Dangerous Goods Handling and Transportation Act Application Form

Manitoba
Conservation and Water Stewardship

Name of facility: Used Oil Space Heater	
Legal name of the applicant of the facility: Town of Churchill	
Location (street address, city, town, municipality, legal description): 451 Kelsey Blvd.	
Name of proponent contact person for purposes of the environmental assessment: Dmytri Kandiurin	
Phone: 204 675 8871 Fax: 204 675 2934	Mailing address: Churchill Municipal Office Box 459, Churchill, MB ROB 0E0
Email address: townofchurchill@churchill.ca	
Webpage address:	
Date: APRIL 8/2015	Signature of person representing the legal applicant Printed name: DKANDIURIN

A complete Dangerous Goods Handling and Transportation Act application consists of the following components:

- **Cover letter**
- **Dangerous Goods Handling and Transportation Act Application Form**
- **Reports/plans supporting the application***
- **Application fee** (Cheque, payable to Minister of Finance, for the appropriate fee)

Per Dangerous Goods Handling and Transportation Fees Regulation (Manitoba Regulation 164/2001):

Hazardous Waste Storage, Handling and/or Treatment $250

Submit the complete application to:

Director
Environmental Approvals Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main Street
Winnipeg, Manitoba R3C 1A5

For more information:
Phone: (204) 945-8321
Fax: (204) 945-5229
http://www.gov.mb.ca/conservation/eal

*The required information, as well as the quantity and types of copies required, are as described in Information Bulletin - Environment Act Proposal Report Guidelines. The applicant should also take facility impacts on environmental and human health into consideration.

The Town of Churchill

P.O. Box 459
Churchill, Manitoba
Canada R0B 0E0
Phone (204) 675-8871
Fax (204) 675-2934
e-mail:townofchurchill@mts.net

April 9, 2015

Manitoba Conservation and Water Stewardship
Environmental Approvals Branch
123 Main St, Suite 160
Winnipeg, MB
R3C 1A5

Dear Raj Rathamano

Please accept the corrections to the applications for a Used Oil Collection Facility and a Used Oil Space Heater.

I hope that these applications answer all of the questions and issues that you have raised.

Please find enclosed $250 for the application for the Used Oil Collection Facility – the monies for the Used Oil Space Heater already having been submitted.

Thank you for all of your help and if you have any more questions please do not hesitate to ask.

Susan Maxson
Sustainability Coordinator
Town of Churchill
204 675 8871 ex 116

The Town of Churchill

P.O. Box 459
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Environmental Report for a Waste Oil Space Heater at Churchill , Manitoba

April 9, 2015

Environmental Report for
a Waste Oil Space Heater
at Churchill, Manitoba

Table of Contents

1.0 Executive Summary

The Town of Churchill plans to create a waste oil collection centre within its recycling depot to handle incoming and currently stored waste oil in the area. The oil will then be separated and recycled through burning in an approved waste oil furnace to heat a nearby shop. Such an initiative would save on transportation costs and possibilities of spillage of sending the oil south on the train while reducing the environmental foot-print of the oil.

2.0 Introduction and Background.

Churchill has a large amount of waste oil stored in barrels near its recycling depot. There is also the on-going production of waste oil through oil changes in various business operations. Sending this oil to southern Manitoba by train is not seen as an environmental solution. Instead, burning this oil in an approved furnace to offset high costs of heating fuel in our cold environment will meet our vision of an environmentally concerned area in a cost effective way.

3.0 Churchill Ecology

Churchill is located in northern Manitoba, near the estuary of the Churchill River in the Hudson Plains Terrestrial Ecozone and more specifically, the Coastal Hudson Bay Lowland Ecoregion. The Ecoregion extends from a few kilometers north of Churchill to James Bay in a band along the Hudson Bay Coast.

The Ecoregion is a low-lying, marshy coastal plain with extensive tidal flats, developed on flat-lying Palaeozoic limestone bedrock. Post-glacial limits of marine innundation are 120-180 m asl. North of the Nelson River beaches are less prominent than in the eastern portion of the Ecoregion. The terrain is dominated by fens, polygonal peat plateaus, and peat plateaus. Peat plateaus occur often in parrallel rows marking the underlying beaches. In the fens, small incipient palsa bogs are common. Wetlands are poorly drained. Permafrost with low to high ice content is widespread.

