel, 100 jet-A	Drums de- headed, decanted and wiped clean with fuel absorbent pads	Some empties rotated out for recycling. Cleaned drums to metal recycling

# 16. OTHER AUTHORIZATIONS Please see Schedule 3 - Nanuq Permit & Licence History In addition to the sub-surface and surface land use authorizations provided in Block 6, are the same authorizations required as considered in the existing licence? X Yes □No For each provide the following: Class "A" Land Use Permit N2012C0028 Authorization: Surface Land Use Authorization & Subsurface Mineral Rights – Issued by INAC Administering Agency: Indigenous and Northern Affairs Canada - INAC Project Activity: Mineral Exploration: Camp, Drilling & Exploration Date (expected date) of issuance: June 14, 2013 Date of expiry: June 13, 2018 Renewal Submitted.....answer is the same as #6 17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION **MEASURES** Are predicted environmental impacts of the undertaking and proposed mitigation measures the same as those considered in the existing water licence? X Yes □No Describe direct, indirect, and cumulative impacts related to water and waste. Please see Schedule 3 - Nanuq Permit & Licence History 18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS Are the effects of the undertaking on any known persons or property including those that hold licences for water use in precedence 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 same as those considered in the existing water licence? X Yes □No 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.

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	
Are the effects of the undertaking on the quality (IOL) the same as those considered in the	uality, quantity or flow of waters flowing through Inuit Owned Land existing water licence?
	X Yes □ No
Land (IOL), and advise the Board if negot	ct of the quality, quantity or flow of waters flowing through Inuit Owned intions have commenced or an agreement to pay compensation for any e or more Designated Inuit Organization (DIO).
	mary of any consultation meetings including when the meetings were dealist of concerns expressed and measures to address concerns.
Please see Schedule 7 – Cons	sultation Log
21. SECURITY INFORMATION	
Is the financial security assessment the sa	ame as that considered in the existing water licence?
	X Yes No
	ty for final reclamation the same as that considered in the existing water
licence?	☐ Yes X No
Nanuq Camp has been partially demobilized Information	d. Please see Schedule 8 – Nanuq Security
	security for final reclamation equal to the total outstanding reclamation ifficient to cover the highest liability over the life of the undertaking.

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.

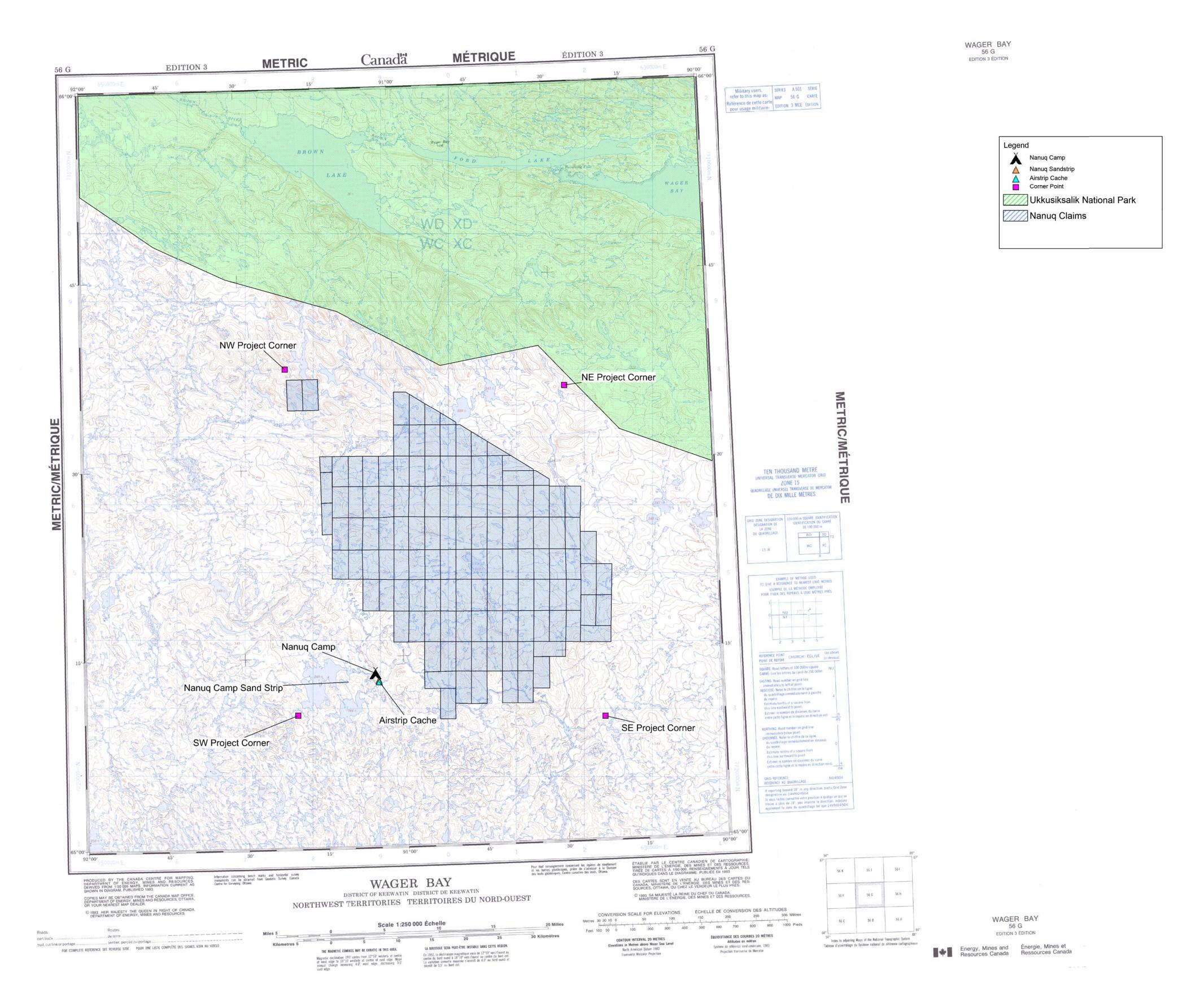
Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

22. FINANCIAL INFORMATION
Is the statement of financial security the same as that considered in the existing water licence?
☐ Yes ☐ No
Provide an updated statement of financial security.
Please see Schedule 9 – Financial Statements
If the applicant is a business entity please answer the questions below:
Is the list of the officers of the company the same as those considered in the existing water licence?
☐ Yes X No
Provide a list of the officers of the company.
<ol> <li>Beverly Downing – Corporate Secretary</li> <li>Greg Shenton – CFO</li> <li>Herman Grutter – VP Technical</li> <li>Tom Peregoodoff – President &amp; CEO</li> </ol>
Is the Certificate of Incorporation or evidence of registration of the company name the same?
X Yes
Attach a copy of the Certificate of Incorporation or evidence of registration of the company name.  Please see Schedule 10 — Corporate Certificates
23. STUDIES UNDERTAKEN TO DATE
List and attach updated studies, reports, research etc.
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.
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.
Please see Schedule 11 – Bibliography of Assessment Reports
Peregrine has not received any INAC inspection reports during the term of the land use permit or the water use permit.

24.	PROPOSED TIME SCH	IEDULE				
	time schedule for all pha		nent (cor	nstruction, operations, closure	and post closure) the same	as
			X Yes	s 🗌 No		
Winter	nally operated exploration Season = March, April Nater Season = June, July 8	lay				
	te the proposed start and tion, closure, and post clo		es for ea	ch applicable phase of devel	opment (construction,	
	Construction Proposed Start Date:	(month/year	F	Proposed Completion Date:	(month/year)	
	Operation Proposed Start Date:		· F	Proposed Completion Date:	, , ,	
	Closure Proposed Start Date:	(month/year	′ F	Proposed Completion Date:	(month/year)	
	Post - Closure Proposed Start Date:	(month/year	,	Proposed Completion Date:	(month/year)	
		(month/year	)		(month/year)	
For ead	ch applicable phase of de	velopment indic	ate whic	ch season(s) activities occur.		
	Construction ☐ Winter ☐ Spring	Summer	☐ Fall	☐ All season		
	Operation ☐ Winter ☐ Spring	Summer	☐ Fall	☐ All season		
	Closure ☐ Winter ☐ Spring	Summer	☐ Fall	All season		
	Post - Closure Winter Spring	Summer	☐ Fall	All season		

25. PROPOSED TERM OF LICENCE
On what date does the existing licence expire? June 30, 2018
Indicate the proposed term of the renewal (maximum of 25 years): 5 years
Requested date of renewal issuance: July 1, 2018 Requested Expiry Date: June 30, 2023 (month/year)
(The requested date of renewal issuance must be <u>at least</u> three (3) months from the date of application for a type B water licence and <u>at least</u> 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 <i>Guide 5: Processing Water Licence Applications</i> for more information)
26. ANNUAL REPORTING
Is the annual report template expected to be the same as that considered in the existing licence?
X Yes □ No
If not using the NWB's <u>Standardized Form for Annual Reporting</u> , provide details regarding the content of annual reports and a proposed outline or template of the annual report.

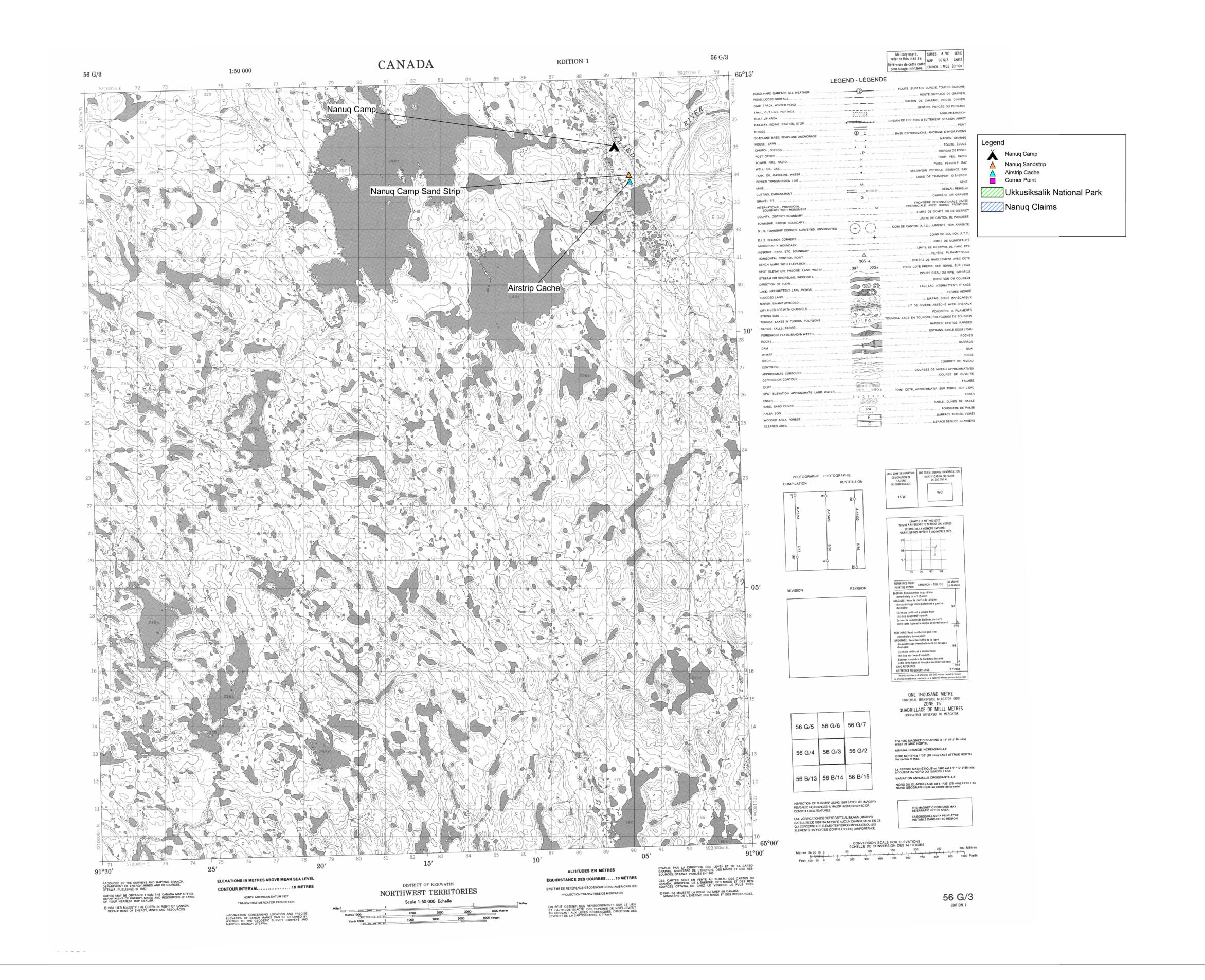
27.	CHECKLIST		
The foll	owing must be included	with the application	n for renewal for the water licensing process to begin.
	Completed Application	for Water Licence	Renewal form.
	X Yes	□No	If no, date expected
	Updated plans, includir	ng designs and rep	ports (see Block 23). Please see Schedules 5, 14, 15
	X Yes	□No	If no, date expected
	Updated security asses	ssment (see Block	21). Please see Schedule 8
	X Yes	□No	If no, date expected
	Updated financial state	ment (see Block 2	2). Please see Schedule 9
	X Yes	□No	If no, date expected
	Compliance Assessme	nt / Status Report	(see Block 23).
	X Yes	□No	If no, date expected
	English Summary of Re	enewal Application	n. Please see Schedule 12
	X Yes	□No	If no, date expected
	Inuktitut and/or Inuinna	qtun Summary of	Renewal Application. Please see Schedule 13
	☐Yes	X No	If no, date expected
	Application fee of \$30.0	00 CDN (Payee Re	eceiver General for Canada).
	X Yes	□No	If no, date expected
	will be calculated by th	e NWB based upo	Payee Receiver General for Canada). The actual water use fee on the amount of water authorized for use in accordance with the elicence.
	X Yes	☐ No	If no, date expected
28.	SIGNATURE		
I, David	Willis (print name)		
			water use or waste disposal as previously authorized and that the knowledge, correct and complete.
2	Wille	June 28, 2018	
Signatu	ire	Date	



1989
1956
1987
Die man was compared with satellite imagery ottained in

This map was compared with satellite imagery ottained in 1989 and found to be up-to-date in all major features.

On a comparé cette carte aux images prises par sitellite en 1989; nous avens constaté que toutes ses caractéristiques principalés étaient à jour.



#### **Schedule 1 - Critical Location and Coordinates**

		Longitude (x) (WGS84)	Latitude (y) (WGS84)	Longitude (x) (WGS84)	(WGS84)	Easting (NAD83)	Northing (NAD83)		50K	Mineral	
Fid.	Location	dd.mm.ss	dd.mm.ss	dd.ddd	dd.ddd	(mE)	( <b>mN</b> )	Zone	NTS	Claim	Note
1	Nanuq Camp	-91° 5' 25.66"	65° 13' 42.89"	-91.09046387	65.2285811	589,266.43	7,235,280.70	15	56G03	No Claim	Nanuq Camp Location - 25 people
2	Nanuq Camp Sand Strip Cache	-91° 4' 47.95"	65° 13' 8.56"	-91.079987	65.219046	589,788.40	7,234,233.30	15	56G03	No Claim	Sand Strip Location
3	Airstrip Cache	-91° 4' 46.00"	65° 13' 0.99"	-91.07944491	65.216944	589,820.89	7,233,999.84	15	56G03	No Claim	Timbers
4	NW Project Corner	-91° 21' 12.15"	65° 37' 58.91"	-91.35337729	65.6330319	575,800.00	7,280,000.00	15	56G03	No Claim	Approximate NW Corner for Permit Purposes
5	NE Project Corner	-90° 27' 40.6692"	65° 36' 1.6992"	-90.461297	65.600472	623,100.00	7,280,000.00	15	56G03	No Claim	Approximate NE Corner for Permit Purposes
6	SE Project Corner	-90° 22' 23.17"	65° 9' 40.91"	-90.37310331	65.1613642	623,100.00	7,229,000.00	15	56G03	No Claim	Approximate SE Corner for Permit Purposes
7	SW Project Corner	-91° 20' 20.92"	65° 10' 30.59"	-91.33914682	65.175164	577,800.00	7,229,000.00	15	56G03	No Claim	Approximate SW Corner for Permit Purposes



April 9, 2018

NIRB - Nunavut Impact Review Board Natasha Lear Manager, Technical Administration P.O. Box 1360, Cambridge Bay, NU XOB OCO info@nirb.ca

NWB - Nunavut Water Board Karén Kharatyan Manager of Licensing P.O. Box 119, Gjoa Haven, NU XOB 1JO licensing@nwb-oen.ca

INAC – Indigenous & Northern Affairs Canada Tracey McCaie P.O. Box 100, Iqaluit, NU X0A 0H0 tracey.mccaie@aandc.gc.ca landsmining@inac.gc.ca KivIA - Kivalliq Inuit Association
Brenda Osmond
Lands Administrator
P.O. Box 340, Rankin Inlet, NU XOC 0G0
bosmond@kivalliqinuit.ca
mserra@kivalliqinuit.ca

PC – Parks Canada Jane Chisholm, Ecologist Team Leader Box 278 GoC Building-969 Federal Road Iqaluit, NU XOA 0H0 jane.chisholm@pc.gc.ca

PROPONENT:
David Willis
Peregrine Diamonds Ltd.
Suite 654 - 999 Canada Place
Vancouver British Columbia V6C3E1 Canada dave@pdiam.com

Dear Ms. Lear, Mr. Kharatyan, Ms. McCaie, Ms. Osmond, Ms. Chisholm, Mr. Willis:

#### RE: NPC File # 148818 [Nanuq Project] & 148819 [Nanuq North]

The following works and activities have been proposed in the above-noted project proposal:

- 1. Two adjacent advanced exploration sites
- 2. Renewals of long-standing exploration projects
- 3. Location: Kivalliq Region; [south of Ukkusiksalik National Park]

A complete description of the project proposal reviewed by the NPC can be accessed online using the link below.

The Nunavut Planning Commission (NPC) has completed its review of the above noted project proposal. The activities associated with this proposal were previously reviewed by NPC, and conformity determinations were issued:

- For 148818 on Dec. 24, 2007 which still applies, and was renewed on Dec. 16 2014 as file 148192.
- For 148819, on April 17, 2013 which still applies, and was renewed on Dec. 16 2014 as file 148188.

In addition, the activities were previously screened by the Nunavut Impact Review Board (NIRB FILE NO.: 08EN002 for NPC 148818 and NIRB FILE NO.: 09EN011 for NPC 148819). These project proposals are exempt from the Nunavut Planning and Project Assessment Act (NUPPAA) under section 235 of that Act. The above-noted project proposals are exempt from screening by the NIRB because the NPC is of the understanding that they do not change the general scope of the original or previously amended project activities, and the exceptions noted in Section 12.4.3 (a) and (b) of the Nunavut Agreement do not apply.

By way of this letter, the NPC is forwarding the project proposal to the regulatory authorities identified by the proponent. Project materials, including the applicable conformity requirements, are available at the following address:

http://lupit.nunavut.ca/portal/project-dashboard.php?appid=148818&sessionid=http://lupit.nunavut.ca/portal/project-dashboard.php?appid=148819&sessionid=

These conformity determinations apply only to the above noted project proposal as submitted. The regulatory authorities to which this letter is addressed are responsible under the Nunavut Agreement to implement any of the applicable conformity requirements by incorporating the requirements directly, or otherwise ensuring that they must be met, in the terms and conditions of any authorizations issued.

My office would be pleased to discuss how best to implement the applicable requirements and to review any draft authorizations that regulatory authorities wish to provide for that purpose. If you have any questions, please do not hesitate to contact me at (867) 857-2242.

