



**APPLICATION FOR LAND USE PERMIT**

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Application Fee	Land Use Fee	General Receipt No.	Date (YYYYMMDD)	Class	Permit Number
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To be completed by all applicants  New Application  Amendment

1. Applicant's Name and Mailing Address (Full name, no initials) Jean-Philippe Cloutier-Dussault Environment Climate & Change Canada, Property Management 160 Cemin Tour de l'isle, Ile Ste-Hélène, Montréal, Québec, H3C 4G8	Facsimile Number
	Telephone Number 514 283-4045

2. Head Office Address	Facsimile Number
	Telephone Number

Field Supervisor	Radio Telephone	E-Mail Address jean-philippe. @canada.ca	Telephone Number
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3. Other Personnel (Subcontractor, Contractors, Company Staff, etc.) *Cloutier-Dussault*

The Station Program Manager (SPM) in Eureka is also a main contact as they manage the operations of the facility. They rotate every three months. It will be one of the following 3 people; André Bouchard, Al Gaudet, or John MacIver.  
Contact info: Environment Canada, Eureka Weather Station, Eureka, Nunavut, X0A 0G0 Attn SPM. Tel# (204)984-6376 Ext.4460

Total ▶ 32

4. Qualifications Refer to Section 21 of the <i>Territorial Land Use Regulations</i>	Number(s) exploration permit mineral claims (If applicable)
a(i) <input type="checkbox"/> a(ii) <input type="checkbox"/> a(iii) <input type="checkbox"/> b <input checked="" type="checkbox"/> c <input type="checkbox"/>	1 Land Use Permit for both Eureka reserves 1021 & 049/G15-2

5. a) Summary of Operation (Describe purpose, nature and location of all activities.)  
Refer to Section 22(2)(b) of the *Territorial Land Use Regulations* (Use last page of form if necessary.)  
Primary purpose and nature of activities at Eureka Facility are to collect meteorological information used to produce weather forecasts and for other scientific and climatic purposes. Secondary purpose is the provision of logistical support and a staging location for the support of Governmental and Non-Governmental entities for the bases of science based research, exploration & military operations. This includes the use of the Runway, Fuel cache depot area, Accomodations Facility, Atmospheric Research Laboratory, 2 Lab trailers (OPAL & SAFIRE), and site related infrastructure such as roadways, fuel supply systems, water supply system, sewage/waste

b) Please indicate if a camp is to be set up (Use last page to provide details.)

See attached documents for site maps of the structures currently in Eureka. Also see attached maps of proposed road and quarry.

6. Summary of potential environmental and resource impacts  
(Describe the effects of the proposed program on land, water, flora and fauna and related socio-economic areas.)  
(Use separate pages if necessary.)

Potential environmental impacts could originate from failure of infrastructure such as the Fuel Storage and Supply systems, the sewage and waste disposal systems. These potential environmental impacts are being mitigated by the implementation of proper operational procedures as described in the attached Operation Procedures For Departments-Emergency Plan document (Appendix C). No potential resource impacts would originate from the Water Supply & storage system utilized in Eureka as the volume of runoff water collected from Station Creek is minimal at 0.4% of the lowest estimated annual volume of water as per the Worley Parson Study (Provided upon request).

7. Proposed Restoration Plans (Please use last page if required.)

Please refer to Abandonment and Restoration Plan attached

8. Other rights, licences or permits related to this permit application (Mineral claims, Yukon timber permits, water licences, etc.)  
(Please use last page if required.)

Please refer to attached copy of Nunavut Water Licence # 8BC-EUR1621.

Please note that the current amendment application is to seek permission to operate outside the land reserve to the east.

Roads  Is this to be a pioneered road?  Has the route been laid out or ground truthed?