The Ecoregion is within the High Subarctic Ecoclimatic Region. The mean winter temperature is -19 C with 400 mm to 600 mm mean annual precipitation. Snowfall averages about 20 cm during each of the months of January through April. Blowing or drifting snow and high windchill factors will inevitably preclude outdoor activities. On average, one third of winter weather observations attribute reduced visibility to blowing snow.

Vegetation is characterized by very open stands of stunted black spruce and tamarack with secondary quantities of white spruce; a shrub layer of dwarf birch, willow or ericacious shrubs; and ground cover of cotton grass or lichen and moss. Poorly drained sites usually support tussock vegetation of sedge, cottongrass and sphagnum moss. Low shrub tundra vegetaion consisting of dwarf birch and willow is also common.

The presence of avian and mammallian life-forms is dependent upon the availability of habitats and temperature. Species diversity and population numbers can vary annually.

At least 133 species of swimming birds, shorebirds, raptors, and scavengers frequent offshore, inshore, intertidal, or salt marsh habitats of the Ecoregion.

3.0 Collection and Recycling Sites

The Churchill waste oil furnace will be owned and operated by the Town of Churchill,
P.O. Box 459,
180 LaVerendrye Ave,
Churchill, Manitoba,
Telephone: 204 675 8871
Fax: 204 675 2934

3.1 Site

The recycling furnace will be situated at 451 Kelsey Bld, in a Town of Churchill shop in the Town Maintenance yard on the south east side of town at the opposite end of town from the hospital and school.

Maps and plans

Appendix A Map of town
Appendix D: Map of Town Shop for Recycling

Zoning Designation

The Town Maintenance Shop is in an area zoned industrial.

3.2 Infrastructure

Storage:

The oil will be stored in a vented double wall 500 gallon UCL – 5601 – 07 Waste Pro tanks which will be install on cement inside the building per Manitoba Fire Code.

Recycling

A Clean Burn Furnace will be used to recycle the waste oil creating heat for the town shop when ever it is needed. (hours of operation). It will take the place of a propane furnace which is currently being used.

Appendix C

Receiving Area:

The oil will be transferred inside the building from barrels in a truck into the oil tank using a double diaphragm pump. The tank has a level gauge. Cement floors/pads will be in all areas. Oil will only be transferred during working hours 8:30 – 5:00.

Access:

All of the equipment and products of the Waste Oil Collection and Recycling Centre will be housed in lockable buildings.

3.3 Supervisor:

The supervisor of the Waste Oil Collection Center will be trained by a certified trainer from MARRC.

4.0 Environmental Effects

This will be an environmental positive in Churchill. Oil which is currently being stored in old barrels will be cleaned up, propane burning will be replaced by oil burning and the hazardous transport of waste oil will be minimized.

4.1 Description of human health effects of proposed development

The human health effects should be minimal.

4.2 Mitigation measures to protect the environment

Transport, transfer and storage are areas of concern. Transport of waste oil will be done by a Town of Churchill truck which will have a license to transport hazardous wastes. Transportation will be minimized by this project as only the glycol will be shipped to southern Manitoba instead of both waste oil and glycol.

Oil transfer will be done inside a building with a cement floor with a waste oil pan situated to contain spills. Sorb-All is on hand to clean spills. Used absorbent will be put in a used oil drum and shipped to GFI Collection Centre in Flin Flon or to the Thompson Collection Centre when it is running again.

Storage will be in a vented double walled approved tank of 500 gallons.

Recycling will use an approved Clean Burn furnace. This will replace an existing method of heating (propane) which means that although CO and CO2 will be emitted the effect should be somewhat neutral allowing for the difference between propane and waste oil.

This project will clean up the present storage site which is behind the recycling facility, and will reduce the risk of old drums rusting out and leaking waste oil into the environment.