Sincerely,

Peter Scholz Senior Planner,

**Nunavut Planning Commission** 

Schedule 3 - Nanuq Permit & Licence History

#	Licence	Organization	Issued to	Issued	Expired	Description	Activities
1	2BE-NAN0608	NWB	Dunsmuir Ventures Ltd.	3-Feb-2003	30-Jan-2008	NWB Licence	Camp & Drilling
2	N2003C0016	INAC	Dunsmuir Ventures Ltd.	16-Jun-03	15-Jun-2008	INAC Land Use Permit	Camp & Drilling
3	03EN099	NIRB	Dunsmuir Ventures Ltd.	22-Jul-2003		NIRB Screening	Camp & Drilling
4	2BE-NAN0305	NWB	Dunsmuir Ventures Ltd.	15-Aug-03	15-Aug-2005	NWB Licence	Camp & Drilling
5	N2003C0040	INAC	Peregrine Diamonds Ltd.	21-Jan-2004	15-Feb-2008	INAC Land Use Permit	Camp & Drilling
6	08EN002	NIRB	Peregrine Diamonds Ltd.	28-Mar-2008		NIRB Screening	Camp & Drilling
7	N2007C0039	INAC	Peregrine Diamonds Ltd.	14-Apr-2008	13-Jun-2013		Camp & Drilling
8	2BE-NAN0813	NWB	Peregrine Diamonds Ltd.	18-Apr-2008	31-May-2013	NWB Licence	Camp & Drilling
9	2BE-NAN1318	NWB	Peregrine Diamonds Ltd.	18-Jan-2013	30-Jun-2018	NWB Licence	Camp & Drilling
10	N2012C0028	INAC	Peregrine Diamonds Ltd.	29-May-2013	13-Jun-2018	INAC Land Use Permit	Camp & Drilling

Schedule 4 - Nanuq List of Authorized Activities

Fid	Activity	Description
1	Core Drilling Land	• This type of drilling to sample and delineate kimberlite on land. This drill process utilizes water. Diameters can be NQ (1.875 inches), HQ (2.5 inches), PQ (3.345 inches). This applies to any geological targets on Crown Land within the Nanuq mineral claim block.
2	Core Drillng Water	<ul> <li>This type of drilling is used to sample and delineate kimberlite from lake ice. The last itme Peregrine dilled on ice was the Winter 2011 program. Diameters can be NQ (1.875 inches), HQ (2.5 inches), PQ (3.345 inches)</li> <li>This applies to any geological targets on Crown Land within the Nanuq mineral claim block.</li> </ul>
3	RC Drilling (Land)	• This type of drilling is used to test geophysical anomalies, gauge overburden thickness and sample kimberlite and/or other anomalous material. This drill process is pneumatic (air), utilizes a compressor, and does not utilize water. Diameter can be 3.54 inches, 3.62 inches and 4.75 inches. This applies to any geological targets on Crown Land within the Nanuq mineral claim block.
4	Camp Sites	• Lodging for work crews at the Project. Currently one camp authorized. Nanuq Camp (25person)
5	Land Airstrip	Winter & Summer area for fixed wing aircraft including DC-3 or similar, Twin Otter or similar.
6	Mini-Bulk Sampling	Mini bulk samping by hand or drill core of up to 200 metric tonnes of rock by core or hand

#### SCHEDULE 5- WASTE MANAGEMENT PLAN

NANUQ PROJECT – JUNE 26, 2018

Waste is generated in any exploration activity with the bulk of it occurring as empty fuel drums with a lesser volume generated through other activities like domestic camp waste and sewage.

As part of the camp induction, Peregrine advises all employees on how to sort, where to place, and how to handle waste. Daily toolbox meetings discuss waste management and periodic weekly safety, health and environment meetings are dedicated to waste awareness and waste handling. Peregrine also practices waste awareness to ensure that the volume of waste generated in a camp setting is kept to a minimum.

The sections below detail how Peregrine manages the waste produced in exploration activities.

As the Nanuq Project is a small seasonal exploration project the volume of waste is limited.

#### **Incinerator**

Nanuq Camp utilizes an Inciner8 A400 incinerator with a 1300°C incineration temperature.

#### **Domestic Waste**

Domestic garbage consists mainly of food wastes, paper and packaging. The waste is sorted into appropriate receptacles. For instance, dead household batteries (AA, AAA etc.) are separated and consolidated in a 5 gallon pail in the field office. Combustible materials are burned in the incinerator. Non-combustible materials are collected and periodically flown to Rankin Inlet for disposal in the local land fill or recycling facility (periodically available). Pop cans are collected and donated to local charities (if interested).

Household batteries (AA, AAA, etc.) are stockpiled and collected for disposal by Nunatta Environmental Services (Waste Handler #NUR-300002).

Incinerator ash is collected and stored for handling by Nunatta Environmental Services (Waste Handler #NUR-300002).

#### **Grey Water**

Grey water is passed through a wooden box with a gravel and sand screen then into a hole in the ground.

#### **Sewage**

Sewage is collected in collected in a hand dug pit privy and treated periodically with lime.

#### **Hazardous Waste**

Exploration activities in general do not produce much in the way of hazardous waste.

The main hazardous waste and bulk portion of all waste generated are empty fuel drums. Drums that can no longer be re-used are de-headed, decanted and wiped clean using fuel absorbent pads. The pads are incinerated and the now clean drums are flown to Rankin Inlet for disposal with metal waste.

Waste fuel is collected and used to power the incinerator.

Minor amounts of waste oil are collected and added intermittently to the incinerator in small amounts (500ml). If a large volume of waste oil is generated it is collected for disposal by Nunatta Environmental Services (Waste Handler #NUR-300002).

Car batteries are used to power electronics such as radio repeaters. Dead car batteries are collected and flown to Rankin Inlet for disposal by Nunatta Environmental Services (Waste Handler #NUR-300002).

#### **Bulky Metal Objects**

Bulky metal objects may result from damaged drill or equipment components. These items are collected and flown to Rankin Inlet where they are taken to the metals collection area at the Rankin Inlet landfill.

#### **Core Drill Cuttings**

Core drill cuttings are wet and are collected in sumps or natural depressions close to the drill. If drilling is on ice the cuttings are collected in plastic "sausage" tubes using a centrifuge to separate the water from the cuttings. The tubes are then collected and deposited in a natural depression on land.

#### **RC Drilling Cuttings**

Small diameter RC drill cuttings are dry. Samples of cuttings are collected for analysis and the remaining material is left at the hole.

### **Schedule 6 – Environmental Impacts**

Peregrine is aware that the main risk associated with tent camps or remote drill sites is fuel spills to land and water, and thus potential impact to land or surficial water quality. Peregrine addresses these risks by:

- 1) Activity Planning (i.e. closure of camp when not required)
- 2) Controls (regular internal inspections and HSE meetings)
- 3) Vigilance (adherence to permits)
- 4) Training (regular drills and practice)

Exploration on mineral claims of the Nanuq Project is minimal due in large portion to the seasonality of the activities and the low impact nature of exploration activities (sampling, drilling and geophysics).

Schedule 7 - Chronology of Community Engagement

#	Date	Organization	Location	Description	Note
1	23-Mar-2004	Baker Lake - Hamlet Administration	Baker Lake	Meeting	Project Active
2	23-Mar-2004	Baker Lake Community	Baker Lake	Public Meeting - Nunamiut Lodge	Project Active
3	24-Mar-2004	Chesterfield Inlet Community	Chesterfield Inlet	Public Meeting - Hamlet Office	Project Active
4	25-Mar-2004	Chesterfield Inlet Hamlet CEDO	Chesterfield Inlet	Meeting	Project Active
5	25-Mar-2004	Chesterfield Inlet - Arctic College	Chesterfield Inlet	Presentation to Students & Instructor	Project Active
6	4-Feb-2008	Chesterfield Inlet	Chesterfield Inlet	Public Meeting	Project Active
7	6-Feb-2008	Repulse Bay	Repulse Bay	Public Meeting	Project Active
8	6-Feb-2008	Repulse Bay - Arctic Collge	Repulse Bay	Presentation to Students & Instructor	Project Active
9	7-Feb-2008	Rankin Inlet SAO	Rankin Inlet	Meeting	Project Active
10	8-Feb-2008	Kangiqliniq HTO - Manager	Rankin Inlet	Meeting	Project Active
11	2-Dec-2008	Chesterfield Inlet	Chesterfield Inlet	Public Meeting	Project Active
12	2-Dec-2008	Kangiqliniq HTO	Rankin Inlet	Meeting with Acting Manager	Project Active
13	4-Dec-2008	Repulse Bay Community	Repulse Bay	Public Meeting - School Gym	Project Active
14	27-Jul-2009	Rankin Inlet - Hamlet SAO	Rankin Inlet	Meeting - Hamlet Office	Project Active
15	13-Oct-2009	Chesterfield Inlet - Arctic College	Chesterfield Inlet	Presentation to Students & Instructor	Project Active
16	13-Oct-2009	Chesterfield Inlet - High School	Chesterfield Inlet	Presentation to Students & Instructor	Project Active
17	13-Oct-2009	Chesterfield Inlet Community	Chesterfield Inlet	Public Meeting	Project Active
18	14-Oct-2009	Meeting with Parks Canada	Repulse Bay	Meeting with Acting Manager	Project Active
19	30-May-2011	Chesterfield Inlet Community	Chesterfield Inlet	Public Meeting	Project Active
20	1-Jun-2011	Repulse Bay Community	Repulse Bay	Public Meeting	Project Active
21	1-Jun-2011	Kangiqliniq HTO	Rankin Inlet	Meeting	Project Active
22	3-May-2013	Hamlet of Repulse Bay EDO	Repluse Bay	Project Update Letter	Project on Care and Maintenance
23	3-May-2013	Hamlet of Rankin Inlet EDO	Rankin Inlet	Project Update Letter	Project on Care and Maintenance
24	3-May-2013	Hamlet of Baker Lake	Baker Lake	Project Update Letter	Project on Care and Maintenance
25	3-May-2013	Hamlet of Chesterfield Inlet	Chesterfield Inlet	Project Update Letter	Project on Care and Maintenance
26	3-Nov-2015	Hamlet of Baker Lake	Baker Lake	Project Update Letter	Project on Care and Maintenance
27	3-Nov-2015	Chesterfield Inlet	Chesterfield Inlet	Project Update Letter	Project on Care and Maintenance
28	3-Nov-2015	Rankin Inlet	Rankin Inlet	Project Update Letter	Project on Care and Maintenance
29	3-Nov-2015	Repulse Bay	Repulse Bay	Project Update Letter	Project on Care and Maintenance
30	5-Jan-2017	Baker Lake	Baker Lake	Project Update Letter	Project on Care and Maintenance
31	5-Jan-2017	Chesterfield Inlet	Chesterfield Inlet	Project Update Letter	Project on Care and Maintenance
32	5-Jan-2017	Rankin Inlet	Rankin Inlet	Project Update Letter	Project on Care and Maintenance
33	5-Jan-2017	Repulse Bay	Repulse Bay	Project Update Letter	Project on Care and Maintenance
34	15-May-2018	Baker Lake	Baker Lake	Project Update Letter	Project on Care and Maintenance
35	15-May-2018	Chesterfield Inlet	Chesterfield Inlet	Project Update Letter	Project on Care and Maintenance
36	15-May-2018	Rankin Inlet	Rankin Inlet	Project Update Letter	Project on Care and Maintenance
37	15-May-2018	Repulse Bay	Repulse Bay	Project Update Letter	Project on Care and Maintenance

**Schedule 8 - Nanuq Security Information** 

Nanuq Camp Abandonment & Restoration

Helicopter	\$ 40,000.00
Aviation Fuel	\$ 12,000.00
Twin Otter Flights (2 Trips)	\$ 8,000.00
Crew 10 days @\$1000/day	\$ 10,000.00
Crew Travel	\$ 8,000.00
Crew Accomodation & Meals	\$ 2,000.00
Grocery Costs	\$ 1,000.00
Communication	\$ 1,500.00
Misc. Equipment	\$ 1,000.00

Discovery Camp Total: \$ 83,500.00

**Cost Estimate** 



#### Schedule 9 - Financial Statements

#### INDEPENDENT AUDITOR'S REPORT

To the Shareholders of Peregrine Diamonds Ltd.

We have audited the accompanying consolidated financial statements of Peregrine Diamonds Ltd., which comprise the consolidated statements of financial position as at September 30, 2017 and 2016 and the consolidated statements of loss and comprehensive loss, changes in equity and cash flows for the years then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements, and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Peregrine Diamonds Ltd. as at September 30, 2017 and 2016, and its financial performance and its cash flows for the years then ended in accordance with International Financial Reporting Standards.

#### **Emphasis** of Matter

Without qualifying our opinion, we draw attention to Note 1 to the consolidated financial statements which describe certain material uncertainties regarding the entity's ability to continue as a going concern.

Hay + Watson

### PEREGRINE DIAMONDS LTD.

Consolidated Statements of Financial Position As at September 30, 2017 and 2016

(Expressed in Canadian Dollars)

	2017	2016		
ASSETS	 _			
Current Assets				
Cash and cash equivalents	\$ 6,704,439	\$	3,096,358	
Accounts receivable	341,574		102,752	
Prepaid expenses	215,862		393,996	
	7,261,875		3,593,106	
PROPERTY AND EQUIPMENT (Note 5)	4,985,337		5,157,175	
DEPOSITS ON PROPERTY AND EQUIPMENT	88,975		88,975	
	\$ 12,336,187	\$	8,839,256	
LIABILITIES AND SHAREHOLDERS' EQUITY				
Current liabilities				
Accounts payable and accrued liabilities	\$ 3,172,529	\$	977,787	
Current portion of finance lease obligation (Note 8)	29,870		28,148	
	3,202,399		1,005,935	
FINANCE LEASE OBLIGATION (Note 8)	62,452		92,322	
	3,264,851		1,098,257	
SHAREHOLDERS' EQUITY				
Share capital (Note 10)	181,298,275		171,282,340	
Share option reserve	14,586,700		14,110,864	
Share warrant reserve	2,798,883		2,722,264	
Other reserve	19,205		19,205	
Deficit	(189,631,727)		(180,393,674)	
	9,071,336		7,740,999	
	\$ 12,336,187	\$	8,839,256	

### NATURE OF OPERATIONS (Note 1) COMMITMENTS AND CONTINGENCIES (Note 17)

The accompanying notes are an integral part of these consolidated financial statements.

#### APPROVED BY THE BOARD:

Peter Meredith	
Director	
D: 1 1 G 1	
Richard Cohen	
Director	

# PEREGRINE DIAMONDS LTD.

Consolidated Statements of Loss and Comprehensive Loss For the Years Ended September 30, 2017 and 2016 (Expressed in Canadian Dollars)

	 2017		2016
EXPENSES			
Accounting and audit fees	\$ 104,157	\$	146,710
Consulting	5,668		19,292
Depreciation	33,640		45,309
Filing fees	77,669		77,456
Legal	85,235		127,468
Insurance	45,884		56,936
Investor relations	29,860		68,144
Office and administration	405,290		410,282
Salaries and benefits	1,150,307		1,306,161
Travel	74,393		34,488
Share-based payments	339,628		857,260
Exploration (Schedule)	6,636,228		3,775,518
	8,987,959		6,925,024
OTHER (INCOME)/EXPENSES			
Interest income	(20,644)		(56,054)
Interest expense	16,337		-
Reorganization expenses (Note 12)	-		545,993
Foreign exchange	(7,215)		6,541
	(11,522)		496,480
NET LOSS BEFORE DISCONTINUED OPERATIONS	8,976,437		7,421,504
Loss from discontinued operations (Note 15)	261,616		733,281
NET LOSS AND COMPREHENSIVE LOSS	\$ 9,238,053	\$	8,154,785
BASIC AND DILUTED			
LOSS PER SHARE	\$ 0.03	\$	0.03
WEIGHTED AVERAGE NUMBER OF			
SHARES OUTSTANDING	 352,284,802	3	20,630,613
	•		

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Changes in Equity For the Years Ended September 30, 2017 and 2016 (Expressed in Canadian Dollars)

_	Share	e Ca	pital			Sh	are Reserves			
_	Number			Sl	nare Option	Sh	are Warrant	Other		
	of Shares		Amount		Reserve		Reserve	Reserve	Deficit	Total
Balances, September 30, 2015	282,663,598	\$	165,668,162	\$	13,128,762	\$	2,722,264	\$ 19,205	\$ (172,238,889)	\$ 9,299,504
Shares issued for cash:										
Rights offering, net of share	56,412,307		5,524,520		-		-	-	-	5,524,520
issue costs of \$116,711										
Options exercised	250,000		89,658		(39,658)		-	-	-	50,000
Share-based payments	-		-		1,021,760		-	-	-	1,021,760
Net loss	-		-		-		-	-	(8,154,785)	(8,154,785)
Balances, September 30, 2016	339,325,905	\$	171,282,340	\$	14,110,864	\$	2,722,264	\$ 19,205	\$ (180,393,674)	\$ 7,740,999
Balances, September 30, 2016	339,325,905	\$	171,282,340	\$	14,110,864	\$	2,722,264	\$ 19,205	\$ (180,393,674)	\$ 7,740,999
Shares issued for cash:										
Rights offering, net of share issue costs of \$266,668	102,826,031		10,015,935		-		76,619	-	-	10,092,554
Share-based payments	-		-		475,836		-	-	-	475,836
Net loss	-		-		-		-	-	(9,238,053)	(9,238,053)
Balances, September 30, 2017	442,151,936	\$	181,298,275	\$	14,586,700	\$	2,798,883	\$ 19,205	\$ (189,631,727)	\$ 9,071,336

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statements of Cash Flows For the Years Ended September 30, 2017 and 2016 (Expressed in Canadian Dollars)

	 2017	 2016
OPERATING ACTIVITIES		
Net loss	\$ (9,238,053)	\$ (8,154,785)
Items not affecting use of cash		
Depreciation	187,576	191,179
Share-based payments	475,836	1,021,760
Loss on disposal of equipment	-	509
	(8,574,641)	(6,941,337)
Changes in non-cash working capital items (Note 14)	2,134,053	(1,113,627)
	(6,440,588)	(8,054,964)
INVESTING ACTIVITIES		
Mineral properties	_	(125,000)
Purchase of property and equipment	(15,738)	(50,735)
	(15,738)	(175,735)
FINANCING ACTIVITIES		
Payment of finance lease obligation	(28,148)	(2,880)
Shares issued for cash, net of share issue costs	10,092,555	5,574,520
9	10,064,407	5,571,640
INCREASE IN CASH AND CASH EQUIVALENTS	3,608,081	(2,659,059)
CASH AND CASH EQUIVALENTS BEGINNING OF YEAR	3,096,358	5,755,417
CASH AND CASH EQUIVALENTS END OF YEAR	\$ 6,704,439	\$ 3,096,358
CASH AND CASH EQUIVALENTS ARE COMPRISED OF:		
Cash in bank	\$ 1,638,619	\$ 502,202
Short-term deposits	5,065,820	2,594,156
	\$ 6,704,439	\$ 3,096,358

#### **SUPPLEMENTAL CASH FLOW INFORMATION (Note 14)**

The accompanying notes are an integral part of these consolidated financial statements.

**Notes to the Consolidated Financial Statements** 

September 30, 2017 and 2016

(Expressed in Canadian Dollars)

#### 1. NATURE OF OPERATIONS

Peregrine Diamonds Ltd. ("Peregrine"), together with its subsidiaries (collectively referred to as the "Company"), is a Canadian exploration stage mining company which is focused on the exploration, development and recovery of minerals and precious gems.

Peregrine was incorporated on November 19, 2002 under the Canada Business Corporations Act. The shares of Peregrine are listed on the Toronto Stock Exchange under the symbol PGD. Its registered office is located at 654-999 Canada Place, Vancouver, British Columbia, V6C 3E1. The Company's financial year-end is September 30<sup>th</sup>.

To date, the Company has not generated revenues from operations and is considered to be in the exploration stage. The Company's operations during the year ended September 30, 2017 were directed towards the exploration of the Company's property interests located in Canada and Botswana.

The Company has incurred significant losses since inception and as at September 30, 2017 has working capital of approximately \$4.1 million and an accumulated deficit of approximately \$189.6 million. These consolidated financial statements have been prepared on the basis of a going concern which assumes the Company will be able to realize its assets and discharge its liabilities in the normal course of business.

The Company's ability to continue as a going concern is dependent on being able to raise the necessary funding to continue operations, through public equity, debt financings, joint arrangements and other contractual arrangements, or being able to operate profitably in the future.

#### 2. BASIS OF PREPARATION

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with International Accounting Standard ("IAS") 1 *Presentation of Financial Statements* ("IAS 1"), using accounting policies which are consistent with the International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB").

(b) Basis of preparation

These consolidated financial statements have been prepared on the historical cost basis, except for certain financial instruments which are measured at fair value, as explained in the accounting policies set out in Note 3.

(c) The consolidated financial statements for the year ended September 30, 2017 (including comparatives) were approved and authorized for issue by the board of directors on December 14, 2017.

#### 3. SIGNIFICANT ACCOUNTING POLICIES

#### (a) Basis of consolidation

These consolidated financial statements include the accounts of Peregrine and its wholly owned subsidiaries Peregrine Exploration Ltd. ("PEX"), Peregrine Botswana BVI Ltd. ("Peregrine Botswana") and Diamexstrat Botswana (Proprietary) Limited ("DEX") (Note 15).

The results of subsidiaries acquired or disposed of during the period are included in the consolidated statements of loss and comprehensive loss from the effective date of acquisition or up to the effective date of disposal, as appropriate. All intra-company transactions, balances, income and expenses are eliminated in full on consolidation.

#### (b) Accounting estimates and judgments

The preparation of these consolidated financial statements requires management to make estimates and judgments and to form assumptions that affect the reported amounts and other disclosures in these consolidated financial statements. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances. The results of these assumptions form the basis of making the judgments about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and further periods if the review affects both current and future periods.

Critical accounting estimates are estimates and assumptions made by management that may result in material adjustments to the carrying amount of assets and liabilities within the next financial year. Critical estimates used in the Company's preparation of these consolidated financial statements include, among others, the recoverability of accounts receivable, valuation of deferred tax assets, impairment of assets, measurement of share-based payments, measurement of the fair value of tax benefits sold and valuation of reclamation obligations.

Critical accounting judgments are accounting policies that have been identified as being complex or involving subjective judgments or assessments. Critical accounting judgments used by the Company include the expected economic lives of assets, the estimated future operating results, and the net cash flows from property and equipment.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (c) Foreign currencies

#### (i) Functional currency

The reporting and functional currency of the parent entity, Peregrine Diamonds Ltd., is the Canadian dollar, the functional currency of its subsidiary, PEX, is the Canadian dollar and the functional currency of its subsidiaries, Peregrine Botswana and DEX, is the Botswana Pula.

