



Environmental Protection Service
Prairie and Northern Region
NWT District Office
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Yellowknife, NWT, X1A 2N3

File:

RECEIVED

By Manager of Licensing at 9:08 am, May 17, 2011

2 June, 1994

Major J.S. Brasseur
Senior Staff Office
Technical Services
Communications Command Headquarters
DND Computer Centre
Tunney's Pasture
Ottawa, Ontario
K1A 0K2

Dear Major Brasseur:

RE: Thermal Oxidation Process System in CFS Alert

The Department of National Defense has recently purchased and installed a 2 tonne per day thermal oxidation system in CFS Alert.

On May 16, 1994 I had an opportunity to view this unit in operation.

The First burn was using the 25 Gallon per hour waste oil burner. Used Crankcase oil was introduced into the primary burn chamber and ignited. The primary burn chamber operates at 1000°F. The exhaust gases are then fed through a secondary burn chamber that operates at 1800°F. This chamber has a 2 second retention time. The gases are then exhausted through a smoke stack. At no time during the one hour burn demonstration was there any visible smoke or ash emitted from the smoke stack.

The second demonstration involved burning solid wastes. The solid wastes were vehicle tires, discarded office files, and domestic trash including kitchen wastes. Approximately 800 kgs of waste were loaded in the primary burn chamber. The smoke stack was observed at 4 separate times during the demonstration. No smoke or ashes were observed coming from the stack. The system was shut down after 12 hours as the wastes had been consumed to the point where they would no longer support fire. The volume of ash remaining was approximately 10% of the original volume of wastes placed in the oxidation unit.

Environment Canada, Atmospheric Environmental Services has an air quality monitoring station in Alert. Personnel at this station indicated there had been no increase in airborne pollutants



measured during the operation of the thermal oxidation system. It remains to be seen if wind direction and increased burning activity will affect this monitoring station.

This type of system appears to have potential for remote communities as it is relatively cheap to operate, requires little supervision, has low maintenance, and produces low levels of emission. As well, this system reduces the volume of waste by at least 90% which significantly reduces the requirements for land fill. This can be important in areas with thin soil or limited land base for a landfill.

Yours truly,



N. Scott
Inspector/Investigator