5.0 Follow – up Plans – monitoring and reporting

The supervisor will be trained by MARRC in monitoring and report procedures. The Director of Facilities for the Town of Churchill will also be monitoring the facility and reporting to Manitoba Conservation on any spills. The site is inspected periodically by Manitoba Conservation.

6.0 Conclusion

Churchill is excited about the possibility of a waste oil collection/recycling center. Getting rid of drums of waste oil will solve the possibility of leakage, and being able to burn it to produce heat instead of sending it down to southern Manitoba on the train makes environmental sense. There is ample space in the current recycling building for the waste oil collection centre and the new furnace will provided needed heat.

All in all, a waste oil collection/recycling facility fits in well with Churchill's desire to be an environmentally responsible community.

Appendix A

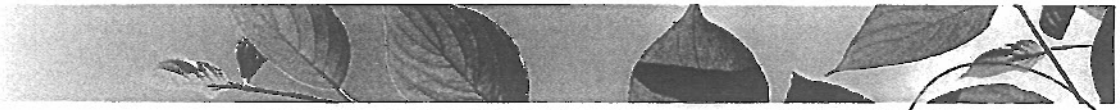
Town Maintenance Shop – Churchill

Appendix

CLEAN BURN

The #1 Waste Oil Furnace In Customer Satisfaction

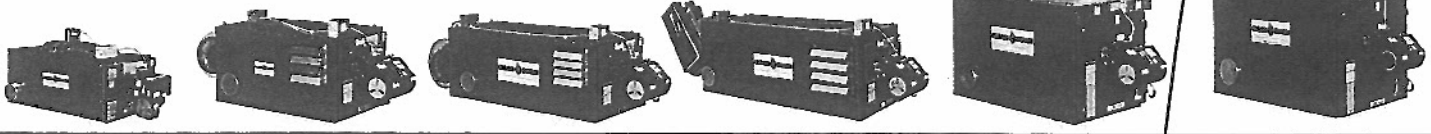
HASSLE FREE CLEAN BURN 100% SATISFACTION 10 YEAR WARRANTY



VERSATILE WASTE OIL HEATING TECHNOLOGY

Furnace system includes:
- Oil supply pump
- In-line washable oil filter
- Vacuum gauge for filter
- Check valve
- Tank filter
- Oil line fittings package
- Wall thermostat
- Barometric damper