#### (ii) Transactions and balances

Transactions in foreign currencies are initially recorded at the functional currency exchange rate at the date of the transaction. At each statement of financial position date, monetary assets and liabilities denominated in foreign currencies are translated using the exchange rate of the functional currency as at the period ending date. Non-monetary items measured in terms of historical cost in a foreign currency are translated using exchange rates as at the initial transaction dates. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at date when the fair value was measured. All foreign currency translation gains and losses are included in the consolidated statement of loss.

#### (iii) Foreign operations

The results of foreign operations are translated to Canadian dollars at an appropriate monthly average rate of exchange during the period. The assets and liabilities of foreign operations are translated to Canadian dollars at rates of exchange in effect at the end of the period. Gains or losses arising on translation of foreign operation's assets and liabilities to Canadian dollars at period end are recorded in other comprehensive income as a foreign currency translation adjustment. When a foreign operation is sold, the net cumulative exchange differences are recorded in the statement of loss as part of the gain or loss on sale of the foreign operation.

#### (d) Financial instruments

Financial instruments are classified into various categories. Held to maturity investments and loans and receivables are measured at amortized cost, with amortization of premiums or discounts, losses and impairment included in current period interest income or expense. Financial assets and liabilities at fair value through profit or loss ("FVTPL") are classified as FVTPL when the financial instrument is held for trading or designated as FVTPL. Financial instruments at FVTPL are measured at fair market value with all gains and losses included in operations in the period in which they arise. Available-for-sale financial assets are measured at fair market value with revaluation gains and losses included in other comprehensive income or loss (see (m) below) until the asset is removed from the statement of financial position, and losses due to impairment are included in operations. All other financial assets and liabilities are carried at amortized cost.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

The Company's financial instruments are cash and cash equivalents, accounts receivable, deposits on property and equipment, accounts payable and accrued liabilities, and finance lease obligation. The Company has classified its cash and cash equivalents as held for trading, accounts receivable and deposits on property and equipment as loans and receivables, and accounts payable and accrued liabilities and finance lease obligation as other financial liabilities. The carrying values of cash and cash equivalents, accounts receivable, and accounts payable and accrued liabilities approximate their fair values due to their short-term maturity. The carrying values of deposits on property and equipment and finance lease obligation approximate their fair values, as the discount rate applied approximates the market rate.

Financial instruments are initially recorded at fair value and transaction costs are added to the carrying value of financial instruments that are not subsequently measured at FVTPL.

The Company classifies and discloses fair value measurements based on a three-level hierarchy:

- Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities;
- Level 2 inputs other than quoted prices in Level 1 that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs for the asset or liability that are not based on observable market data.

#### (e) Cash and cash equivalents

Cash and cash equivalents in the consolidated statement of financial position are comprised of cash at banks and on hand and short-term deposits which have an original maturity of three months or less or are readily convertible into a known amount of cash.

#### (f) Property and equipment

#### (i) Mineral exploration assets

Assets owned are recorded at cost less accumulated depreciation and accumulated impairment losses. All direct costs related to the acquisition of mineral properties are capitalized until the properties to which they relate are ready for their intended use, sold, abandoned, or management has determined that there is impairment. On the commencement of commercial production, net capitalized costs are charged to operations on a unit-of-production basis, by property, using estimated proven and probable recoverable reserves as the depletion base.

Although the Company has taken steps to verify titles to the properties in which it has an interest, in accordance with industry standards for properties in the exploration stage, these procedures do not guarantee the Company's title. Property titles may be subject to unregistered prior agreements and noncompliance with regulatory requirements.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (ii) Other property and equipment

Other property and equipment are recorded at cost less accumulated depreciation and accumulated impairment losses. These assets are depreciated using the straight-line method over the following periods:

Office equipment, furniture and fixtures 1-3 years Plant, equipment and buildings 3-5 years

#### (g) Impairment of non-financial assets

At the end of each reporting period, the Company reviews the carrying amounts of its property and equipment to determine whether there is an indication that those assets have suffered impairment. If any such indication exists, the extent of the impairment charge would be determined based on the estimated recoverable amount of the asset (if any).

The recoverable amount of the asset used for this purpose is the higher of the fair value less costs to sell and the value in use. In assessing the value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assignments of the time value of money and the risks specific to the asset.

If the recoverable amount of the asset is estimated to be less than its recorded amount, the recorded amount of the asset is reduced to its recoverable amount. An impairment charge is recognized immediately in the statement of loss and comprehensive loss, unless the asset is carried at a revalued amount, in which case the impairment loss is treated as a revaluation decrease.

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, to a maximum amount equal to the carrying amount that would have been determined had no impairment loss been recognized for the asset in prior years.

#### (h) Exploration and evaluation expenditures

Exploration and evaluation expenditures, inclusive of exploration programs required under option agreements, net of incidental revenues, are charged to operations in the period incurred, until such time as it has been determined that a property has economically recoverable reserves and a decision to commence commercial production has occurred, in which case subsequent exploration expenditures and the costs incurred to develop a property are capitalized.

Where the Company's exploration and development activities are conducted jointly with others, its financial statements include only the Company's proportionate interests in these arrangements.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (i) Joint arrangements

A joint arrangement is a contractual arrangement whereby two or more parties undertake an economic activity that is subject to joint control. Joint control is the contractually agreed sharing of control over an economic activity, and exists only when significant operating and financial decisions relating to the activity require the unanimous consent of the parties sharing control. The Company's joint arrangements consist of joint operations.

A joint operation is a joint arrangement in which the parties to the arrangement have joint control over the assets contributed to or acquired for the purposes of the joint arrangement. Joint operations do not involve the establishment of a corporation, partnership or other entity. The Company records its proportionate interest in the assets, liabilities, revenues and expenses of its joint operations.

#### (j) Provisions

Provisions are recorded when a present legal or constructive obligation exists as a result of past events where it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate of the amount of the obligation can be made.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the statement of financial position date, taking into account the risks and uncertainties surrounding the obligation. Where a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows. When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset when it is virtually certain that reimbursement will be received and the amount receivable can be measured reliably. At September 30, 2017, there were no provisions recorded.

#### (k) Reclamation obligations

Liabilities related to environmental protection and reclamation costs are recognized when the obligation is incurred and the fair value of the related costs can be reasonably estimated. This includes future site restoration and other costs as required due to environmental law or contracts. At September 30, 2017, there were no reclamation liabilities.

#### (l) Income recognition

Interest from cash and short term investments is recorded on an accrual basis when collection is reasonably assured.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

#### (m) Comprehensive income or loss

Other comprehensive income or loss is the change in net assets arising from transactions and other events and circumstances from non-owner sources. Comprehensive income comprises net income or loss and other comprehensive income or loss. Financial assets that are classified as available-for-sale, if any, will have revaluation gains and losses included in other comprehensive income or loss until the asset is removed from the statement of financial position. Gains and losses arising on translation of foreign operation's assets and liabilities to Canadian dollars at period end are also recorded in other comprehensive income or loss as a foreign currency translation adjustment.

#### (n) Share-based payments

From time to time, the Company grants common share purchase options to directors, officers, employees and non-employees. The Company accounts for its share-based compensation plan using the fair-value method. Compensation costs, equal to the fair value of the options on the date of grant for options issued to employees and fair value of goods or services received for options issued to non-employees, are recognized in operations, with an offsetting credit to the share option reserve, over the vesting period of the related options. The cumulative expense is recognized for equity-settled transactions at each reporting date until the vesting date reflects the Company's best estimate of the number of equity instruments that will ultimately vest. Consideration received upon exercise of share purchase options, along with the related amount previously recorded in the share option reserve, is credited to share capital.

No expense is recognized for awards that do not ultimately vest. Where the terms of an equity-settled award are modified, the minimum expense recognized is the expense as if the terms had not been modified. An additional expense is recognized for any modification which increases the fair value of the award as measured on the date of modification.

#### (o) Income taxes

The provision for income taxes consists of current and deferred tax expense and is recorded in operations. Current tax expense is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the end of the period, adjusted for amendments to tax payable for previous years.

Deferred tax assets and liabilities are computed using the asset and liability method on temporary differences between the carrying amounts of assets and liabilities on the statement of financial position and their corresponding tax values, using the enacted or substantially enacted, income tax rates at each statement of financial position date. Deferred tax assets also result from unused losses and other deductions carried forward. The valuation of deferred tax assets is reviewed on a regular basis and adjusted to the extent that it is not probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized by use of a valuation allowance to reflect the estimated realizable amount.

#### 3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

(p) Loss per share

The basic loss per share is computed by dividing the net loss by the weighted average number of common shares outstanding during the period. The diluted loss per share reflects the potential dilution of common share equivalents, such as outstanding share options and warrants, in the weighted average number of common shares outstanding during the year, if dilutive. The number of additional shares is calculated by assuming that outstanding share options and warrants were exercised and that the proceeds from such exercises were used to acquire common shares at the average market price during the reporting periods. Common share equivalents have been excluded from the computation of diluted loss per share for the periods presented as including them would have been anti-dilutive.

#### 4. NEW ACCOUNTING STANDARDS AND INTERPRETATIONS

The following is a summary of new standards, amendments and interpretations that are effective for annual periods beginning on or after January 1, 2016:

(a) IFRS 11, Joint Arrangements ("IFRS 11") – amendments

The amendments to IFRS 11 provide guidance on the accounting for acquisition of interests in joint operations constituting a business. The amendments require all such transactions to be accounted for using the principles on business combination accounting in *IFRS 3*, *Business Combinations* and other IFRS standards except where those principles conflict with IFRS 11.

- (b) IAS 1, Presentation of Financial Statements ("IAS 1") amendmentsThe amendments to IAS 1 enhance financial statement disclosures and presentation.
- (c) IAS 16, Property, Plant and Equipment ("IAS 16") amendment

  The amendment to IAS 16 provides clarification of acceptable methods of depreciation and amortization.
- (d) IAS 38, Intangible Assets ("IAS 38") amendment

The amendment to IAS 38 provides clarification of acceptable methods of depreciation and amortization.

The application of the above amendments did not have any material impact on the consolidated financial statements presented.

#### 4. NEW ACCOUNTING STANDARDS AND INTERPRETATIONS (Continued)

The following is a summary of new standards, amendments and interpretations that have been issued but not yet adopted in these consolidated financial statements:

#### (a) IFRS 9, Financial Instruments ("IFRS 9")

IFRS 9 uses a single approach to determine whether a financial asset is measured at amortized cost or fair value, replacing the multiple classification options in IAS 39. The approach in IFRS 9 is based on how an entity manages its financial impairment methods in IAS 39. IFRS 9 is effective for annual periods beginning on or after January 1, 2018, with earlier adoption permitted. The Company is currently evaluating the impact of the adoption of the amendments on its financial statements; however, the impact, if any, is not expected to be significant.

#### (b) IFRS 16 Leases (IFRS 16")

IFRS 16 provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16's approach to lessor accounting substantially unchanged from its predecessor *IAS 17 Leases*. IFRS 16 replaces *IAS 17 Leases*, *IFRIC 4 Determining Whether an Arrangement Contains a Lease*, *SIC -15 Operating Leases – Incentives*, and *SIC – 27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease*. IFRS 16 is effective for annual periods beginning on or after January 1, 2019, with earlier adoption permitted if *IFRS 15 Revenue from Contracts with Customers* is also applied.

#### (c) IFRS 2 Share-based Payment ("IFRS 2") – amendments

The amendments to IFRS 2 provide clarification and guidance on the treatment of vesting and non-vesting conditions related to cash-settled share-based payment transactions, on share-based payment transactions with a net settlement feature for withholding tax obligations, and on accounting for modification of a share-based payment transaction that changes its classification from cash-settled to equity-settled. The amendments to IFRS 2 are effective for annual periods beginning on or after January 1, 2018, with earlier application permitted.

The Company is currently assessing the impact that these new and amended standards will have on the financial statements.

#### 5. PROPERTY AND EQUIPMENT

		Total	I	Mineral Exploration Assets	fuı	Office quipment, miture and fixtures		Buildings, plant and equipment
Cost	Φ	C 075 15C	Φ	4.607.020	Φ	260 442	Φ	1 000 775
Balance, September 30, 2015 Additions	\$	6,075,156 299,085	\$	4,697,038 125,000	\$	369,443 31,540	\$	1,008,675 142,545
Dispositions/write downs		(165,630)		123,000		(146,688)		(18,942)
				4.022.020				
Balance, September 30, 2016 Additions		6,208,611 15,738		4,822,038		254,295 2,227		1,132,278 13,511
Dispositions/write downs		(49,262)		-		(49,262)		15,511
Balance September 30, 2017	\$	6,175,087	\$	4,822,038	\$	207,260	\$	1,145,789
A								
Accumulated depreciation Balance, September 30, 2015	\$	(1,025,378)	Φ		\$	(300,763)	Φ	(724,615)
Additions	Ф	(191,179)	Ф	-	Φ	(45,309)	Ф	(145,870)
Dispositions/write downs		165,121		-		146,179		18,942
1		·				· · · · · · · · · · · · · · · · · · ·		
Balance, September 30, 2016		(1,051,436)		-		(199,893)		(851,543)
Additions		(187,576)		-		(33,640)		(153,936)
Dispositions/write downs		49,262	_	-		49,262	_	
Balance, September 30, 2017	\$	(1,189,750)	\$	-	\$	(184,271)	\$	(1,005,479)
Carrying amounts								
Balance, September 30, 2015	\$	5,049,778	\$	4,697,038	\$	68,680	\$	284,060
Balance, September 30, 2016	\$	5,157,175	\$	4,822,038	\$	54,402	\$	280,735
Balance, September 30, 2017	\$	4,985,337	\$	4,822,038	\$	22,989	\$	140,310
Mineral Exploration Assets		Total		Chidliak		Qilaq		WO
September 30, 2015	\$	4,697,038	\$	3,995,384	\$	125,760	\$	575,894
•	\$					-	\$	
September 30, 2016 and 2017	ф	4,822,038	\$	4,120,384	\$	125,760	Ф	575,894

#### **5. PROPERTY AND EQUIPMENT (Continued)**

#### **Mineral Exploration Assets**

#### **Nunavut**

#### Chidliak Property

The Chidliak property is wholly owned by the Company and is located 120 kilometres from Iqaluit, the capital of Nunavut, Canada. Chidliak consists of 266 mineral claims (of which, 10 lease applications have been filed) covering an area of approximately 278,000 hectares (2,780 square kilometres).

Chidliak was previously subject to a 2% gross overriding royalty. During the year ended September 30, 2016, this royalty was purchased by the Company for \$125,000 and subsequently cancelled.

#### Qilaq Property

The Qilaq property consists of 58 mineral claims covering approximately 42,000 hectares (420 square kilometres) on Baffin Island. Fifty-three of these claims are east of Chidliak, while the remaining claims are located approximately 75 kilometres south of Chidliak. These claims are wholly owned by the Company.

#### Nanua Property

The Nanuq property ("Nanuq") consists of 125 mineral claims covering approximately 125,000 hectares (1,250 square kilometres), located in Nunavut. The centre of the property is 170 km north of the town of Chesterfield Inlet and 225 km east-northeast of the town of Baker Lake. These claims are wholly owned by the Company.

#### Nanua North Property

In 2005, the Company entered into an agreement with Bluestone Resources Inc. ("Bluestone") and Hunter Exploration Group ("Hunter") on the Nanuq North property which consists of 51 claims covering an area of approximately 33,000 hectares (330 square kilometres) immediately north of the Nanuq property. Under the terms of this agreement, the Company and Bluestone currently hold a 42.8% and 37.2% interest, respectively, on a core group of 16 claims with an area of 11,605 hectares. Hunter retains a 20% property interest carried through the completion of scoping study and a gross-over-riding royalty ("GOR") of 2% on revenues generated from these 16 claims. The Company and Bluestone hold 53.8% and 46.2% interests, respectively, in the remaining 35 claims with an area of 21,451 hectares.

#### Lac de Gras Project - Northwest Territories

The Company holds 12 mining leases covering an area of approximately 8,500 hectares in the Lac de Gras region of the Northwest Territories, Canada, which encompasses three project areas: The WO property, property held jointly with Thelon Capital Inc. ("Thelon Joint Operation"), and property held 100% by the Company ("the Peregrine Lease").

#### 5. PROPERTY AND EQUIPMENT (Continued)

#### **WO Property**

The WO property, which hosts the DO-27 diamond deposit, the diamondiferous DO-18 kimberlite pipe and a number of other kimberlites, is located approximately 300 kilometres north-northeast of the city of Yellowknife in the Northwest Territories, Canada. It comprises eight mining leases covering an area of approximately 5,800 hectares (58 square kilometres). WO is held by the Company and its joint partners, the Company's current interest in this joint operation is 72.1%. The WO Property is subject to GOR's totaling 1.8%.

#### Lac de Gras Thelon Property

The Thelon Joint Operation consists of three mining leases covering approximately 1,600 hectares (16 square kilometres) located 300 kilometres northeast of Yellowknife. The Company owns a 70.6% joint operation interest in these leases. This property is subject to a GOR of 4% on diamonds and a net smelter royalty of 4% on all metals, of which 50% of either of these royalties can be purchased by the Company for \$4.0 million.

#### Lac de Gras Peregrine Property

The Peregrine Lease consists of one mining lease covering approximately 1,000 hectares (10 square kilometres) located 300 kilometres northeast of Yellowknife. This lease is wholly-owned by the Company. This property is subject to (i) a GOR on diamonds of 2%, fifty percent of which can be purchased by the Company for \$1.0 million and (ii) a GOR on diamonds of 1%, fifty percent of which can be purchased by the Company for \$1.0 million.

#### **Botswana Properties**

In August 2017 the Company agreed to sell its wholly owned subsidiary DEX which held 12 prospective diamond prospecting licenses that cover approximately 661,000 hectares (6,610 square kilometres) in five separate project areas in Botswana. All Botswanan properties will be sold with the sale of DEX (Note 15).

#### 6. EXPLORATION AND EVALUATION COSTS

Cumulative exploration and evaluation costs included in operations are:

	Total			Chidliak	Others (a)		
Balance, September 30, 2015	\$	145,227,414	\$	49,164,631	\$ 22,478,002	\$	73,584,781
Expenditures for the year ended September 30, 2016		3,775,518		3,174,335	85,155		516,028
Balance, September 30, 2016	\$	149,002,932	\$	52,338,966	\$ 22,563,157	\$	74,100,809
Balance, September 30, 2016	\$	149,002,932	\$	52,338,966	\$ 22,563,157	\$	74,100,809
Expenditures for the year ended September 30, 2017		6,636,228		6,188,606	4,939		442,683
Balance, September 30, 2017	\$	155,639,160	\$	58,527,572	\$ 22,568,096	\$	74,543,492

<sup>(</sup>a) Includes cumulative expenditures on the WO project to September 30, 2017 and 2016 of \$50.8 million and \$50.7 million, respectively.

#### 7. INVESTMENT IN JOINT ARRANGEMENTS

#### **WO Joint Operation**

The Company has a 72.1% interest in a joint operation formed to explore for diamonds at the WO property in the Northwest Territories. As the Company has a majority interest in the joint operation, it is the operator of the joint operation. Under the terms of the joint operation, participants can elect to withhold funding of the joint operation resulting in the dilution of their respective interests.

For the year ended September 30, 2017, the WO joint operation incurred expenditures of \$26,000 (2016 - \$97,000). In addition, no cash contributions were received from other joint venture participants in respect of their proportionate share of joint venture expenditures incurred in 2017 and 2016. The WO joint operation owned no significant net assets as at September 30, 2017. There are no contingent or other liabilities relating to the Company's interest in the WO joint operation which have not been recorded in the Company's accounts.

#### 8. FINANCE LEASE OBLIGATION

The Company entered into an agreement for the lease of equipment. This lease agreement transferred substantially all the risks and rewards incidental to the ownership of the equipment to the Company and the Company considered it as a purchase and finance agreement. Accordingly, at the commencement of the lease term, the Company recognized this agreement as the acquisition of an asset and liability at amounts equal to the present value of the minimum lease payments. The discount rate used in calculating the present value of the minimum lease payments was the interest rate stated in the finance lease.

	 September 30,				
	 2017	2016			
Present value lease payments outstanding	\$ 92,322	\$	120,470		
Less current portion	(29,870)		(28,148)		
Long-term portion	\$ 62,452	\$	92,322		

#### 9. INCOME TAXES

	September 30,				
		2017		2016	
Deferred tax assets					
Mineral exploration assets	\$	465,799	\$	465,799	
Investments		12,621		12,621	
Other property and equipment		668,868		628,165	
Exploration expense pools		29,604,747		27,796,632	
Tax loss carry forwards		8,311,760		7,672,565	
Share issue costs		151,525		154,860	
Charitable donations		390		880	
Total deferred tax assets		39,215,710		36,731,522	
Valuation allowance		(39,215,710)		(36,731,522)	
Net deferred tax assets	\$	-	\$	-	

A reconciliation of the provision for recovery of income taxes is as follows:

	Year Ended September 30,				
		2017		2016	
Loss before income taxes	\$	9,238,053	\$	8,154,785	
Combined Canadian federal and provincial statutory					
tax rates		26.0%		26.0%	
Recovery of income taxes based on combined statutory tax rates	\$	2,401,894	\$	2,120,244	
Net tax effect of items that are not taxable or deductible		(127,592)		(268,731)	
Tax effect relating to items that are tax deductible		81,653		67,071	
Lower effective tax rate in foreign jurisdiction		(10,465)		(28,710)	
Other		139,118		(624,482)	
Increase in valuation allowance		(2,484,608)		(1,265,392)	
	\$	-	\$		

At September 30, 2017, the Company has unrecognized non-capital losses for income tax purposes of approximately \$32.1 million (2016 - \$29.6 million) which may be used to offset future taxable income. \$30.9 million (2016 - \$28.7 million) of these losses, if not utilized, will expire during the period 2026 to 2037 and \$1.2 million (2016 - \$1 million) of these losses may be carried forward indefinitely. In addition to these tax losses, the Company has resource related expenditures of approximately \$120.5 million (2016 - \$113.5 million), net of renounced exploration expenditures, which can be used to offset future Canadian taxable income and can be carried forward indefinitely. The Company also has \$2.6 million (2016 - \$2.6 million) of unused tax credits which expire between 2028 and 2034.