9. Proposed Disposal Methods (Please use last page if required.)

- |  |  |
|--|--|
| a) Garbage<br>Organics incinerated. Non-organic, non hazardous is landfilled | b) Sewage (Sanitary and Grey Water)<br>Sewage Lagoon   |
| c) Brush and Trees<br>N/A  | d) Overburden (Organic soils, waste material, etc.)<br>Non-hazardous landfilled. Hazardous shipped off site. |

10. Equipment (Includes drills, pumps, etc.) (Please use last page if required.)

Type and Number	Size	Proposed Use
Loader Case 721D	See attached specification	Infrastructure maintenance & Operations
Caterpillar IT 28B Loader	See attached specification	Infrastructure maintenance & Operations
Champion Grader 720 Series 3	See attached specification	Infrastructure maintenance & Operations
Cat D7F	See attached specification	Infrastructure maintenance & Operations
RTC Crane	30 Ton	Operations including Material handling
See Annex B Equipment list for remaining	Varies	Infrastructure maintenance & Operations

Fuels	Number of Containers	Capacity of Containers
<input checked="" type="checkbox"/> Diesel	9 of the 60,000L & 1 of the 800,000L	60,000 liter & 800,000 liter tanks
<input checked="" type="checkbox"/> Gasoline	23 drums	200 liter (50 Gallon drums)
<input checked="" type="checkbox"/> Aviation Fuel	8 drums	200 liter (50 Gallon drums)
<input type="checkbox"/> Propane		
<input type="checkbox"/> Other: _____		

12. Containment Fuel Spill Contingency Plans (Please attach separate contingency plan if necessary.)  
Please refer to attached document entitled "Eureka Operations Procedures for Departments/Agencies/Private Sector Residing/Working on Eureka Land Reserve".

13. Methods of Fuel Transfer (To other tanks, vehicles, etc.)

Ship to shore yearly fuel transfer from Coast Guard Vessel to Fuel Tank Farm via floating hose and land based fuel transfer pipeline.  
Fuel transfer from Fuel Tank Farm to Electrical Generators via pipeline.  
Periodic fuel dispensing from Fuel Tank farm to heavy equipment and machinery using pipeline and fuel dispensers.  
Periodic fuel transfer from fuel drums to aircraft at Runway.  
Periodic fuel transfer from aircraft to fuel depot at Runway either via hose to above ground storage tanks or via barrel fuel cache.  
Periodic fuel transfer from Fuel Tank Farm to mobile fuel wagon then to various above ground storage tanks at various locations.

14. Period of Operation (Includes time to cover all phases of project work applied for, including restoration.)  
Continuous year round operation for Meteorological activities and unmanned Satellite Communication Station as well as being a staging location for seasonal military, research, exploration, expedition, and tourism operations by various external entities. See section 21 of application for Historical data concerning period of operation.

15. Period of Permit (Up to two years, with maximum of one year extension.) Same as current permit #N2017N0017	Start Date (2017-07-04)	Completion Date (2022-07-03)
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16. Location of activities by map co-ordinates (Attach maps and sketches.)							
	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds
Minimum Latitude ▶	79	56	16	Minimum Longitude ▶	85	20	40
Maximum Latitude ▶	79	59	24	Maximum Longitude ▶	85	46	35

Map Sheet Number  
See Annex C containing maps for Eureka Complex and proposed road

17. Applicant (Print Full Name) <b>JEAN-PHILIPPE CLOTTIER-DUSSAULT</b>	Signature <i>Jean-Philippe Clottier-D.</i>	Date <b>2018-02-13</b>
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18. Fees		
<input checked="" type="radio"/> Class A - \$150.00 <input type="radio"/> Class B - \$150.00		\$150.00
Land Use Fees: Less than or equal to 2 hectares	▶ \$50.00	\$ 50.00
For each additional hectare over 2 hectares or portion of a hectare	▶ X \$50.00 =	
<b>Total application and land use fees</b>	<b>▶</b>	

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19. Calculation of area involved (Includes access, staging areas, airstrips, campsites, etc.)		
Total Area (Ha)	Less than or equal to 2 hectares	Total (For Fee Calculation)

20. Application Checklist
- |  |   |
|--|---|
| <input type="checkbox"/> a) Application Signed and Dated | <input type="checkbox"/> e) Screening Report                  |
| <input type="checkbox"/> b) Fees Attached                | <input type="checkbox"/> f) Timber Permit Applied for - Yukon |
| <input type="checkbox"/> c) Map Included                 | <input type="checkbox"/> g) Fees Attached                     |
| <input type="checkbox"/> d) Address and Telephone Number | <input type="checkbox"/> h) Lease Applied for                 |

Remarks (Please use last page if additional space is required.)

