

Public Registry - Project Proposals

NPC 150699: Isachsen High Arctic Weather Station Waste Fuel Reduction Program

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Proposal Status: Conformity Determination Issued

Overview Documents

Project Overview

Type of application: New

Proponent name: Owen Wade

Proponent company: ECCC

Project Description:

The purpose of the Project is to reduce the environmental risk at Environment and Climate Change Canada's Isachsen High Arctic Weather Station. There is approximately 76,000 litres of old fuel on site in above ground storage tanks and drums. The majority of it is along the runway, with lesser amount in other tanks at the Station area. In 2024 NOJV, working for ECCC reconditioned and tested two forced air incinerators that were present at the site from earlier fuel incineration activities. The incinerators were successful in burning all types of waste fuels on site. Gasoline was not tested because it needs to be mixed with fuels of higher flashpoint for incineration. An incineration area has been proposed and designed to be established at the west end of the runway across from the runway tanks. Fuel (old diesel) from those tanks will be gravity fed to the mixing/feed tanks for the incinerators. Drummed fuel will be brought to the incineration area by a loader with a drum grabber. It is expected that the incineration program will require approximately 42 days for it to be complete, and will span from late June to early August 2025. At the end of the program there will be no waste fuel left at the site. The resulting empty drums will be crushed later as part of the scope of the larger remediation program which is in its planning stages. The alternative is to leave fuel in tanks and drums which is not acceptable. The risk of leakage grows with every year as these tanks and drums become weakened through corrosion. The work camp for this project is already permitted under N2024U0011 (effective as of June 1, 2024, in effect til May 30, 2026) .

Project Schedule

Start Date: 2025-06-30

End Date: 2025-08-30

Project Map

List of project geometries:

Id	Geometry	Location Name
15994	polyline	P2023-16 LUP(250228)

NPC Planning regions:

North Baffin

Project Land Use and Authorizations

Project Land Use:

Site Cleanup/Remediation

Site Cleanup/Remediation

Licensing Agencies:

Government of Canada - Crown-Indigenous Relations and Northern Affairs Canada

Nunavut Water Board

Material Use

Equipment:

Type	Quantity	Type	Use
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Forced-air incinerators	2	n/a	Two Ketek brand forced air incinerators will be used to incinerate the combustible waste fuel that is present at Isachsen. The units were used in 1996 for the same purpose and have been reconditioned and recertified by their manufacturer. They burn at the rate of about 110 L/hour. Test burns were conducted on diesel, jet A & B fuel and kerosene. Gasoline will be mixed at a ratio of 1 parts gasoline to 10 parts diesel or jet to be incinerated.
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Fuel Use:

Type	Container	Capacity	Use
Diesel	20	205	To pre-heat the incinerators
Aviation fuel	10	205	To refuel the Twin Otter
Gasoline	10	205	To refuel the generators

Hazardous Material and Chemical Use:

Type	Container	Capacity	Use
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No data found

Water Consumption:

Daily Amount (m2)	Retrieval Method	Retrieval Location
2	North of runway	Pump from meltwater pond

Waste and Impacts

Environmental Impacts:

Waste fuel will be reduced and eliminated via on-site incineration at Isachsen. Aside from combustion gasses no environmental impacts are expected. The incineration area will be bermed to contain any spillage of fuel. A spill protection plan and spill cleanup equipment will be implemented. The work will be led by an appropriately licensed contractor. In addition, non-combustible liquids will be collected from approximately 11 inoperable vehicles and will be put in drums and taken off site for disposal.

Waste Management:

Waste Type	Quantity Generated	Treatment Method	Disposal Method
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Combustible wastes	76,000L	Combustible waste fuels will be incinerated on-site in two force-air incinerators that were reconditioned and tested in 2024.	Incineration in forced-air incinerators.
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Non-Combustible wastes	100L	This waste stream is antifreeze and will be taken off-site for disposal.	Non-combustible fluids from inoperable vehicles will be pumped out of the motors and collected into one or more sturdy 205L drums and taken off-site for disposal.
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