#### 10. SHARE CAPITAL

- (a) The Company's authorized capital consists of an unlimited number of common shares without par value. At September 30, 2017, 442,151,936 common shares were issued and outstanding.
- (b) Share purchase options are granted at an exercise price equal to the estimated fair value of the Company's common shares on the date of the grant.

The Company may grant share purchase options to purchase up to 10% of its issued and outstanding common shares from time to time. Options generally vest over 12 to 36 months from the grant date and generally expire five to ten years after the grant date.

A summary of the status of the Company's share purchase options outstanding as at September 30, 2017 and 2016 and changes during the periods ended on those dates are presented below:

	Year En	ıded	Year En	Year Ended			
	September 3	30, 2017	September 3	0, 2016			
		Weighte	d	Weighted			
		Averag	ge	Average			
	Number	Exercis	e Number	Exercise			
	of Shares	Pric	e of Shares	Price			
Outstanding at beginning							
of period	30,248,500	\$ 0.29	25,238,500	\$ 0.32			
Granted	5,025,000	0.13	7,490,000	0.23			
Exercised	-	-	(250,000)	0.20			
Forfeited /Expired	(1,745,000)	0.30	(2,230,000)	0.42			
Outstanding at end of period	33,528,500	0.26	30,248,500	0.29			
Options exercisable at end of period	26,084,750	\$ 0.29	21,486,000	\$ 0.30			
Weighted average remaining contractual life	3.2 years		3.7 years				

#### 10. SHARE CAPITAL (Continued)

As at September 30, 2017, the following share purchase options were outstanding:

Weighted Average Exercise	Outstanding	Weighted Average Remaining Contractual	Exercisable
Price	Options	Life (Years)	Options
\$0.12	4,700,000	5.0	1,175,000
\$0.20	1,158,500	0.9	1,158,500
\$0.21	350,000	2.4	350,000
\$0.23	7,720,000	3.8	3,801,250
\$0.30	14,610,000	2.5	14,610,000
\$0.35	3,840,000	2.5	3,840,000
\$0.38	1,000,000	5.0	1,000,000
\$0.65	150,000	1.4	150,000
\$0.26	33,528,500	3.2	26,084,750

The weighted average grant-date fair value of the share purchase options granted during the years ended September 30, 2017 and 2016 was estimated at \$0.07 and \$0.13, respectively, using the Black-Scholes option pricing model and the following assumptions:

Year	Year Ended September 30,			
2017		2016		
	1.19%	0.54%		
	81%	93%		
	3.0	3.0		
	\$Nil	\$Nil		
\$	0.13	\$0.22		
\$	0.13	\$0.23		
	\$	2017 1.19% 81% 3.0 \$Nil \$ 0.13		

The effects of early exercise were incorporated in the estimate of the expected life of the share purchase options. Expected volatility was determined based on historic volatility of the Company's share price over a period ending on the grant date of the instrument and commensurate with the instrument's expected life. Other features of options granted did not affect the calculation of grant date fair value.

Subsequent to September 30, 2017, a total of 215,000 share purchase options with exercise prices ranging from \$0.23 to \$0.35 were cancelled.

#### 10. SHARE CAPITAL (Continued)

#### (c) Outstanding Warrants

		Exercise	
Issue Date	Warrants	Price	Expiry Date
August 17, 2017	2,000,000	\$0.20	August 16, 2019

The fair value of the warrants issued on August 17, 2017 was estimated at \$0.04 using the Black-Scholes option pricing model and the following assumptions: annualized volatility of 80.7%, risk free interest rate of 0.75%, expected warrant term of 2 years and an expected dividend rate of Nil.

#### 11. RELATED PARTY TRANSACTIONS

Remuneration of directors and key management personnel was as follows:

	Year Ended September 30,				
	2017	2016			
Salaries	\$ 941,904	\$ 1,176,068			
Short-term employee benefits	57,907	49,947			
Reorganization expenses (Note 12)	-	337,000			
Share-based payments	350,078	899,207			
	\$ 1,349,889	\$ 2,462,222			

Short-term employee benefits include the cost of health and life insurance plans.

In June 2017, the Company entered into an agreement whereby the Company's Executive Chair agreed to lend the Company up to \$1.0 million. This loan was unsecured and accrued interest at a rate of 12% per annum, compounded yearly and not in advance. The loan was repayable on or before the earlier of September 30, 2017 and two business days after the date on which the Company completed any equity financing by way of issuance of shares. A total of \$900,000 was advanced under this loan facility during June and July, 2017. This amount, plus accrued interest of \$9,929, was repaid by the Company in August 2017.

#### 12. REORGANIZATION EXPENSES

Reorganization expenses of \$545,993 incurred during the year ended September 30, 2016 consist of payment obligations in respect of the termination of employment contracts (\$507,331) and costs associated with the relocation of the Company's corporate office (\$38,662).

#### 13. MULTI-EMPLOYER PENSION PLAN (CPP)

The Company contributes to the Canada Pension Plan, a national multi-employer, contribution based pension plan in Canada on behalf of its employees. During the year ended September 30, 2017, the Company made contributions totaling \$32,422 (2016 - \$41,386).

#### 14. CASH FLOW INFORMATION

(a) Net change in non-cash working capital items:

	Year Ended September 30,			
	2017		2016	
Accounts receivable	\$	(238,822)	\$	(451)
Prepaid expenses		178,134		(213,827)
Accounts payable and accrued liabilities		2,194,741		(899,349)
	\$	2,134,053	\$	(1,113,627)

#### (b) Supplementary information regarding other non-cash transactions:

	Year Ended September 30,			
	2017		2016	
Transfer from share option reserve to share capital				
on exercise of share purchase options	\$	-	\$	(39,658)
Purchase of property and equipment under finance				
lease		-		(123,350)
Transfer from share capital for fair value of warrant	S			
issued on rights offering		(76,619)		-

#### (c) Other information:

	Year Ended September 30,			
	 2017		2016	
Interest received	\$ 20,644	\$	56,054	
Interest paid	\$ (16,337)	\$	-	

#### 15. DISCONTINUED OPERATIONS

During the year ended September 30, 2017, the Company agreed to sell DEX in exchange for a 1% gross-over-riding royalty on revenue from the sale of production from any mineral properties held or acquired by DEX in areas identified as targets by DEX in the sale agreement. Closing of this agreement is contingent upon the receipt of approval from Botswana regulators for the transfer of ownership of certain mineral exploration licenses held by DEX.

	Year Ended September 30,			
		2017	2016	
EVDENCES				
EXPENSES			_	•
Consulting	\$	-	\$	297
Filing fees		-		30
Exploration		261,616		732,954
Net loss from discontinued operations	\$	261,616	\$	733,281
Basic and diluted loss per share	\$	-	\$	-

Cash flows (used in) from the discontinued operations are as follows:

	Year Ended September 30,			ıber 30,
	2017		2016	
Net cash (used in) from operating activities	\$	(43,712)	\$	49,640
Net cash (outflow) inflow for the year	\$	(43,712)	\$	49,640

#### 16. SEGMENT DISCLOSURES

- (a) The Company operates in one industry segment (Note 1).
- (b) At September 30, 2017, the Company's mineral exploration assets, recorded at \$4,822,038 (2016- \$4,822,038), were located solely in Canada.
- (c) At September 30, 2017, the Company's other capital assets, recorded at \$163,299 (2016 \$335,137), were located solely in Canada.
- (d) For the year ended September 30, 2017, the Company incurred \$6,636,228 (2016 \$3,775,518) in exploration expenditures on its mineral property assets in Canada.

#### 17. COMMITMENTS AND CONTINGENCIES

The Company has applied for 10 mining leases at the Chidliak property and holds 12 mining leases at the Lac de Gras project. The minimum future annual payments under the leases are as follows:

Years Ending September 30,	
2018	\$ 47,215
2019	\$ 47,215
2020	\$ 47,215
2021	\$ 47,215
2022	\$ 47,215

In accordance with the terms of a contract for drilling services, the Company is required to demobilize drilling equipment from the Chidliak property in Nunavut to Montreal, PQ. Estimated costs for this demobilization range between \$2.0 million and \$3.0 million and these costs could potentially be incurred as early as 2018.

The minimum future annual payment under the Company's equipment finance lease is as follows:

Years Ending September 30,	
2018	\$ 29,870
2019	\$ 31,696
2020	\$ 30,756

#### 18. MANAGEMENT OF CAPITAL

The Company's objectives are to safeguard the Company's ability to continue as a going concern in order to pursue the development of its mineral properties. The Company considers its capital as its shareholders' equity.

The Company manages and adjusts its capital structure whenever changes to the risk characteristics of the underlying assets or changes in economic conditions occur. To maintain or adjust the capital structure, the Company may attempt to issue new shares or acquire, dispose of or jointly operate certain of its assets.

In order to facilitate the management of its capital requirements, the Company prepares annual expenditure budgets which are revised periodically based on the results of its exploration programs, availability of financing and industry conditions. Annual and any materially updated budgets are approved by the Board of Directors. As of the consolidated financial statement date there are no external restrictions on the Company's capital.

#### **18.** MANAGEMENT OF CAPITAL (Continued)

In order to maximize ongoing development efforts, the Company does not pay out dividends. The Company's investment policy is to invest any excess cash in liquid short-term interest-bearing instruments with maturities in 90 days or less. When utilized, these instruments are selected with regard to the expected timing of expenditures from continuing operations. As the Company does not have sufficient financial resources to undertake all of its currently planned exploration programs, further exploration and development of the Company's mineral properties in the near and long term will depend on the Company's ability to obtain additional funding through equity or debt financing or through the joint operation of projects. Actual funding requirements may vary from those planned due to a number of factors, including the progress of exploration and development activities. The Company believes it will be able to raise capital as required in the long term, but recognizes there will be risks involved that may be beyond its control.

#### 19. FINANCIAL INSTRUMENTS

(a) Fair value information

The Company classifies and discloses its fair value measurements based on a three-level hierarchy as described in Note 3(d).

(b) Financial instrument risk exposure

The Company's financial instruments are exposed to certain risks, which include credit risk, liquidity risk and market risks, comprising interest rate risk and other market price risk.

#### Credit risk

Credit risk is the risk of an unexpected loss if a customer or third party to a financial instrument fails to meet its contractual obligations. The Company's cash and cash equivalents are held at large Canadian financial institutions. Accounts receivable consist mostly of refundable taxes due from the Government of Canada. Deposits are primarily mineral property permits which will be refunded by the Government of Canada. As such, the Company considers this risk to be minimal. The carrying amount of financial assets represents the maximum credit exposure.

#### Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. Accounts payable and accrued liabilities are due within the current operating period. The Company manages liquidity risk through the management of its capital structure (Note 18).

#### 19. FINANCIAL INSTRUMENTS (Continued)

#### Market risk

#### (a) Interest rate risk

Interest rate risk is the risk that the fair value of future cash flows from a financial instrument will fluctuate because of changes to market interest rates. The Company is exposed from time to time to interest rate risk when it renews its fixed rate cash equivalent investments. The sensitivity of the Company's loss before tax to a reasonably possible change in interest rates upon renewal, based on review of historical and economic forecaster's expectations, is expected to be minimal. The risk that the Company will realize a loss as a result of a decline in the fair value of these investments is limited as these investments are highly liquid securities with short-term maturities.

#### (b) Other market price risk

The Company is exposed to market risk related to the fluctuation in the market price of its investments. Although considered available for sale, the Company's investments have been acquired as a result of property transactions and, to a large extent, represent strategic investments in related mining companies and their underlying properties. These investments do not normally represent core assets of the Company nor are they considered to be material. However, the Company closely monitors the market values of these investments in order to determine the most appropriate course of action.

Schedule of Exploration Expenditures For the Years Ended September 30, 2017 and 2016 (Expressed in Canadian Dollars)

	 2017		2016	
Salaries	\$ 950,050	\$	753,310	
Share-based payments	136,207		164,500	
Fuels	215,571		55,113	
Sampling	1,088		2,760	
Drilling	1,999,535		311,625	
Sample processing	34,700		791,610	
Camp costs	608,816		145,202	
Rental, lease and charter	1,872,808		659,681	
Environmental	81,018		66,786	
Fees and licenses	33,684		27,384	
Consulting	127,339		7,632	
Geological consultants	7,383		40,831	
Engineering consultants	99,030		463,575	
Logistics consulting	45,838		7,493	
Administration	96,554		40,593	
Travel	157,798		98,434	
Repairs & maintenance	14,873		-	
Depreciation	153,936		145,870	
Expense recoveries	-		(6,881)	
	\$ 6,636,228	\$	3,775,518	

No.: **ET8329** 

### ےد<sup>ہ د</sup> Nunavut

Canada

BUSINESS CORPORATIONS ACT

### CERTIFICATE OF REGISTRATION OF AN EXTRA-TERRITORIAL CORPORATION

LOI SUR LES SOCIÉTÉS ACTIONS

## CERTIFICAT D'ENREGISTREMENT D'UNE SOCIÉTÉ PAR ACTIONS EXTRATERRITORIALE

I HEREBY CERTIFY THAT

JE CERTIFIE PAR LA PRÉSENTE QUE

#### PEREGRINE DIAMONDS LTD.

a body corporate incorporated under the laws of

une personne morale constituée

En vertu des lois

#### Canada

was registered under Part XXI of the Business Corporations Act of Nunavut, the Statement of Registration of which is attached.

était enregistrée en vertu de la partie XXI de la *Loi sur les sociétés par actions au Nunavut*, la déclaration d'enregistrement en faisant foi

étant jointe.

Date of Registration Enregistrement fait le

31-Aug-2004



No.: ET8329

### ے مے ک<sup>c</sup> Nunavut CANADA

**BUSINESS CORPORATIONS ACT** 

### CERTIFICATE OF COMPLIANCE OF AN EXTRA-TERRITORIAL CORPORATION

LOI SUR LES SOCIÉTÉS ACTIONS

## CERTIFICAT DE CONFORMITÉ D'UNE SOCIÉTÉ PAR ACTIONS EXTRATERRITORIALE

I HEREBY CERTIFY THAT

JE CERTIFIE PAR LA PRÉSENTE QUE

#### PEREGRINE DIAMONDS LTD.

a body corporate incorporated under the laws of

une personne morale constituée En vertu des lois

#### Canada

registered under Part XXI of the Business Corporations Act of Nunavut, has filed with the Registrar of Corporations, the required annual returns and is, with respect to the filing of annual returns, in good standing on the records of the Registrar.

enregistrée en vertu de la partie XXI de la Loi sur les sociétés par actions au Nunavut, a déposé auprès du registraire des sociétés par actions le rapport annuel exigé et renconte les exigences du registraire relatives au dépôt des rapports annuels.



Dated Fait le 19-Dec-2017

DEPUTY / REGISTRAR OF CORPORATIONS
REGISTRAIRE OU REGISTRAIRE ADJOINT DES SOCIÉTÉS PAR ACTIONS

Schedule 11 – Bibliography of Assessment Reports

Fid.	Project	Assessment Report Number	Report Date
1	Nanuq Project	84623	Mon, Dec 15, 2003
2	Nanuq Project	84756	Tue, Dec 7, 2004
3	Nanuq Project	84836	Tue, Mar 1, 2005
4	Nanuq Project	84967	Fri, Jan 13, 2006
5	Nanuq Project	85027	Fri, Apr 28, 2006
6	Nanuq Project	85348	Sat, Jun 28, 2008
7	Nanuq Project	85517	Mon, Nov 9, 2009
8	Nanuq Project	85728	Wed, May 23, 2012

#### **Schedule 12 - English Summary of Walter Licence Renewal**

Peregrine Diamonds Ltd, ("Peregrine") is a diamond exploration company that has operated the Nanuq Project since 2003 when the original mineral claims were staked. The project is located approximately 275 kilometers northeast of Baker Lake. During the ensuing years Peregrine has discovered three kimberlite volcanoes that contain diamonds.

These kimberlites were discovered though a variety of techniques including heavy mineral sampling, prospecting mapping, geophysics and drilling. All activities were based out of Peregrine's Nanuq Camp located next to the Lorillard River.

The last significant field exploration program on the Nanuq Project was undertaken during the summer of 2011 and included drill testing geological and geophysical anomalies.

Camp field inspections were carried out in 2012 and 2014. A small sampling program was undertaken on the same day as the field inspection.

In 2014 the draft Nunavut Land Use Plan spontaneously labelled the Nanuq Project as being occurring in a caribou calving area. At this time all exploration activities were halted and Peregrine indefinitely suspended all Nanuq with the Nunavut Mining Recorder until this matter is clearly resolved.

In 2016 the Nanuq Camp was partially demobilized and all fuel liabilities removed to ensure that the camp area remained tidy and secure.

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# Spill Contingency Plan for the **Nanuq Project**

Kivalliq Region, Nunavut NTS 56G

Peregrine Diamonds Ltd.

Suite 654 – 999 Canada Place Vancouver, British Columbia V6C 3E1

June 27, 2018

#### Nanuq Project Spill Contingency Plan June 27, 2018

#### **Introduction**

This document is an updates Spill Contingency Plan for the Nanuq Project. It builds upon previous Spill Contingency Plans for the Project and shall be in effect as of June 27, 2018. At present the Nanuq Project is on hiatus due to uncertainty regarding the draft Nunavut Land Use Plan.

The Nanuq Claim Block is located on 1:50,000 NTS Maps, 56G02, 56G06, 56G07, 56G08, 56G10 and 56G11. The field camp, "Nanuq Camp", is located on NTS Map 56G03 and the coordinates are as follows:

**Projection:** Latitude/Longitude

**Datum:** WGS84 **Latitude:** 65° 13' 43" **Longitude:** -91° 05' 26"

This location is approximately 280 kilometres at heading 10.14 degrees (north-northeast) of Rankin Inlet.

All employees, whether permanent or casual, and programme contractors, are required to be trained in spill procedures. All spills, regardless of how small, will be recorded and catalogued. Only spills that meet reportable thresholds will be called into the 24 hour spill response line so as not to burden government officials with minor spills. Peregrine will keep a catalogue of spills for statistical purposes.

#### **Background as of October 31, 2016**

The exploration camp (Latitude 65°13'43"N Longitude 91°05'26"W) was partially demobilized in July 2016. At present there are only three wooden buildings, a wooden platform, an outhouse and an incinerator. *All fuel has been removed from the Nanuq Project Area*. The last drilling on the Nanuq Project occurred on 2011. All drill materials were removed upon the completion of drilling.

**Table 1:** Projected Fuel Types for 2016 to 2017

Fuels	Containers	Capacity
Diesel for camp stoves, drills, generators heaters	0 drums	205L
Aviation turbine fuel (Jet-A)	0 drums	205L
Unleaded petrol (gasoline)	0 drums	205L
Propane	0 cylinders	45kg

#### **Spill Procedures**

A <u>spill</u> is classified as the discharge of petroleum products or other dangerous substances into the environment. Potential hazards created by the spill for humans, vegetation, water resources, fish and wildlife vary in severity, depending on several factors, including nature of the material, quantity spilled, location and season. Refer to the detailed section *Spill Response Actions: By Product* for specific response information.

The general emergency response to be followed in the event of a spill at the Nanuq Project, NU, is:

- 1) **Protect people** prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion
- 2) *Identify the product and its source* check container design, warning labels, markings, Material Safety Data Sheets, etc., to enable prompt and appropriate response
- 3) Stop the flow at the source reduce or terminate the flow of product without endangering anyone
- 4) Assess the seriousness of the spill assess potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources
- 5) *Clean up the spill* follow procedures appropriate for the location, environment, material and time of year.
- 6) **Report the spill** A spill report will be completed for all spills and all spills will be documented. Only spills at or above the reporting threshold will reported to the NU 24-hour Spill Report Line so as not to burden the officials with minor occurrences. Figures 1 and 2 are images of the spill report to be completed by Peregrine personnel including location of spill, (company) name of polluter, type and amount of material spilled, date and time of the spill, any perceived threat to human health or the environment, and remedial actions taken and planned
- 7) **Evaluate and learn** after the emergency has passed, evaluate the incident and the clean up procedure with the goal of continuous improvement in prevention and response; train or re-train personnel and ensure a practice incident-and-response drill is held at least once per field season.