Accepted by	Date (YYYYMMDD)

21. Additional Information (Attach additional pages if necessary.)

The current amendment application is to include a new road and water crossings using an existing ATV path/trail. It is planned to extend the path to a 6 meter wide permanent road. The road will be built up using pit run and crushed aggregate from the new borrow area located at West Remus Creek. The contractor's plan is to move the crusher and temporary tent camp from Blacktop Creek to West Remus Creek. Excavate and crush the required size and quantities of aggregate to construct the road working from West Remus Creek back to Blacktop Creek. Along the road, culverts will be strategically placed to drain any melt runoff from the high side of the newly constructed road. At Blacktop Creek, two Arch culverts will be placed in Blacktop Creek to create a 6m x 50m water crossing. The culvert bridge will span Blacktop Creek to the location of the original borrow area located on the West side of Blacktop Creek.

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The following Environment & Climate Change Canada Meteorological Service personnel reside at the Eureka Facility on a continuous basis (all year);

Station Program Manager, Senior Aerological Observer, 2 Meteorological Technicians, Cook, and a Handy person.

There are 2 contracted personnel that also are in Eureka all year and they consist of the Mechanic and the Heavy Equipment Operator.

There are multiple Governmental Departments, Agencies, University Researchers, and Private Sector companies that utilize Eureka as a staging ground for their research and operations. The following is a list of such entities operating out of Eureka;

CANDAC (Canadian Network for the detection of atmospheric change)

-Operate at PEARL, OPAL and SAFIRE. Activities part of International Polar Year.

DND

-Operate out of Fort Eureka. Summer occupation only to do maintenance on their communication equipment.

NRCAN

-Has geomagnetic survey equipment at PEARL.

PCSP (Natural resources Canada)

-Polar continental shelf Project (PCSP) gives support for and offers expert advice to Can.Government and university scientists and independent, private sector and non-canadian researchers working in isolated areas throughout Canadian arctic (transportation, communications, accommodation, field equipment, etc..).Facilities at airstrip (Weather Haven)

NAVCANADA

-Maintains non-directional beacon between airstrip and Eureka complex.

U of New Brunswick (CADI Canadian Advanced Digital Ionosonde)

OGD

-Occasional other government departments for scientific research (Peary Caribou Project, etc)

NOAA (United states oceanic& Atmospheric Administration)

-Has installed a Light detection and Ranging (LIDAR) with CANDAC, MSC and U of Wiskonsin. Covered under CANDAC.

Perimeter Air

-Provides charter aircraft services

Tourism (Private)

Other (NGO)

-Doing research in the Arctic

ARQX (ECCC Research)

-ECCC research runs a BREWER program in Eureka for measuring atmospheric ozone.

Inland Waters (ECCC water survey)

Other (ECCC)

Historical Data

- 1947 (Joint Canadian-United States Arctic Weather Station JAWS): Joint effort between Canada and USA to establish 5 weather stations (Eureka being one of them) to get observation data from the Canadian Arctic that would increase knowledge in weather forecasting.

-Canada provided all permanent installations and ½ of the staff.

-USA provided fuel, mobile equipment, upper air ground equipment and staff

-1950: 1st airstrip became operational

-1972: Department of Transport (DOT) took over the 5 weather stations.

-1977: Environment Canada (EC) takes over the 5 weather stations. DOT stays to maintain airports

-1990: DOT hands over airports to EC.

-1990 to Present: EC operates & maintains Eureka Facility.