 Table 2: Important Placards

#	Fuel Name	UN Number	Placard
1.	Diesel Fuel & Stove Oil	1202	1202
2.	Jet A	1863	1863
3.	Gasoline	1203	1203
5.	Propane	UN1075	1075

 Table 3: Important Contact Information

Organization	Description	Telephone
Environment Canada	24 Hour Spill Report Line	1-867-920-8130 (Igaluit)
	The state of the s	1
AANDC	Land & Water Inspector	1-867-645-2839 (Rankin Inlet
AANDC	_	`
	(Currently Christine Wilson)	Christine.Wilson@aandc-aadnc.gc.ca

#### **Permits and Authorizations**

The Nanuq Project consists of 125 mineral claims with an aggregate area of 125,402.19 hectares. All claims are on Crown Land.

- 1) INAC Class "A" Land Use Permit N2012C0028
  - a. Issued: May 28, 2013
  - b. Expires: June 13, 2018
  - c. Renewal in process
- 2) NWB Class "B" Water Use and Waste Water Disposal Permit #2BE-NAN1318
  - a. Issued: January 18, 2013
  - b. Expires: June 30, 2018
  - c. Renewal in process
- 3) GN Department of Environment Waste Generator Number #NUG-100030
  - a. Issued: April 8, 2008
  - b. Expires: No expiry

#### **Spill Response Team Leaders**

The following two positions will be physically present at the Nanuq site, in respect of management or control of contaminants.

- 1) **Project Manager:** To be determined at time of field operations (Alan O'Connor)
- 2) **Land Manager:** will be informed of all spills (David Willis).

#### **Training and Practice Drills**

All personnel on site will be trained in spill response procedures. Training will be conducted at the camp induction and at least one drill will be conducted per season. Initial or refresher training (practice drills), as appropriate, provided once per field season.

Regular inventory updates will be provided in list form to all team members. Information to be reported includes listing of all spill response resources, their location, condition, date of last inspection and any special comments.

#### **Spill Response Kits**

Spill response kits and additional bundles of absorbents will be located at:

- 1. All fuel stations
- **2.** At the drill(s) during drill operations
- 3. At any trenching operations
- **4.** Within the camp
- **5.** On heavy equipment sleds

**Table 4:** General Response Inventory –Nanuq Property

#	Item	Location
1.	Fire extinguishers (valid/recharged) in each structure:	Tents, Drill Shack
2.	Water pump and spare; hoses and fittings	Camp Dry and Drill Shack
3.	Hammers, assorted weights	Camp Dry and at Drill Shack
4.	Assorted 10L-20L plastic pails;	Camp Dry and Drill Shack
6.	127L plastic garbage bags (boxes of 20 each)	Kitchen and Latrine
7.	Plastic tarps – assorted sizes	Camp Dry
8.	Liner material (minimum 30mm),	Camp Dry
9.	Extra bundles of absorbents	Camp Dry
10.	Fuel-transfer pump	Camp and Drill Shack
11.	Empty drums for contained spilt substances	Camp

#### **Used Drum Disposal**

The majority of used fuel drums (205L) for Jet-A fuel, diesel and unleaded petrol are returned to Iqaluit and handled by Nunatta Environmental Services Inc. ("Nunatta"). Nunatta cleans the drums of any residual fuel then crushes them. Some empty drums are retained at camp as excess containment vessels to be used in the event of a large spill

#### Fuel Spills; Risk Assessment and Preventative Measures

The possibility of a fuel spill on Peregrine projects will vary, depending on a number of factors, including human error, mechanical failure, road conditions, weather conditions, etc. Table 4 details risk assessment and mitigations.

 Table 5: Risk Assessment & Preventative Measures

POTENTIAL PROBLEM	IMPACT	PROBABILITY	PREVENTATIVE MEASURES
Diesel or Oil Major leak from drums	High	Low	<ul> <li>Training/refresher training for site personnel who handle fuels.</li> <li>Daily inspections and monitoring</li> <li>Placement of drums in a suitable area (e.g. depression), with natural drainage pattern away from water,</li> <li>Berming with peat bales or snow.</li> <li>Secure drums in use on proper stands</li> </ul>
A spill from a valve left open or a break in a transfer hose.	High	Moderate	<ul> <li>Daily inspections to ensure all valves are either closed (when not needed), or that a catch pail is installed beneath valves, e.g., at tents, drill shacks, Fuel transfer hoses will have a double locking mechanism and undergo daily inspection as part of the routine work cycle, to check for soundness and wear.</li> <li>Markers around all fuel transfer lines.</li> </ul>
Pump Failure	Low	Low	Pumps are to be inspected weekly and -serviced monthly.
Broken Or Blocked Drill Sludge Lines	Low	Moderate	Lines are inspected daily as part of the routine work cycle.
Chemical Spills	Low – High	Low	<ul> <li>Training in the handling of chemicals will take place to ensure safe handling.</li> <li>Chemicals will be stored in their original labelled drums, bottles, canisters or packages.</li> <li>Chemicals will be stored in such a way as to protect from the weather or spillage, and be in non-reactive trays, underlain with liner material or absorbents to prevent chemicals coming into contact with soil or tent floors.</li> <li>Regular inspections will take place of stored chemicals.</li> <li>Inventory controls in place</li> </ul>
Gases (oxygen, acetylene, propane, argon, carbon dioxide)	Low-High	Low	<ul> <li>Training/refresher training for site personnel who handle gases.</li> <li>Stored in designated areas until required, secured upright.</li> <li>Daily checks of cylinders in use, including gas-detector monitoring, as necessary.</li> </ul>

٨	REPORT DATE: MONTH - DAY - YEAR  □ ORIGINAL SPILL REPORT,			REPORT LINE USE ON						
A						OR	ILL REPOR	RT,	REPORT NUMBER	
В	OCCURRENCE DATE: MONTH - DA	eden sederació					OTHE ORIGINAL SPILL REPORT			
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G	ANY CONTRACTOR INVOLVED		CONTRACTOR	ADDRESS	OR OFFICE L	OCATION				
1	PRODUCT SPILLED		QUANTITY IN	LITRES, KILO	OGRAMS OR	CUBIC METRE	S U.N. NUMBI	ER		
H	SECOND PRODUCT SPILLED (IF A	PPLICABLE)	QUANTITY IN	LITRES, KILO	OGRAMS OR	CUBIC METRE	S U.N. NUMBI	ER		
I	SPILL SOURCE		SPILL CAUSE				AREA OF C	ONTAMINA	ITION IN	SQUARE METRES
	FACTORS AFFECTING SPILL OR RECOVERY DESCRIBE AN		NY ASSISTANCE REQUIRED HAZARDS TO		O PERSONS, PROPERTY OR ENVIRONMENT					
J	FACTORS AFFECTING SPILL OR R ADDITIONAL INFORMATION, COMM									
					N, RECOVER (	OR DISPOSE (		DOUCT AND	D CONTA	
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AGE	REPORTED TO SPILL LINE BY  ANY ALTERNATE CONTACT  RECEIVED AT SPILL LINE BY  D AGENCY DEC DOOG D GNW	POSITION POSITION POSITION STATION OPERATO	REPORT LI	EMPLOYE  EMPLOYE  EMPLOYE  SIGNI	ER ER IFICANCE	OR DISPOSE (	LOCATION CALL ALTERNATE COL LOCATION LOCATION CALL YELLOWKNIFE,	ING FROM	D CONTA	TELEPHONE  ALTERNATE TELEPHON  REPORT LINE NUMBER  1867) 920-8130

**Figure 1:** Updated Spill Report Form Part A

# PEREGRINE DIAMONDS LTD. SPILL REPORT SUPPLEMENTAL QUESTIONNAIRE DATE: PART I: What events lead up to the incident? PART II: What Mitigation Measures were taken? PART III: What are the planned preventative measures to avoid future similar incidents? PART IV: What is the planned disposal method and chain of custody? (Include: 1)Who handled it, 2) Where it was stored, 3) How it was shipped and 4) All bills of lading)

Figure 2: Updated Spill Report Form Part 2

#### Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number: the spill line will assign a number after the spill is reported.
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
D. Geographic Place Name	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E).
E. Geographic Coordinates	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.
F. Responsible Party Or Vessel Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and email. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.
G. Contractor involved?	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.
H. Product Spilled	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)
I. Spill Source	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m²)
J. Factors Affecting Spill	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.
K. Additional Information	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.
N. Report Line Use Only	Leave Blank. This box is for the Spill Line's use only.

Figure 3: Instructions for Completing the NT-NU Spill Report Form

#### **Product Categories**

The greatest potential risk for spills within the project area comes from fuels (Flammable Immiscible Liquids). These substances are all hydrocarbon-based and will ignite under certain conditions. Petrol (gasoline) and aviation fuels pose the greatest fire and safety hazard and are not recoverable when spilled on water.

#### **Action Plan Steps**

- Confirm that a spill has occurred. It may not be obvious if a spill has occurred look for:
  - o pooled liquid.
  - o damage to equipment/tanks.
  - o smell of fuel or chemicals and
  - o leaks from hatches, valves or other fixtures

#### **Assess the Situation**

- Before initiating response actions, take the time to determine the nature of a spill and to
  collect some or all of following facts: potential risk of fire, explosion and environmental
  damage.
- extent of injuries to co-workers or the public.
- source and approximate size of the spill.
- possible methods to stop the flow of product; and
- proximity to water.

#### **Take Action**

- Eliminate ignition source(s) if safe to do so.
- Shut off spill source if safe to do so.
- Call out emergency on radio to alert camp (so that spill response team can mobilize)
- Attend to any injured persons.
- Restrict personnel to the spill site using barriers or marker tape.
- Warn others in the area of the spill.
- Use an explosion meter to monitor atmospheric gas concentrations.
- Transport Spill Kit to the spill site.
- Control spreading and minimise impacts.
- Report spill to Peregrine management.

#### **Spill Containment and Recovery**

Special care should be taken to ensure that spilled material does not reach waterbodies where recovery is more difficult. Ice augers (under appropriate conditions) can be effective in terms of locating and exposing oil for burning or pumping off.

#### **Response Organization**

On rare occasions, additional company and outside resources may need to be brought in to support the spill clean-up. For a major incident, the Project Manager would mobilise Peregrine, contractor and outside expertise for the response.

#### **General Responsibilities**

The following provides a general guide to the Spill Response Organisation responsibilities. In some cases, certain Peregrine personnel may fill dual roles, depending upon the circumstances of the incident.

In most incidents, the Camp Manger, working with the site Spill Response Team, will handle the initial response, containment and clean-up. In larger incidents, Peregrine management will play a more active role. In all cases, Peregrine management will be notified immediately of a spill and will be responsible for notifying the 24-hour Spill Line or assigning this task to a designate.

#### **Individual Discovering Incident**

- Assess the initial severity of the spill and safety concerns.
- Identify the source of the spill
- Report all spills to Supervisor.
- Determine the size of the spill and stop or contain it, if possible.

#### **Spill Response Team**

- Conduct the cleanup of spills under the direction of the Supervisor.
- Deploy booms, absorbent and other equipment and materials as required.
- Take appropriate response measures.
- Continue the cleanup as directed by the Supervisor or until relieved.

#### **Supervisor**

- Assist in initial and ongoing response efforts.
- Supervise the Spill Response Team.
- With work crew, take initial action to seal off the source and contain spill.
- Decide with Peregrine management if mobilization of additional equipment is required.
- Assess whether burning is a viable clean-up measure. Consult regulatory agency (Environment Canada on Spill Line can provide initial guidance).
- Ensure co-ordination of equipment and manpower as needed (Peregrine and contractors)
- Ensure expeditious response and clean-up of spill site and impacted area.

#### Additional Resources - Support Team to the Spill-Response Team

- Provide assistance to Supervisor as required.
- Responsible for mobilizing additional Peregrine support staff, security and other contractors as required.

#### **Peregrine Management**

- Records the time of the report, source of information and details on location, size, type of spill and any other information available on the Spill Report Form.
- Ensures that the spill is reported to the NU 24-Hour Spill Report Line.
- Oversees or directs the clean-up operation until it is satisfactorily completed.
- Together with the Supervisor, decides if additional equipment is required to contain and clean-up spills.
- Maintains contact with Supervisor to ensure final inspection and sign-off on the spill.
- Notifies internal company departments.
- Initiates Mutual Aid Agreements if so required.
- Oversees completion and distribution of the Spill Report.
- Ensures investigation identifies measures to prevent similar spills.
- Provides clean-up advice to the Supervisor.
- Assists with preparation of press releases.
- Provides advice on storage and disposal options.
- Ensures that there are follow-up reports prepared on the spill event, clean-up and environmental impacts.
- Ensures that post-spill reports are completed and takes action, as necessary, to prevent a recurrence.
- Liaises with government agencies (as required)

#### **Response Resources**

A wide variety of spill control/recovery equipment and material exists for dealing with spills of petroleum products and chemical reagents.

#### **Response Equipment Deployment**

All equipment is stored in such a manner as to be readily available on short notice.

The Supervisor would immediately respond to a reported spill site by notifying site personnel to move into place the materials necessary to provide control and clean-up (e.g., shovels, refuge drums, tarps, liner material <sup>2</sup>, etc.). Emergency spill containment and recovery materials and supplies are available on site for immediate mobilisation at any time.

#### **Spill Response Actions By Product**

At the Peregrine Nanuq Project, "safety first" is the abiding principle which guides response: Spills and products are to be handled as/if safety permits.

After adequate safety precautions, effort will be concentrated on stopping or eliminating the source of ignition.

#### **Spill Planning and Logistics**

The feasibility of containing and recovering a spill will be generally determined by its location and the rate of release, spreading, transport and evaporation. These rates should be compared with the total time needed to deploy response equipment in order to evaluate whether or not containment, and/or absorbent and skimming operations, can be effectively implemented. The pre-assembly of spill clean-up kits will expedite response and reduce the total deployment time needed, including:

- Equipment and support material mobilisation time.
- Personnel mobilisation time, including transit and assembly.
- Actual equipment setup and deployment time.
- Determine whether or not a spill has entered a waterway and whether or not access by land or water to control points is possible so that booms, absorbents and skimmers can be deployed. Check maps and consult with personnel familiar with the spill area.
- Establish priorities to optimise use of personnel and gear needed for all clean-up phases (containment, removal, storage, transfer and disposal) at selected sites.
- Allow additional time for adverse weather and flying.

#### **Monitoring Spills**

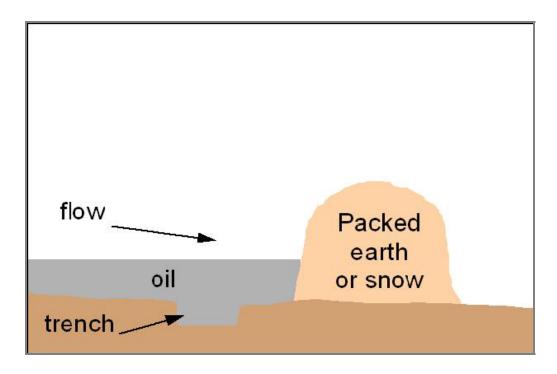
Peregrine will monitor spills throughout the response to ensure safety and to direct clean-up efforts:

- Spill movement and behaviour, in order to properly direct response efforts.
- All threats to the safety of people, property and the environment.

#### **Spills on Land**

Spills on land should be contained as close to the source as possible, if safety allows. Peregrine will make every effort to ensure that a spill does not reach water, where its containment and recovery (after breakup) are more difficult and the potential environmental impacts are greater. Containment can be achieved using:

- A berm or dyke around the spill source.
- A trench or ditch downslope of the spill source.



#### **Earthen Berm/Trench**

If possible, locate the berm/trench sufficiently downslope of the release point to complete its construction before the spill arrives. Dig the trench along a natural drainage contour.

It should be approximately 0.5 m deep with a relatively flat bottom. The excavated material can then be combined with other available material to build the berm.

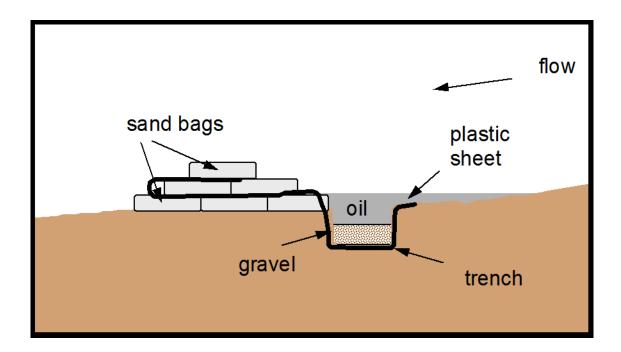
#### Sand Bag Berm/Trench

Sand bags can be used where available and if the earth is too hard or frozen and cannot be excavated or compacted. A plastic liner can be used to seal the trench and bags should be anchored with gravel or rocks and be woven between layers of bags.

#### Spills on Muskeg

Muskeg is generally poorly drained, wet and spongy. Internal drainage is usually slow and the depth of peat over mineral soil varies greatly. Muskeg is also highly acidic and low in nutrients, making biodegradation very slow, even during the summer months.

It is recommended that small oil spills in muskeg be mixed with peat moss and allowed to degrade during the summer months, since more damage can be done by attempting clean-up using mechanical removal methods.



In the event of a small spill, it is important to weigh the advantages of clean-up versus the potential negative impacts on the terrain. Both personnel and equipment on wet or sensitive areas can cause considerable damage. In many cases, the best solution may be to add nutrients to the contaminated area and monitor the site to ensure that the spill does not migrate to an adjacent sensitive area. In all cases, appropriate environmental advisors and regulatory authorities should be consulted.

#### **Spills on Water**

Containing spills in water is often difficult because oil quickly spreads. In turbulent water, oil and chemicals are likely to mix into the water column, making recovery impractical. For these reasons, it is important that if the spill reaches water, that containment be attempted as close to the source as possible, and that the spill be prevented from reaching a flowing stream.

Spills in lakes should be contained, if possible, before reaching outlets where containment and recovery can be difficult and dangerous.

Efforts to contain spills in large streams should be limited to land-based operations where the oil might pool in accessible back eddies. The recovery of water-soluble chemicals is not possible.

In flowing streams, oil travels at the same speed as the surface current. On larger rivers or in open lake areas, slicks are also transported at 3.5% of the wind speed. Although a comparatively small effect, it can be an important factor if the wind is at right angles to the water flow and if the

water surface is extensive. The wind can force the spill to the sides of the river where flows are slower or the shore of a lake. Long reaches of the river may become contaminated, although containment and recovery might also be possible.

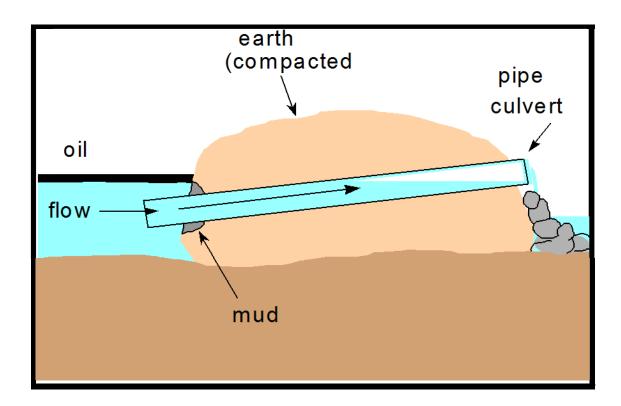
In smaller streams, the wind will have less impact and the slick speed can be easily estimated. Placing a small stick in the middle of the stream and determining the length of time required to travel a given distance, typically 10 m. This information can be quickly converted to speed (36/time (sec) = km/h) to determine the estimated travel time to a confluence or other sensitive area.

#### **Containment Strategies for Spills on Water**

Determining the best strategy for containment will depend on a number of factors:

- Speed of oil-slick travel
- Location of possible containment sites
- Availability of personnel and equipment
- Location of sensitive areas
- Safety of operations

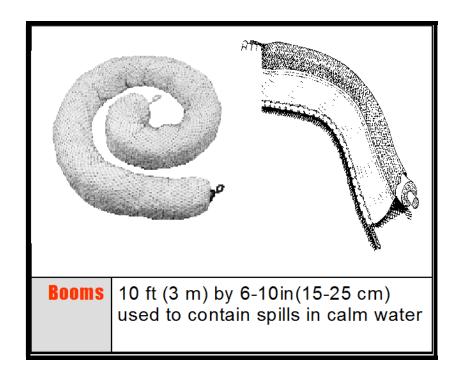
Spills on water can be contained by using floating booms (absorbent or non-absorbent) or by constructing a temporary berm or inverted weir. The objective is to build a barrier against which the (normally floating) oil will pool whilst allowing the underflow of water.

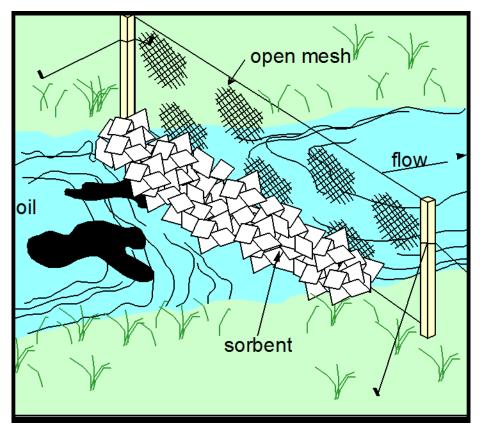


#### **Booms**

Booming with either absorbent or non-absorbent booms can also be an effective means of containing spills on slow-moving waters and in lakes. Effective containment using conventional booming techniques will be difficult in streams or rivers where currents exceed 0.7 knots (0.4m/s). At these speeds, oil will become entrained in the water flowing under the boom, resulting in significant Losses. Some improvements can be achieved in waters flowing at 1-2 knots (0.5-1 m/s) if the boom is deployed at an angle of less than 90 degrees to the direction of the flow.

Absorbent booms or socks can also be used to provide a barrier to floating oil. These types of booms should be checked regularly to ensure that they do not become saturated with either water or oil, since they will tend to float very low in the water or even sink and release oil downstream.





**Filter Fence** 

#### **Spills on Ice & Snow**

Oil can remain relatively fresh, (i.e, in an unweathered state) under snow and ice for several months or more after a spill.

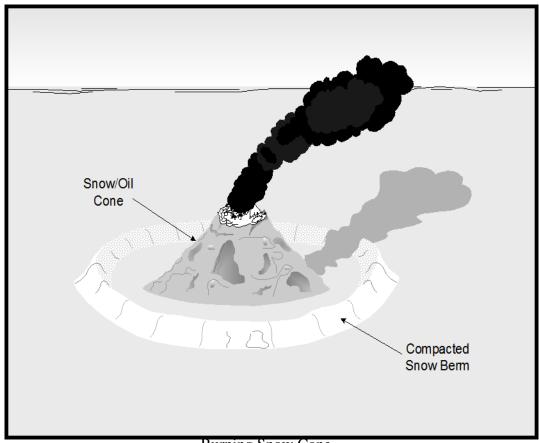
Evaporation rates will still be high when oil is ultimately exposed to the atmosphere, except in very low temperatures. Oil can also move up and down small hills (several metres high) due to the capillary action of the snow.

#### **Containment**

Snow and ice can be used to create berms to keep spills from spreading. In frozen rivers, angled slots about 1 m wide or holes can be cut in the ice, where safety permits, to allow possible spill recovery. The oil will rise up into the openings where it will concentrate and be available for recovery using skimmers or pumps.

#### **Disposal**

Oil spills in snow and ice can sometimes be burned if the spill can be isolated from the source. Although there is generally a reduced fire hazard, due attention to safety of operations is still required. If burning is not effective, recovered contaminated material will be collected and transported to a designated disposal/treatment facility.



**Burning Snow Cone** 

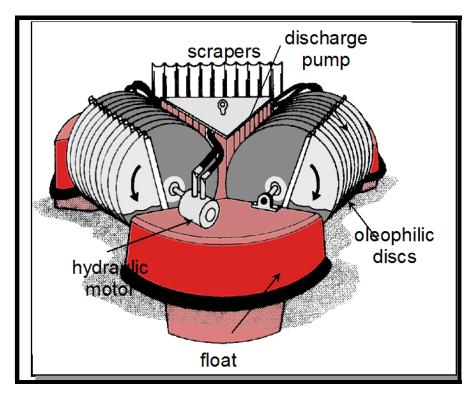
#### Recovery

When large volumes of oil have been contained either through natural or mechanical containment, it will be necessary to remove or recover the accumulated oil. This will generally occur in excavated trenches or adjacent to berms or natural barriers and occasionally in slow running streams or quiet ponds.

Vacuum trucks are not feasible at fly-in sites, but would be suitable for sites served by a seasonal or winter road and where a large volume of oil has pooled that is generally free of water. The truck must be positioned at a safe distance so that there is no possibility of fire or explosion.

Oleophillic devices, such as disc or drum skimmers, can selectively recover oil in water, and are better suited to applications where the oil has formed a distinct layer on top of quiet water. Accumulations adjacent to an inverted weir are an example. A vacuum truck would be largely ineffective in this instance, since it would recover large amounts of water, particularly in a thin layer of oil with water flowing through the pipe or culvert.

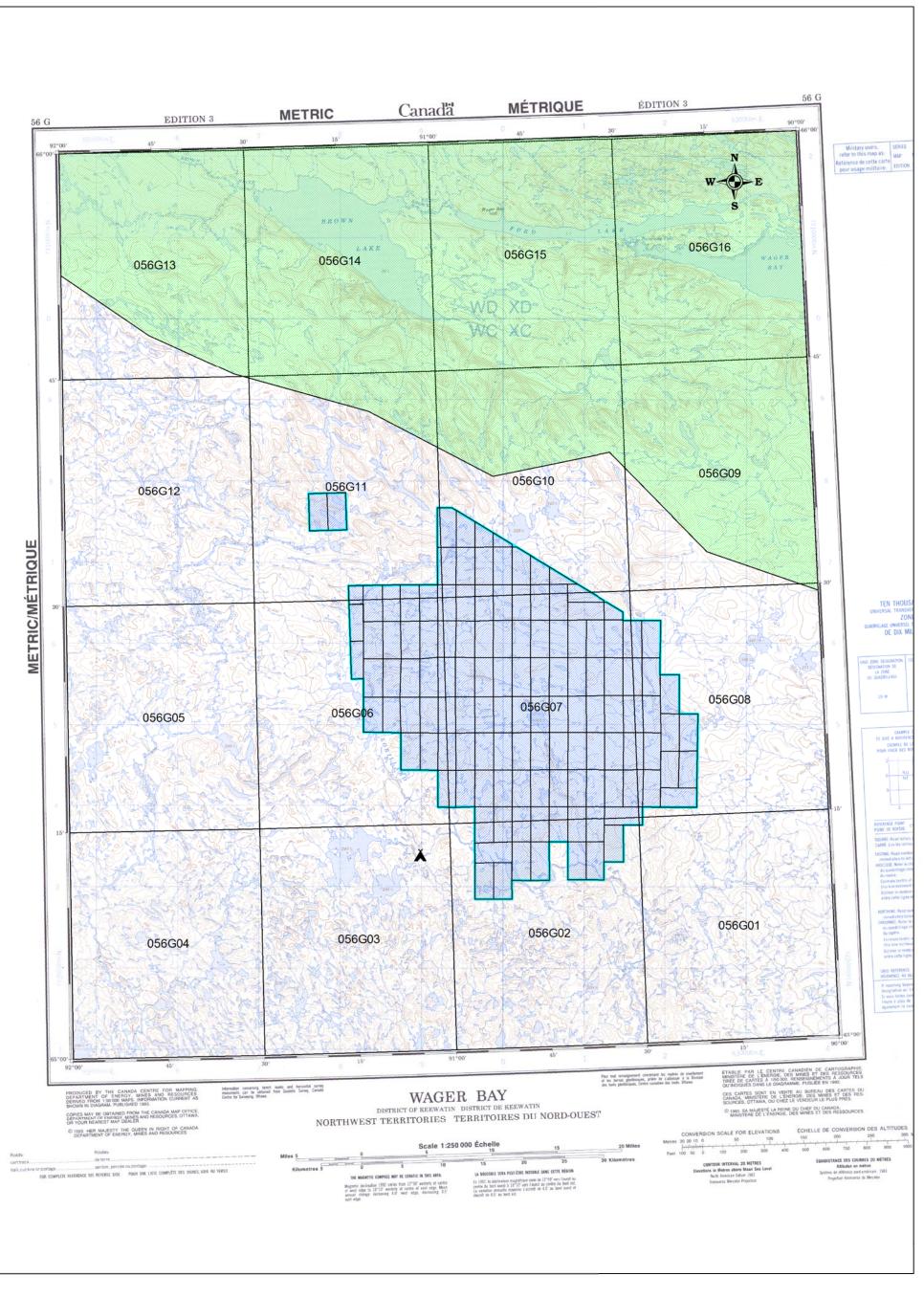
When using disc or drum skimmers, ensure that small items of debris are periodically removed from the scrapers to ensure their efficient operation.

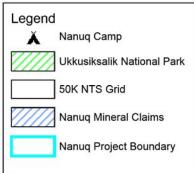


Disc Skimmer

## Appendix "A"

Project Location Map





## Nanuq Project Location Map

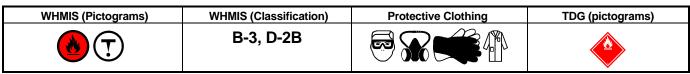
October 14, 2016

## Appendix "B"

MSDS Sheets for Common Liquid Fuels

- Diesel
- Gasoline
  - Jet A
- Propane





Section 1. Chemical Product and Company Identification					
Product Name	DIESEL FUEL	Code	W104, W293 SAP: 120, 121, 122, 287		
Synonym	Diesel 50, Diesel 50 LS, #1 Diesel , #1 Diesel LS, Diesel LC, Seasonal Diesel, Seasonal Diesel LS, Diesel AA, Domestic Marine Diesel, International marine Diesel, Seasonal Diesel Locomotive, Domestic Marine diesel LS, diesel -20°C (LS), LSD, Low Sulphur Diesel, dyed diesel, marked diesel, coloured diesel, Naval Distillate, Ultra Low Sulphur Diesel, ULS Diesel, Mining Diesel, Mining Diesel Special, Mining Diesel Special LS, High Flash Mining Diesel, Furnace Oil, Stove Oil.	Validated on 2/6/2004.			
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3	In case of Emergency	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for		
Material Uses	Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type. Mining Diesel has a higher flash point requirement, for safe use in underground mines.		emergency number(s).		

Section 2. Composition and Information on Ingredients							
				Exposure Limits (ACGIH)			
	Name	CAS#	% (V/V)	TLV-TWA(8 h)	STEL	CEILING	
1) Diesel oil.		68334-30-5	>99.9	100 mg/m³ (as total hydrocarbons) *	Not established	Not established	
2) Proprietary additives	S.	Not available	<0.1	Not established	Not established	Not established	
Aromatic content is 50 Sulphur content is 0-0.							
Manufacturer Recommendation	* Avoid prolonged or repeated skin contact to diesel fuels which can lead to dermal irritation and may be associated with an increased risk of skin cancer.						
Other Exposure Limits	Consult local, state, provincial or territory authorities for acceptable exposure limits.						

Section 3. Hazar	Section 3. Hazards Identification.				
Potential Health Effects	Combustible liquid. Exercise caution when handling this material. Contact with this product may cause skin and eye irritation. Prolonged or repeated contact may cause skin irritation, defatting, drying and dermatitis. Inhalation of this product may cause respiratory tract irritation and Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death. Ingestion of this product may cause gastro-intestinal irritation. Aspiration of this product may result in severe irritation or burns to the respiratory tract. For more information refer to Section 11 of this MSDS.				

Section 4. First	Section 4. First Aid Measures				
Eye Contact	ntact IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.				
Skin Contact	Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Seek medical attention.				
Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform artificial respiration. Allow the victim to rest in a well ventilated area. Seek medical attention.				
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.				
Note to Physician	Not available				

Continued on Next Page Internet: www.petro-canada.ca/msds Available in French

DIESEL FUEL Page Number: 2

Section 5. Fire-fighting Measures					
Flammability	Class II - combustible liquid (NFPA).	Flammable Limits	LOWER: 0.7%, UPPER: 6% (NFPA)		
Flash Points	Diesel Fuel: Closed Cup: >40°C (>104°F) Marine Diesel Fuel: Closed Cup: >60°C (>140°F) Mining Diesel: Closed Cup: 52°C (126°F)	Auto-Ignition Temperature	225°C (437°F)		
Fire Hazards in Presence of Various Substances	Flammable in presence of open flames, sparks, or heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite. May accumulate in confined spaces.	Explosion Hazards in Presence of Various Substances	Containers may explode in heat of fire. Do not cut, weld, heat, drill or pressurize empty container. Vapour explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard.		
Products of Combustion	Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), sulphur compounds (H2S), water vapour (H2O), smoke and irritating vapours as products of incomplete combustion.  See Section 11 (Other Considerations) for information regarding the toxicity of the combustion products.				
Fire Fighting Media and Instructions	See Section 11 (Other Considerations) for information regarding the toxicity of the combustion products.  NAERG96, GUIDE 128, Flammable liquids (Non-polar/Water-immiscible).  CAUTION: This product has a moderate flash point above 40°C: Use of water spray when fighting fire may be inefficient.  If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions.  SMALL FIRES: Dry chemical, CO2, water spray or regular foam.  LARGE FIRES: Water spray, fog or regular foam. Do not use straight streams. Move containers from fire area if you can do it without risk.  Fires Involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.  Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting devices or any discolouration of tank. ALWAYS stay away from the ends of tanks. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Wear positive				

#### Section 6. Accidental Release Measures

## Material Release or Spill

Consult current National Emergency Response Guide Book (NAERG) for appropriate spill measures if necessary. IN THE EVENT OF A LARGE SPILL CONSIDER THE FOLLOWING CONTROL MEASURES: Extinguish all ignition sources. Stop leak if safe to do so. Ventilate area. Dike spilled material. Use appropriate inert absorbent material to absorb spilled product. Collect used absorbent for later disposal. Avoid contact with spilled material. Avoid breathing vapours or mists of material. Avoid contaminating sewers, streams, rivers and other water courses with spilled material. Evacuate non-essential personnel. Ensure clean-up personnel wear appropriate personal protective equipment. Ground and bond all equipment used to clean up the spilled material, as it may be a static accumulator. Notify appropriate authorities immediately.

Section 7. Har	Section 7. Handling and Storage				
Handling	COMBUSTIBLE MATERIAL. Handle with care. Avoid contact with any sources of ignition, flames, heat, and sparks. Avoid skin contact. Avoid eye contact. Avoid inhalation of product vapours or mists. Empty containers may contain product residue. Do not pressurize, cut, heat, or weld empty containers. Do not reuse containers without commercial cleaning and/or reconditioning. Personnel who handle this material should practice good personal hygiene during and after handling to help prevent accidental ingestion of this product. Properly dispose of contaminated leather articles including shoes that cannot be decontaminated. Avoid confined spaces and areas with poor ventilation. Ensure all equipment is grounded/bonded. Wear proper personal protective equipment (See Section 8).				
Storage	Store away from heat and sources of ignition. Store in dry, cool, well-ventilated area. Store away from incompatible and reactive materials (See section 5 and 10). Ensure the storage containers are grounded/bonded.				

#### Section 8. Exposure Controls/Personal Protection

Engineering Controls For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.

#### Personal Protection - The selection of personal protective equipment varies, depending upon conditions of use.

Eyes Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered.

Body Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.

Respiratory Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.

Hands Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.

Feet Wear appropriate footwear to prevent product from coming in contact with feet and skin.

DIESEL FUEL	Page Number: 3
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Section 9. Physi	Section 9. Physical and Chemical Properties				
Physical State and Appearance	Bright oily liquid.	Viscosity	1.3 - 4.1 cSt @ 40°C (104°F)		
Colour	Clear to yellow / brown (may be dyed for taxation purposes).	Pour Point	Variable, -50°C to 0°C (-58°F to -32°F)		
Odour	Petroleum oil like.	Softening Point	Not applicable.		
Odour Threshold	Not available	<b>Dropping Point</b>	Not applicable.		
<b>Boiling Point</b>	150 - 371°C (302-700°F)	Penetration	Not applicable.		
Density	0.80 - 0.85 kg/L @ 15°C (59°F)	Oil / Water Dist. Coefficient	Not available		
Vapour Density	4.5 (Air = 1)	Ionicity (in water)	Not applicable.		
Vapour Pressure	Not available	<b>Dispersion Properties</b>	Not available		
Volatility	Semivolatile to volatile.	Solubility	Insoluble in cold water, soluble in non-polar hydrocarbon solvents.		

Section 10. Stability and Reactivity				
Corrosivity	Not available			
Stability	The product is stable under normal handling and storage conditions.	Hazardous Polymerization	Will not occur under normal working conditions.	
Incompatible Substances / Conditions to Avoid	Reactive with oxidizing agents and acids.	Decomposition Products	May release COx, NOx, SOx, H2S, H2O, smoke and irritating vapours when heated to decomposition.	

Section 11. Toxicological In	formation
Routes of Entry	Skin contact, eye contact, inhalation, and ingestion.
Acute Lethality	Acute oral toxicity (LD50): 7500 mg/kg (rat).
Chronic or Other Toxic Effects Dermal Route:	This product contains a component (at >= 1%) that can cause skin irritation. Therefore, this product is considered to be a skin irritant. Prolonged or repeated contact may defat and dry skin, and cause dermatitis. (See Other Considerations)
Inhalation Route:	Inhalation of this product may cause respiratory tract irritation. Inhalation of this product may cause Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.
Oral Route:	Ingestion of this product may cause gastro-intestinal irritation. Aspiration of this product may result in severe irritation or burns to the respiratory tract. Ingestion of this product may cause Central Nervous System (CNS) Depression, symptoms of which may include; weakness, dizziness, slurred speech, drowsiness, unconsciousness and in cases of severe overexposure; coma and death.
Eye Irritation/Inflammation:	This product contains a component (at >= 1%) that can cause eye irritation. Therefore, this product is considered to be an eye irritant.
Immunotoxicity:	Not available
Skin Sensitization:	Contact with this product is not expected to cause skin sensitization, based upon the available data and the known hazards of the components.
Respiratory Tract Sensitization:	Contact with this product is not expected to cause respiratory tract sensitization, based upon the available data and the known hazards of the components.
Mutagenic:	This product is not known to contain any components at >= 0.1% that have been shown to cause mutagenicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a mutagen.
Reproductive Toxicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause reproductive toxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a reproductive toxin.
Teratogenicity/Embryotoxicity:	This product is not known to contain any components at >= 0.1% that have been shown to cause teratogenicity and/or embryotoxicity. Therefore, based upon the available data and the known hazards of the components, this product is not expected to be a teratogen/embryotoxin.
Carcinogenicity (ACGIH):	ACGIH A3: animal carcinogen. [Diesel oil] (See Other Considerations)
Carcinogenicity (IARC):	This product is not known to contain any chemicals at reportable quantities that are listed as Group 1, 2A, or 2B carcinogens by IARC.
Carcinogenicity (NTP):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by NTP.
Carcinogenicity (IRIS):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by IRIS.
Continued on Next Page	Internet: www.petro-canada.ca/msds Available in French

DIESEL FUEL	Page Number: 4
Carcinogenicity (OSHA):	This product is not known to contain any chemicals at reportable quantities that are listed as carcinogens by OSHA.
Other Considerations	Avoid prolonged or repeated skin contact to diesel fuels which can lead to dermal irritation and may be associated with an increased risk of skin cancer.
	Diesel engine exhaust particulate is probably carcinogenic to humans (IARC Group 2A).

Section 12. Ecological Information				
Environmental Fate	Not available	Persistance/ Bioaccumulation Potential	Not available	
BOD5 and COD	Not available	Products of Biodegradation	Not available	
Additional Remarks	No additional remark.			

Section 13. Disposal Considerations				
Waste Disposal	Spent/ used/ waste product may meet the requirements of a hazardous waste. Consult your local or regional authorities. Ensure that waste management processes are in compliance with government requirements and local disposal regulations.			

Section 14. Transport Information				
TDG Classification	DIESEL FUEL, 3, UN1202, PGIII (CL-TDG)	Special Provisions for Transport	See Transportation of Dangerous Goods Regulations.	

latory Information					
This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed the CEPA-DSL (Domestic Substances List).					
All components of this formulation are listed on the US EPA-TSCA Inventory.					
All components of this product are on the European Inventory of Existing Commercial Chemical Substances (EINECS).					
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.					
Please contact Product Safety for more info	mation.				
Not evaluated.	HCS (U.S.A.)	CLASS: Irritating substance. CLASS: Target organ effects. CLASS: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).			
NOT EVALUATED FOR EUROPEAN TRANSPORT NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.	DOT (U.S.A) (Pictograms)				
Health Hazard  Fire Hazard  Reactivity  NFPA	Health 2 0	Rating 0 Insignificant  Reactivity 1 Slight  Recific hazard 3 High  4 Extreme			
	the CEPA-DSL (Domestic Substances List).  All components of this formulation are listed  All components of this product are on the Eu  This product has been classified in accorda the MSDS contains all of the information req  Please contact Product Safety for more infor  Not evaluated.  NOT EVALUATED FOR EUROPEAN TRANSPORT  NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.  Health Hazard  2* NFPA (	This product is acceptable for use under the provisions of WHMIS-C the CEPA-DSL (Domestic Substances List).  All components of this formulation are listed on the US EPA-TSCA Inv.  All components of this product are on the European Inventory of Exist.  This product has been classified in accordance with the hazard criter the MSDS contains all of the information required by the CPR.  Please contact Product Safety for more information.  Not evaluated.  HCS (U.S.A.)  NOT EVALUATED FOR EUROPEAN TRANSPORT NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN.  Health Hazard  Pire Hazard  Reactivity  O  NFPA (U.S.A.)  Health			

#### Section 16. Other Information Available upon request. References \* Marque de commerce de Petro-Canada - Trademark Glossary ACGIH - American Conference of Governmental Industrial Hygienists IRIS - Integrated Risk Information System LD50/LC50 - Lethal Dose/Concentration kill 50% ADR - Agreement on Dangerous goods by Road (Europe) LDLo/LCLo - Lowest Published Lethal Dose/Concentration ASTM - American Society for Testing and Materials ( BOD5 - Biological Oxygen Demand in 5 days NAERG'96 - North American Emergency Response Guide Book (1996) CAN/CGA B149.2 NFPA - National Fire Prevention Association Propane Installation Code CAS - Chemical Abstract Services NIOSH - National Institute for Occupational Safety & Health CEPA - Canadian Environmental Protection Act CERCLA - Comprehensive Environmental Response, Compensation and Liability NPRI - National Pollutant Release Inventory NSNR - New Substances Notification Regulations (Canada) NTP - National Toxicology Program OSHA - Occupational Safety & Health Administration CFR - Code of Federal Regulations CHIP - Chemicals Hazard Information and Packaging Approved Supply List PEL - Permissible Exposure Limit COD5 - Chemical Oxygen Demand in 5 days RCRA - Resource Conservation and Recovery Act CPR - Controlled Products Regulations SARA - Superfund Amendments and Reorganization Act DOT - Department of Transport SD - Single Dose DSCL - Dangerous Substances Classification and Labeling (Europe) STEL - Short Term Exposure Limit (15 minutes)

Internet: www.petro-canada.ca/msds

Available in French

Continued on Next Page

DIESEL FUEL Page Number: 5

DSD/DPD - Dangerous Substances or Dangerous Preparations Directives (Europe)

DSL - Domestic Substance List

EEC/EU - European Economic Community/European Union

EINECS - European Inventory of Existing Commercial Chemical Substances

EPCRA - Emergency Planning and Community Right to Know Act

FDA - Food and Drug Administration

FIFRA - Federal Insecticide, Fungicide and Rodenticide Act

HCS - Hazardous Communication System
HMIS - Hazardous Material Information System
IARC - International Agency for Research on Cancer

TDG - Transportation Dangerous Goods (Canada)
TDLo/TCLo - Lowest Published Toxic Dose/Concentration

TLm - Median Tolerance Limit

TLV-TWA - Threshold Limit Value-Time Weighted Average

TSCA - Toxic Substances Control Act

USEPA - United States Environmental Protection Agency

USP - United States Pharmacopoeia

WHMIS - Workplace Hazardous Material Information System

For Copy of MSDS

Internet: www.petro-canada.ca/msds

Western Canada, Ontario & Central Canada, telephone: 1-800-668-0220; fax:

1-800-837-1228

Quebec & Eastern Canada, telephone: 514-640-8308; fax: 514-640-8385

For Product Safety Information: (905) 804-4752

Prepared by Product Safety - JDW on 2/6/2004.

Data entry by Product Safety - JDW.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

## **GASOLINE, UNLEADED**



#### 000003000644

Version 1.0 Revision Date 2015/05/14 Print Date 2015/05/14

#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name

GASOLINE, UNLEADED

Synonyms

Regular, Unleaded Gasoline (US Grade), Mid-Grade, Plus, Super, WinterGas, SummerGas, Supreme, SuperClean, SuperClean WinterGas, RegularClean, PlusClean, Premium, marked or deel gasoline, TQRUL, transitional quality regular

unleaded, BOB, Blendstock for Oxygenate Blending,

Conventional Gasoline, RUL, MUL, SUL, PUL.

Product code

100126, 101823, 100507, 101811, 101814, 100141, 101813, 101810, 101812, 100063, 101822, 100138, 101821, 100064, 101820, 101819, 100506, 101818, 101816, 101817, 100488

Manufacturer or supplier's details

Petro-Canada

P.O. Box 2844, 150 - 6th Avenue South-West

Calgary Alberta T2P 3E3

Canada

Emergency telephone

number

Suncor Energy: +1 403-296-3000;

Poison Control Centre: Consult local telephone directory for

emergency number(s).

#### Recommended use of the chemical and restrictions on use

Recommended use

Unleaded gasoline is used in spark ignition engines including motor vehicles, inboard and outboard boat engines, small engines such as chain saws and lawn mowers, and

recreational vehicles.

Prepared by

Product Safety: +1 905-804-4752

#### **SECTION 2. HAZARDS IDENTIFICATION**

#### **Emergency Overview**

Appearance	Clear liquid.
Colour	Clear to slightly yellow or green, undyed liquid. May be dyed red for taxation purposes.
Odour	Gasoline
Hazard Summary	Flammable liquid Irritating to eyes and skin. May cause cancer. May cause heritable genetic damage.

#### **Potential Health Effects**

Primary Routes of Entry

Eye contact

## **GASOLINE, UNLEADED**



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Revision Date 2015/05/14 Print Date 2015/05/14 Version 1.0 Ingestion Inhalation Skin contact **Target Organs** : Blood Immune system Inhalation Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. : May irritate skin. Skin : May irritate eyes. Eyes Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration hazard if swallowed - can enter lungs and cause damage. Chronic Exposure 1 Chronic exposure to benzene may result in increased risk of leukemia and other blood disorders. Aggravated Medical None known. Condition Carcinogenicity: **IARC** Group 1: Carcinogenic to humans 71-43-2 Benzene **ACGIH** Confirmed human carcinogen 71-43-2 Benzene Confirmed animal carcinogen with unknown relevance to humans 64-17-5 Ethanol Gasoline, natural 8006-61-9

#### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

**Chemical Name** CAS-No. Concentration (%)

### **GASOLINE, UNLEADED**



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gasoline	86290-81-5	95 - 100 %
toluene	108-88-3	1 - 40 %
benzene	71-43-2	0.5 - 1.5 %
ethanol	64-17-5	0.1 - 0.3 %

**SECTION 4. FIRST AID MEASURES** 

If inhaled : Artificial respiration and/or oxygen may be necessary.

Move to fresh air. Seek medical advice.

In case of skin contact In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Wash skin thoroughly with soap and water or use recognized

skin cleanser.

Wash clothing before reuse.

Seek medical advice.

In case of eye contact Remove contact lenses.

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes.

Obtain medical attention.

If swallowed Rinse mouth with water.

DO NOT induce vomiting unless directed to do so by a

physician or poison control center.

Never give anything by mouth to an unconscious person.

Seek medical advice.

Most important symptoms and effects, both acute and

delayed

First aider needs to protect himself.

#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media : Dry chemical

Carbon dioxide (CO2)

Water fog. Foam

Unsuitable extinguishing

media

Do NOT use water jet.

Specific hazards during

firefighting

Cool closed containers exposed to fire with water spray.

Hazardous combustion

products

Carbon oxides (CO, CO2), nitrogen oxides (NOx), polynuclear aromatic hydrocarbons, phenols, aldehydes, ketones, smoke and irritating vapours as products of incomplete combustion.

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Further information

Prevent fire extinguishing water from contaminating surface

water or the ground water system.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.

Ensure adequate ventilation.

Evacuate personnel to safe areas. Material can create slippery conditions.

Environmental precautions

f the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

Remove all sources of ignition.

Soak up with inert absorbent material. Non-sparking tools should be used. Ensure adequate ventilation.

Contact the proper local authorities.

#### **SECTION 7. HANDLING AND STORAGE**

Advice on safe handling

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the

application area.

Use only with adequate ventilation.

In case of insufficient ventilation, wear suitable respiratory

equipment.

Avoid spark promoters. Ground/bond container and

equipment. These alone may be insufficient to remove static

electricity.

Avoid contact with skin, eyes and clothing.

Do not ingest.

Keep away from heat and sources of ignition. Keep container closed when not in use.

Conditions for safe storage

Store in original container.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Keep in a dry, cool and well-ventilated place.

Keep in properly labelled containers.

To maintain product quality, do not store in heat or direct

sunlight.

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters /	Basis
		exposure)	Permissible	
			concentration	

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gasoline	86290-81-5	TWA	300 ppm	CA AB OEL
		STEL	500 ppm	CA AB OEL
		TWA	300 ppm	CA BC OEL
		STEL	500 ppm	CA BC OEL
		TWA	300 ppm	ACGIH
		STEL	500 ppm	ACGIH
toluene	108-88-3	TWA	50 ppm 188 mg/m3	CA AB OEL
		TWA	20 ppm	CA BC OEL
		TWAEV	50 ppm 188 mg/m3	CA QC OEL
		TWA	20 ppm	ACGIH
benzene	71-43-2	TWA	0.5 ppm 1.6 mg/m3	CA AB OEL
		STEL	2.5 ppm 8 mg/m3	CA AB OEL
		TWA	0.5 ppm	CA BC OEL
		STEL	2.5 ppm	CA BC OEL
		TWA	0.5 ppm	CA ON OEL
		STEL	2.5 ppm	CA ON OEL
		TWAEV	1 ppm 3 mg/m3	CA QC OEL
		STEV	5 ppm 15.5 mg/m3	CA QC OEL
		TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
ethanol	64-17-5	TWA	1,000 ppm 1,880 mg/m3	CA AB OEL
		STEL	1,000 ppm	CA BC OEL
		TWAEV	1,000 ppm 1,880 mg/m3	CA QC OEL
		STEL	1,000 ppm	ACGIH

#### Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentration	Basis
Toluene	108-88-3	Toluene	in blood	Prior to last shift of workwee k	0.02 mg/l	ACGIH BEI
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI

**Engineering measures** 

: Use only in well-ventilated areas.

Ensure that eyewash station and safety shower are proximal

to the work-station location.

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#### Personal protective equipment

Respiratory protection

: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type

A NIOSH-approved air-purifying respirator with an organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection Material

: polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves

should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Remarks

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is

necessary.

Eye protection

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection

Choose body protection in relation to its type, to the

concentration and amount of dangerous substances, and to

the specific work-place.

Protective measures

: Wash contaminated clothing before re-use.

Hygiene measures

Remove and wash contaminated clothing and gloves,

including the inside, before re-use.

Wash face, hands and any exposed skin thoroughly after

handling.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance

: Clear liquid.

Colour

Clear to slightly yellow or green, undyed liquid. May be dyed

red for taxation purposes.

Odour

: Gasoline

Odour Threshold

No data available

Internet: www.petro-canada.ca/msds Petro-Canada is a Suncor Energy business. Page: 6 / 12

## **GASOLINE, UNLEADED**



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pH No data available

Pour point : No data available

Boiling point/boiling range 25 - 225 °C (77 - 437 °F)

Method: Tagliabue.

Auto-Ignition Temperature : 257 °C (495 °F)

Evaporation rate : No data available

Flammability : Extremely flammable in presence of open flames, sparks,

shocks, and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing

ignition. May accumulate in confined spaces.

Upper explosion limit 7.6 %(V)

Lower explosion limit 1.3 %(V)

Vapour pressure \$\ < 802.5 mmHg (20 °C / 68 °F)

Relative vapour density 3

Relative density : 0.685 - 0.8

Solubility(ies)

Water solubility insoluble

Partition coefficient: n-

octanol/water

: No data available

Viscosity

Explosive properties 

Do not pressurise, cut, weld, braze, solder, drill, grind or

expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapours may form explosive

mixtures with air.

#### **SECTION 10. STABILITY AND REACTIVITY**

Possibility of hazardous

reactions

Hazardous polymerisation does not occur.

Stable under normal conditions.

Conditions to avoid Extremes of temperature and direct sunlight.

Incompatible materials : Reactive with oxidising agents, acids and interhalogens.

Hazardous decomposition

products

: May release COx, NOx, phenols, polycyclic aromatic hydrocarbons, aldehydes, ketones, smoke and irritating

vapours when heated to decomposition.

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## **GASOLINE, UNLEADED**



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#### **SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of : Eye contact

exposure

Eye contact Ingestion

Inhalation Skin contact

**Acute toxicity** 

Product:

Acute oral toxicity

Remarks: No data available

Acute inhalation toxicity

Remarks: No data available

Acute dermal toxicity

Remarks: No data available

**Components:** 

gasoline:

Acute oral toxicity

: LD50 Rat: 13,600 mg/kg,

Acute dermal toxicity

: LD50 Rabbit: > 5,000 mg/kg,

toluene:

Acute oral toxicity

: LD50 Rat: 5,580 mg/kg,

Acute inhalation toxicity

LC50 Rat: 7585 ppm Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity

: LD50 Rabbit: 12,125 mg/kg,

benzene:

Acute oral toxicity

LD50 Rat: 2,990 mg/kg,

Acute inhalation toxicity

: LC50 Rat: 13700 ppm Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity

: LD50 Rabbit: > 8,240 mg/kg,

ethanoi:

Acute oral toxicity

: LD50 Rat: 7,060 mg/kg,

Acute inhalation toxicity

: LC50 Rat: > 32380 ppm Exposure time: 4 h

Test atmosphere: vapour

## **GASOLINE, UNLEADED**



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Skin corrosion/irritation

**Product:** 

Remarks: No data available

**Components:** 

gasoline:

Result: Moderate skin irritant

toluene:

Result: Moderate skin irritant

benzene:

Result: Moderate skin irritant

ethanol:

Result: Skin irritation

Serious eye damage/eye irritation

**Product:** 

Remarks: No data available

**Components:** 

gasoline:

Result: Mild eye irritation

toluene:

Result: Mild eye irritation

benzene:

Result: Moderate eye irritation

ethanol:

Result: Eye irritation

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

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# Material Safety Data Sheet GASOLINE, UNLEADED



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STOT - repeated exposure

No data available

Aspiration toxicity

No data available

#### **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

Product:

Toxicity to fish

Remarks: No data available

Toxicity to daphnia and other

aquatic invertebrates

Remarks: No data available

Toxicity to algae

: Remarks: No data available

Toxicity to bacteria

Remarks: No data available

#### Persistence and degradability

**Product:** 

Biodegradability

Remarks: No data available

#### Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### Disposal methods

Waste from residues

The product should not be allowed to enter drains, water

courses or the soil.

Offer surplus and non-recyclable solutions to a licensed

disposal company.

Waste must be classified and labelled prior to recycling or

disposal.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and

national regulations.

Dispose of product residue in accordance with the instructions

of the person responsible for waste disposal.

Contaminated packaging

Do not re-use empty containers.

#### GASOLINE, UNLEADED



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#### **SECTION 14. TRANSPORT INFORMATION**

#### International Regulation

IATA-DGR

UN/ID No. Proper shipping name

: Gasoline : 3

: 1203

Packing group Labels Packing instruction (cargo

: 3 : 364

: 11

aircraft)

Class

**IMDG-Code** 

: 1203 UN number

Proper shipping name

: GASOLINE

Class : 3 Packing group : II Labels : 3

EmS Code : F-E, S-E

Marine pollutant

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**TDG** 

UN number

: 1203

Proper shipping name

: GASOLINE

Class Packing group : 3 : 11 : 3

Labels ERG Code Marine pollutant

: 128 : no

#### Special precautions for user

Not applicable

#### **SECTION 15. REGULATORY INFORMATION**

WHMIS Classification

: B2: Flammable liquid

D2A: Very Toxic Material Causing Other Toxic Effects D2B: Toxic Material Causing Other Toxic Effects

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The components of this product are reported in the following inventories:

DSL

On the inventory, or in compliance with the inventory

**TSCA** 

All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

**EINECS** 

On the inventory, or in compliance with the inventory

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## **GASOLINE, UNLEADED**



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#### **SECTION 16. OTHER INFORMATION**

For Copy of (M)SDS

Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-

1228

For Product Safety Information: 1 905-804-4752

Prepared by

: Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# **JET A/A-1 AVIATION TURBINE FUEL**



#### 000003001081

Version 2.0

Revision Date 2016/07/20

Print Date 2016/07/20

**SECTION 1. IDENTIFICATION** 

Product name

JET A/A-1 AVIATION TURBINE FUEL

Synonyms

Jet A-1; Jet A-1-DI; Aviation Turbine Kerosene (ATK); JP-8;

NATO F-34; Jet F-34; Aviation Turbine Fuel, Kerosene Type

(CAN/CGSB 3.23 & CAN/CGSB 3.24)

Product code

101851, 100123

Manufacturer or supplier's details

Petro-Canada

P.O. Box 2844, 150 - 6th Avenue South-West

Calgary Alberta T2P 3E3

Canada

Emergency telephone num-

Suncor Energy: +1 403-296-3000;

ber

Poison Control Centre: Consult local telephone directory for

emergency number(s).

#### Recommended use of the chemical and restrictions on use

Recommended use

: Used as aviation turbine fuel. May contain a fuel system icing

inhibitor. In the arctic, Jet A-1 may also be used as diesel fuel

(if it contains a lubricity additive) and heating oil.

Prepared by

Product Safety: +1 905-804-4752

#### **SECTION 2. HAZARDS IDENTIFICATION**

# **Emergency Overview**

Appearance	Clear liquid.
Colour	Clear and colourless
Odour	Kerosene-like.

#### **GHS Classification**

Flammable liquids

Category 3

Skin irritation

: Category 2

Reproductive toxicity

: Category 2

Specific target organ toxicity

- single exposure

Category 3 (Central nervous system)

Aspiration hazard

Category 1

# **JET A/A-1 AVIATION TURBINE FUEL**



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#### GHS label elements

Hazard pictograms







Signal word

Danger

Hazard statements

Flammable liquid and vapour.

May be fatal if swallowed and enters airways.

Causes skin irritation.

May cause drowsiness or dizziness.

Suspected of damaging fertility or the unborn child.

Precautionary statements

#### Prevention:

Obtain special instructions before use.

Do not handle until all safety precautions have been read and

understood.

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Keep container tightly closed.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ ventilating/ lighting/ equipment.

Use non-sparking tools.

Take action to prevent static discharges.

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/ protective clothing/ eye protection/ face

protection.

#### Response:

IF SWALLOWED: Immediately call a POISON CENTER/doctor. IF ON SKIN (or hair): Take off immediately all contaminated

clothing. Rinse skin with water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

IF exposed or concerned: Get medical advice/ attention.

Do NOT induce vomiting.

If skin irritation occurs: Get medical advice/ attention.

Take off contaminated clothing and wash it before reuse.

In case of fire: Use dry sand, dry chemical or alcohol-resistant

foam to extinguish.

#### Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Store locked up.

#### Disposal:

Dispose of contents/ container to an approved waste disposal

plant.

#### **Potential Health Effects**

Primary Routes of Entry

Eye contact Ingestion

Inhalation Skin contact

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Inhalation : Inhalation may cause central nervous system effects.

Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of

consciousness.

Skin : May irritate skin.

Eyes : May irritate eyes.

Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomit-

ing and diarrhoea.

Aspiration hazard if swallowed - can enter lungs and cause

damage.

Aggravated Medical Condi-

tion

None known.

Other hazards

None known.

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

ACGIH Confirmed animal carcinogen with unknown relevance to hu-

mans

Kerosene 8008-20-6

#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture

: Mixture

# **Hazardous components**

Chemical name	CAS-No.	Concentration	
kerosine (petroleum)	8008-20-6	90 - 100 %	
2-(2-methoxyethoxy)ethanol	111-77-3	0 - 0.2 %	

#### **SECTION 4. FIRST AID MEASURES**

If inhaled : Move to fresh air.

Artificial respiration and/or oxygen may be necessary.

Seek medical advice.

In case of skin contact In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Wash skin thoroughly with soap and water or use recognized

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# JET A/A-1 AVIATION TURBINE FUEL



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skin cleanser.

Wash clothing before reuse.

Seek medical advice.

In case of eye contact

Remove contact lenses.

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Obtain medical attention.

If swallowed

: Rinse mouth with water.

DO NOT induce vomiting unless directed to do so by a physi-

cian or poison control center.

Never give anything by mouth to an unconscious person.

Seek medical advice.

Most important symptoms and effects, both acute and

delayed

First aider needs to protect himself.

#### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media

: Dry chemical

Carbon dioxide (CO2)

Water fog. Foam

Unsuitable extinguishing

media

Do NOT use water jet.

Specific hazards during fire-

fighting

Cool closed containers exposed to fire with water spray.

Hazardous combustion prod-

Carbon oxides (CO, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), smoke and irritating vapours as products of

incomplete combustion.

Further information

Prevent fire extinguishing water from contaminating surface

water or the ground water system.

Special protective equipment

for firefighters

Wear self-contained breathing apparatus for firefighting if nec-

essary.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

tive equipment and emer-

gency procedures

Personal precautions, protec-

Ensure adequate ventilation. Evacuate personnel to safe areas.

Material can create slippery conditions.

Environmental precautions

If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for

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# **JET A/A-1 AVIATION TURBINE FUEL**



#### 000003001081

containment and cleaning up

Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

#### **SECTION 7. HANDLING AND STORAGE**

Advice on safe handling

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Use only with adequate ventilation.

In case of insufficient ventilation, wear suitable respiratory

equipment.

Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static elec-

tricity

Avoid contact with skin, eyes and clothing.

Do not ingest.

Keep away from heat and sources of ignition. Keep container closed when not in use.

Conditions for safe storage

Store in original container.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Keep in a dry, cool and well-ventilated place.

Keep in properly labelled containers.

To maintain product quality, do not store in heat or direct sun-

light.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
kerosine (petroleum)	8008-20-6	TWA	200 mg/m3 (total hydrocarbon vapor)	CA BC OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	CA AB OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH

**Engineering measures** 

Use only in well-ventilated areas.

Ensure that eyewash station and safety shower are proximal

to the work-station location.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust

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# JET A/A-1 AVIATION TURBINE FUEL



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Version 2.0 Revision Date 2016/07/20 Print Date 2016/07/20 ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. A NIOSH-approved air-purifying respirator with an organic Filter type vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by airpurifying respirators is limited. Use a positive-pressure, airsupplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection. Hand protection Material polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed. Remarks Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Eye protection Wear face-shield and protective suit for abnormal processing problems. Choose body protection in relation to its type, to the concen-Skin and body protection tration and amount of dangerous substances, and to the specific work-place. Protective measures Wash contaminated clothing before re-use. Hygiene measures Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

# **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Clear liquid.

Colour : Clear and colourless

Odour Chreshold : Kerosene-like.

Odour Threshold : No data available pH : No data available

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Boiling point/boiling range 140 - 300 °C (284 - 572 °F)

Flash point :  $> 38 \,^{\circ}\text{C} (100 \,^{\circ}\text{F})$ 

Method: Tagliabue

Auto-Ignition Temperature : 210 °C (410 °F)

Evaporation rate 

No data available

Flammability : Flammable in presence of open flames, sparks and heat. Va-

pours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite. May accumulate in con-

fined spaces.

Upper explosion limit : 5 %(V)

Lower explosion limit : 0.7 %(V)

Vapour pressure 5.25 mmHg (20 °C / 68 °F)

Relative vapour density \$\frac{1}{2} 4.5

Relative density 0.775 - 0.84 (15 °C / 59 °F)

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: No data available

Viscosity

Viscosity, kinematic 1.0 - 1.9 cSt (40 °C / 104 °F)

pose containers to heat or sources of ignition. Containers may

explode in heat of fire.

#### **SECTION 10. STABILITY AND REACTIVITY**

Possibility of hazardous reac-

tions

: Hazardous polymerisation does not occur.

Stable under normal conditions.

Conditions to avoid : Extremes of temperature and direct sunlight.

Incompatible materials : Reactive with oxidising agents, acids and alkalis.

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Hazardous decomposition

products

May release COx, NOx, SOx, aldehydes, acids, ketones, smoke and irritating vapours when heated to decomposition.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Eye contact Ingestion Inhalation Skin contact

#### **Acute toxicity**

**Product:** 

Acute oral toxicity

Remarks: No data available

Acute inhalation toxicity

: Remarks: No data available

Acute dermal toxicity

Remarks: No data available

Components:

kerosine (petroleum):

Acute oral toxicity

LD50 (Rat): > 5,000 mg/kg,

Acute inhalation toxicity

: LC50 (Rat): > 5 mg/l

Exposure time: 4 h Test atmosphere: dust/mist

Acute dermal toxicity

LD50 (Rabbit): > 2,000 mg/kg,

#### Skin corrosion/irritation

**Product:** 

Remarks: No data available

#### Serious eye damage/eye irritation

Product:

Remarks: No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

# Carcinogenicity

No data available

#### Reproductive toxicity

No data available

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STOT - single exposure

No data available

STOT - repeated exposure

No data available

#### **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

**Product:** 

Toxicity to fish

Remarks: No data available

Toxicity to daphnia and other

aquatic invertebrates

Remarks: No data available

Toxicity to algae

\_

Remarks: No data available

Toxicity to bacteria

Remarks: No data available

#### Persistence and degradability

Product:

Biodegradability

Remarks: No data available

# Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### **Disposal methods**

Waste from residues

The product should not be allowed to enter drains, water

courses or the soil.

Offer surplus and non-recyclable solutions to a licensed dis-

posal company.

Waste must be classified and labelled prior to recycling or

disposal.

Send to a licensed waste management company.

Dispose of product residue in accordance with the instructions

of the person responsible for waste disposal.

Contaminated packaging

Do not re-use empty containers.

# **JET A/A-1 AVIATION TURBINE FUEL**



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#### **SECTION 14. TRANSPORT INFORMATION**

# International Regulations

IATA-DGR

UN/ID No. UN 1863

Proper shipping name Fuel, aviation, turbine engine

Class : 3
Packing group : III

Labels : Class 3 - Flammable Liquid

Packing instruction (cargo : 366

aircraft)

**IMDG-Code** 

UN number UN 1863

Proper shipping name : FUEL, AVIATION, TURBINE ENGINE

Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

#### **National Regulations**

**TDG** 

UN number UN 1863

Proper shipping name FUEL, AVIATION, TURBINE ENGINE

Class : 3
Packing group : III
Labels : 3
ERG Code : 128
Marine pollutant : no

# **SECTION 15. REGULATORY INFORMATION**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

#### The components of this product are reported in the following inventories:

DSL On the inventory, or in compliance with the inventory

TSCA All chemical substances in this product are either listed on the

TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

**EINECS** On the inventory, or in compliance with the inventory

# **JET A/A-1 AVIATION TURBINE FUEL**



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#### **SECTION 16. OTHER INFORMATION**

For Copy of (M)SDS Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-

1228

For Product Safety Information: 1 905-804-4752

Prepared by Product Safety: +1 905-804-4752

Revision Date : 2016/07/20

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# **PROPANE**

# PETROCAMADA

#### 000003000646

Version 2.0 Revision Date 2016/07/20 Print Date 2016/07/20

#### **SECTION 1. IDENTIFICATION**

Product name

PROPANE

Synonyms

Propane HD-5, Propane commercial, Liquified Petroleum Gas (LPG), C3H8, CGSB Propane Grade 1, CGSB Propane Grade 2, odorized propane, stenched propane, automotive

propane.

Product code

100139

Manufacturer or supplier's details

Petro-Canada

P.O. Box 2844, 150 - 6th Avenue South-West

Calgary Alberta T2P 3E3

Canada

Emergency telephone num-

ber

Suncor Energy: +1 403-296-3000;

Poison Control Centre: Consult local telephone directory for

emergency number(s).

#### Recommended use of the chemical and restrictions on use

Recommended use

Propane is used as a fuel gas, refrigerant and as a raw material for organic synthesis. It is also used as a laboratory gas. The grade determines the propane content. It is supplied as

pressurized liquid in tanks.

Prepared by

Product Safety: +1 905-804-4752

#### **SECTION 2. HAZARDS IDENTIFICATION**

# **Emergency Overview**

Appearance	Gas at room temperature; liquid when stored under pressure., Liquefied compressed gas.
Colour	colourless
Odour	Propane is an odourless gas. Odourized propane will contain up to 30 g Ethyl Mercaptan per 1000 L of propane.

## **GHS Classification**

Flammable gases

: Category 1

Gases under pressure

Liquefied gas

Simple Asphyxiant

: Category 1

#### **GHS label elements**





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Hazard pictograms





Signal word : Danger

Hazard statements : Extremely flammable gas.

Contains gas under pressure; may explode if heated. May displace oxygen and cause rapid suffocation.

Precautionary statements : Prevention:

Keep away from heat, hot surfaces, sparks, open flames and

other ignition sources. No smoking.

Response:

Leaking gas fire: Do not extinguish, unless leak can be stopped

safely.

In case of leakage, eliminate all ignition sources.

Storage:

Protect from sunlight. Store in a well-ventilated place.

**Potential Health Effects** 

Primary Routes of Entry : Eye contact

Inhalation Skin contact

Inhalation : Inhalation may cause central nervous system effects.

May cause respiratory tract irritation.

Inhalation of vapours may cause drowsiness, headache, diz-

ziness, and disorientation.

Skin : Contact with rapidly expanding gas may cause burns or frost-

bite.

Eyes : Contact with rapidly expanding gas may cause burns or frost-

bite

Ingestion : Exposure by this route unlikely.

Aggravated Medical Condi-

tion

Overexposure may lead to cardiac sensitization.

Other hazards

None known.

IARC No component of this product present at levels greater than or

equal to 0.1% is identified as probable, possible or confirmed

human carcinogen by IARC.

ACGIH No component of this product present at levels greater than or

equal to 0.1% is identified as a carcinogen or potential carcino-

gen by ACGIH.

# **PROPANE**



000003000646

Version 2.0 Revision Date 2016/07/20

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#### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture

: Mixture

#### Hazardous components

Chemical name	CAS-No.	Concentration	
propane	74-98-6	90 - 100 %	
propylene	115-07-1	1 - 5 %	
butane	106-97-8	1 - 2.5 %	
ethane	74-84-0	1 - 1.5 %	
methane	74-82-8	0.1 - 0.2 %	

#### **SECTION 4. FIRST AID MEASURES**

If inhaled

: Move to fresh air.

Artificial respiration and/or oxygen may be necessary.

Seek medical advice.

In case of skin contact

In case of contact, immediately flush skin with plenty of water

for at least 15 minutes while removing contaminated clothing

and shoes.

Wash skin thoroughly with soap and water or use recognized

skin cleanser.

Wash contaminated clothing before reuse.

Seek medical advice.

In case of eye contact

Remove contact lenses.

Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Obtain medical attention.

If swallowed

Not a significant route of exposure.

Most important symptoms and effects, both acute and

delayed

First aider needs to protect himself.

# **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media

: Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Unsuitable extinguishing

media

No information available.

Specific hazards during fire-

fighting

: If the product release cannot be shut off safely, allow the

product to burn itself out.

Cool closed containers exposed to fire with water spray.

Hazardous combustion prod-

: Carbon oxides (CO, CO2), smoke and irritating vapours as

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# **PROPANE**



#### 000003000646

Revision Date 2016/07/20 Version 2.0 Print Date 2016/07/20 ucts products of incomplete combustion. Further information Prevent fire extinguishing water from contaminating surface water or the ground water system. Special protective equipment Wear self-contained breathing apparatus and full protective for firefighters Wear a positive-pressure supplied-air respirator with full facepiece.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

tive equipment and emer-

gency procedures

Personal precautions, protective equipment. Ensure adequate ventilation.

Evacuate personnel to safe areas.

In case of inadequate ventilation wear respiratory protection.

Remove all sources of ignition.

**Environmental precautions** 

: If the product contaminates rivers and lakes or drains inform

respective authorities.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so.

Ensure adequate ventilation.

Use explosion-proof ventilation equipment. Non-sparking tools should be used. Contact the proper local authorities.

#### **SECTION 7. HANDLING AND STORAGE**

Advice on safe handling

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

In case of insufficient ventilation, wear suitable respiratory

equipment.

Avoid contact with skin, eyes and clothing.

Avoid breathing gas.

Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static elec-

tricity.

Use only with adequate ventilation.

Keep away from heat and sources of ignition. Keep container closed when not in use.

Do not use sparking tools.

Do not enter areas where used or stored until adequately ven-

tilated.

Conditions for safe storage

Store in original container.

Containers which are opened must be carefully resealed and

kept upright to prevent leakage.

Keep in a dry, cool and well-ventilated place.

Keep in properly labelled containers.

To maintain product quality, do not store in heat or direct sun-

Keep away from sources of ignition - No smoking.

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# **PROPANE**



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Ensure the storage containers are grounded/bonded.

#### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
propane	74-98-6	TWA	1,000 ppm	CA AB OEL
		TWA	1,000 ppm	CA BC OEL
		TWAEV	1,000 ppm	CA QC OEL
			1,800 mg/m3	
propylene	115-07-1	TWA	500 ppm	CA AB OEL
			860 mg/m3	
		TWA	500 ppm	CA BC OEL
		TWA	500 ppm	ACGIH
butane	106-97-8	TWA	1,000 ppm	CA AB OEL
		TWA	600 ppm	CA BC OEL
		STEL	750 ppm	CA BC OEL
		TWAEV	800 ppm	CA QC OEL
			1,900 mg/m3	
ethane	74-84-0	TWA	1,000 ppm	CA AB OEL
		TWA	1,000 ppm	CA BC OEL

**Engineering measures** 

Use only in well-ventilated areas.

Use explosion-proof ventilation equipment.

Adequate ventilation to ensure that Occupational Exposure

Limits are not exceeded.

Personal protective equipment

Respiratory protection

: Respirator selection must be based on known or anticipated

exposure levels, the hazards of the product and the safe

working limits of the selected respirator.

Filter type

Always wear NIOSH-approved self-contained breathing ap-

paratus when handling this material.

Hand protection

Material

Wear insulated gloves to prevent frostbite.

Remarks

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is nec-

essary.

Eye protection

Wear face-shield and protective suit for abnormal processing

problems.

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the spe-

cific work-place.

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Protective measures Wash contaminated clothing before re-use.

Wear suitable protective equipment.

Hygiene measures : Remove and wash contaminated clothing and gloves, includ-

ing the inside, before re-use.

Wash face, hands and any exposed skin thoroughly after

handling.

#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Gas at room temperature; liquid when stored under pressure.,

Liquefied compressed gas.

Colour Scolourless

Odour Propane is an odourless gas. Odourized propane will contain

up to 30 g Ethyl Mercaptan per 1000 L of propane.

Odour Threshold : No data available
pH : No data available
Pour point : No data available

Boiling point/boiling range : -42 °C (-44 °F)

Flash point 3 -104 °C (-155 °F)

Method: closed cup

Fire Point : No data available
Auto-Ignition Temperature : 450 °C (842 °F)

Evaporation rate No data available

Flammability : Extremely flammable in presence of open flames, sparks, and

heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. Rapid escape of vapour may generate static charge causing ignition.

May accumulate in confined spaces.

Lower explosion limit 2.1 %(V)

Vapour pressure : 10,763 mmHg (38 °C / 100 °F)

Relative vapour density \$\frac{1.56}{2}\$

Relative density

No data available

Density 

No data available

Solubility(ies)

# **PROPANE**

# PETRO-CAMADA

#### 000003000646

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Water solubility
Partition coefficient: n-

octanol/water

No data availableNo data available

Viscosity

Viscosity, kinematic

: No data available

**Explosive properties** 

Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Containers may explode in heat of fire. Vapour explosion hazard indoors, outdoors or in sewers. Propane may form explosive mixtures with

air.

#### **SECTION 10. STABILITY AND REACTIVITY**

Possibility of hazardous reac-

tions

: Hazardous polymerisation does not occur,

Stable under normal conditions.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Reactive with oxidising agents and halogenated compounds.

Hazardous decomposition

products

May release COx, smoke and irritating vapours when heated

to decomposition.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Eye contact Inhalation Skin contact

# **Acute toxicity**

Product:

Acute oral toxicity

Remarks: No data available

Acute inhalation toxicity

: Remarks: No data available

Acute dermal toxicity

Remarks: No data available

# **Components:**

butane:

Acute inhalation toxicity

LC50 (Rat): 658 mg/l Exposure time: 4 h

Test atmosphere: gas

## Skin corrosion/irritation

#### Product:

Remarks: No data available Internet: www.petro-canada.ca/msds Petro-Canada is a Suncor Energy business.

# **PROPANE**

# 000003000646

Version 2.0

Revision Date 2016/07/20



Print Date 2016/07/20

#### Serious eye damage/eye irritation

**Product:** 

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

# **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

**Product:** 

Toxicity to fish

Remarks: No data available

Toxicity to daphnia and other

aquatic invertebrates

Remarks: No data available

Toxicity to algae

Remarks: No data available

Toxicity to bacteria Remarks: No data available

Persistence and degradability

Product:

Biodegradability Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

# **PROPANE**

# PETRO-CAMADA

#### 000003000646

Version 2.0

Revision Date 2016/07/20

Print Date 2016/07/20

#### Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

#### Disposal methods

Waste from residues

The product should not be allowed to enter drains, water

courses or the soil.

Offer surplus and non-recyclable solutions to a licensed dis-

posal company.

Waste must be classified and labelled prior to recycling or

disposal.

Send to a licensed waste management company.

Dispose of as hazardous waste in compliance with local and

national regulations.

Dispose of product residue in accordance with the instructions

of the person responsible for waste disposal.

#### SECTION 14. TRANSPORT INFORMATION

# International Regulations

IATA-DGR

UN/ID No.

: UN 1978

Proper shipping name

Propane

Class

2.1

Packing group

Not assigned by regulation

Labels

: Class 2 - Gases: Flammable (Division 2.1)

Packing instruction (cargo

aircraft)

200

IMDG-Code

**UN** number

F UN 1978

Proper shipping name

: PROPANE

Class

: 2.1

Packing group

: Not assigned by regulation

Labels

2.1

EmS Code

: F-D, S-U

Marine pollutant

: r-D, 3-1

# Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

#### **National Regulations**

**TDG** 

UN number

: UN 1978

Proper shipping name

: PROPANE

Class

: 2.1

Packing group

Not assigned by regulation

Labels

2.1

ERG Code

115

Internet: www.petro-canada.ca/msds Petro-Canada is a Suncor Energy business.  $Page: 9 \ / \ 10$  Trademark of Suncor Energy Inc. Used under licence.

# **PROPANE**



#### 000003000646

Version 2.0 Revision Date 2016/07/20 Print Date 2016/07/20

Marine pollutant

: no

#### **SECTION 15. REGULATORY INFORMATION**

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

# The components of this product are reported in the following inventories:

DSL

On the inventory, or in compliance with the inventory

**TSCA** 

All chemical substances in this product are either listed on the

TSCA Inventory or are in compliance with a TSCA Inventory

exemption.

**EINECS** 

On the inventory, or in compliance with the inventory

#### **SECTION 16. OTHER INFORMATION**

For Copy of (M)SDS

: Internet: www.petro-canada.ca/msds

Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-

1228

For Product Safety Information: 1 905-804-4752

Prepared by

: Product Safety: +1 905-804-4752

**Revision Date** 

2016/07/20

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

# Abandonment and Restoration Plan for the Nanuq Project

Kivalliq Region, Nunavut NTS 56G

Peregrine Exploration Ltd.

Suite 654 – 999 Canada Place Vancouver, British Columbia V6C 3E1

June 27, 2018

# Nanuq Project Abandonment and Restoration Plan June 27, 2018

# Background as of June 27, 2018

This document is an update of the abandonment and restoration plan for the Nanuq Project. It builds upon previous plan for the project and shall be in effect as of June 27, 2018. At present the Nanuq Project is on hiatus due to uncertainty regarding the draft Nunavut Land Use Plan.

The Nanuq Claim Block is located on 1:50,000 NTS Maps, 56G02, 56G06, 56G07, 56G08, 56G10 and 56G11. The Nanuq Project consists of 125 mineral claims with an aggregate area of 125,402.19 hectares. All claims are on Crown Land.

This location is approximately 280 kilometres at heading 10.14 degrees (north-northeast) of the Kivalliq Regional Centre of Rankin Inlet.

# **CAMP LOCATION**

The Nanuq Camp is located on the west bank of the Lorillard River on 1:50,000 scale National Topographic Map 56G06. The coordinates for the camp are as follows:

**Projection:** Latitude/Longitude

**Datum:** WGS84 **Latitude:** 65° 13'43" **Longitude:** -91° 05'26" **NTS:** 56G03

# **CAMP - SEASONAL SHUTDOWN**

# **Buildings and Contents**

Buildings and contents will be secured and will remain at site. Wood structures and wood doors will be kept secured. Wooden bed frames will be turned upside down and secured to the wooded floors for over winter storage. Equipment will be stored neatly and securely in the camp buildings.

# **Water System**

Pumps and hoses will be drained and dismantled. Pumps and hoses will stored neatly and securely within the building.

# **Fuel Management & Storage**

Any fuel caches established beyond the camp boundary will be removed and relocated to the camp. An inventory and inspection of all fuel drums will be completed and empty fuel drums will be decanted, de-headed and wiped clean with fuel absorbent pads. Partially full fuel drums will be kept to a minimum and placed on an angle to ensure that snow and water do not enter the drum and no leakage from the drum occurs. Fuel drums will be stored on their sides.

All full or partially full drums will be stored in impermeable berms. Charcoal filters will be attached to the berms for water drainage.

#### **Domestic Chemicals**

Domestic chemical (cleaners) use will be kept to a minimum. At the end of the season domestic chemicals will be compiled into a Rubbermaid type container and securely stored.

#### **Domestic Waste**

All combustible domestic waste will be incinerated on a daily basis, this includes food scraps, office garbage etc. Non-combustible inert waste will be sorted (metals, glass etc.) packaged and flown out to an appropriate disposal facility.

# **Grey Water**

Domestic grey water sump will be inspected and covered securely for the winter. Stakes will be placed around the sump so that it is easily identifiable when the camp is opened up again each year.

#### Sewage

A sanitary pit with outhouse is used at the Nanuq Camp. Lime (CaO) is scattered in the sanitary pit after every use. This helps reduce both the bad insects and the nasty odours while aiding the decomposition process.

# **Hazardous Waste**

Hazardous waste is generally confined to empty fuel drums, batteries and generator waste oil. As described above, empty fuel drums will be decanted, de-headed and wiped clean with fuel absorbent pads. Batteries will be collected and compiled for disposal at final camp abandonment. Waste oil from the generator will be incinerated in small quantities (500 ml) with the domestic garbage as there are no secure facilities to handle waste oil in the neighboring communities.

# **CAMP – FINAL ABANDONMENT AND RESTORATION**

# **Buildings and Contents**

All buildings will be dismantled and removed. All wooden structures, including floors, will either be burned or removed.

# **Equipment**

All equipment will be dismantled, packed up and removed from the project area.

# **Fuel Caches and Chemical Storage**

All fuel drums will be removed. All areas where there have been fuel caches will be thoroughly inspected. Any contamination will be cleaned up as well as any debris removed. If there are instances of contaminated soil will be handled as per the Spill Contingency Plan.

# **Sumps**

The grey water sump will be inspected to ensure there is no leaching or run-off. It will be backfilled and leveled as required.

# DRILLS SITES - SEASONAL AND FINAL

The drill site will be dismantled into its main components as per the drill contractor's procedures, packaged and secured along with equipment and rods. The drill will be flown out by the drilling contractor or as the contract describes.

All drill sites will be inspected for soil contamination. Any remaining waste will be taken to camp to be incinerated if possible or to be flown out to an approved disposal location. Natural depressions used as sumps will be inspected.

Drill sites will be subject to progressive reclamation. As much as possible drill sites will be restored immediately after the drill has been moved to the next site.

# **CONTAMINATION CLEAN-UP**

No contamination is anticipated however, should this occur, any contamination will be treated as per the 2018 Nanuq Spill Contingency Plan.