6 ft. figure shown for scale



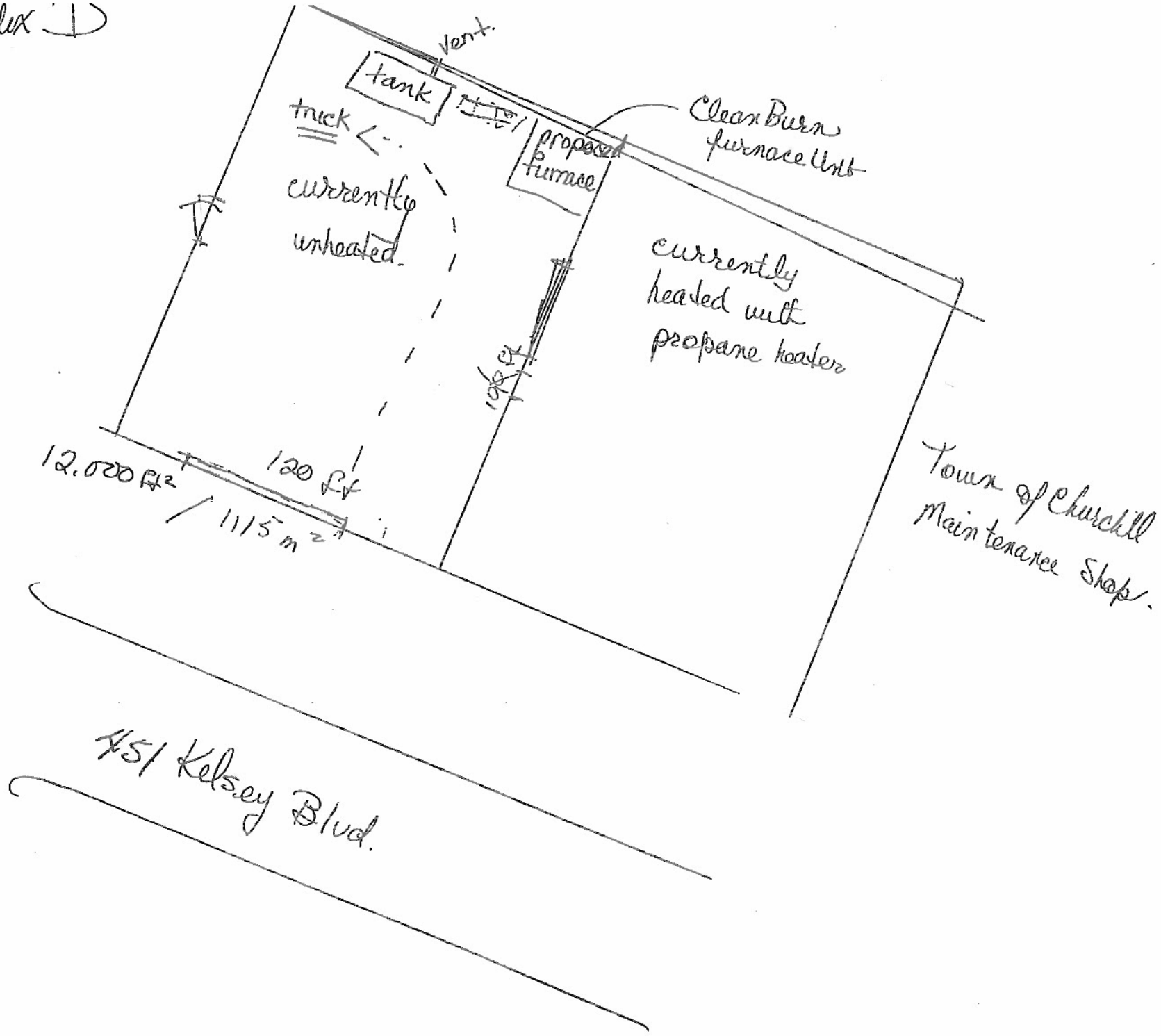
	CB-140	CB-1750	CB-2500	CB-3250	CB-3500	CB-5000
*Maximum BTU/hour	140,000 (41 kW)	175,000 (51.25 kW)	250,000 (73 kW)	325,000 (95.3 kW)	350,000 (102 kW)	500,000 (146 kW)
*Maximum oil consumption	1.0 GPH (3.8 L/h)	1.2 GPH (4.54 L/h)	1.7 GPH (6.4 L/h)	2.1 GPH (7.91 L/h)	2.5 GPH (9.5 L/h)	3.6 GPH (13.6 L/h)
Fuels	Used oils: Crankcase, ATF, hydraulic Fuel oils: #2, #4, and #5 fuel oil					
Air flow output (CFM)	Unit heater 2000 Axial fan Furnace cannot be ducted	Unit heater 1700 Central furnace (ducted) 0.25 SPWC (in.) 1500 0.30 SPWC (in.) 1400	Unit heater 2700 Central furnace (ducted) 0.25 SPWC (in.) 2500 0.40 SPWC (in.) 2400	Unit heater 3300 Central furnace (ducted) 0.25 SPWC (in.) 3150 0.40 SPWC (in.) 2900	Unit heater 4200 Central furnace (ducted) 0.25 SPWC (in.) 4000 0.40 SPWC (in.) 3900	Unit heater 5500 Central furnace (ducted) 0.25 SPWC (in.) 5200 0.40 SPWC (in.) 5100
*Air compressor req'd	2.0 CFM @ 20 PSI (3.4 m³/h @ 1.4 bar)	2.0 CFM @ 20 PSI (3.4 m³/h @ 1.4 bar)	2.0 CFM @ 20 PSI (3.4 m³/h @ 1.4 bar)	2.0 CFM @ 20 PSI (3.4 m³/h @ 1.4 bar)	2.0 CFM @ 25 PSI (3.4 m³/h @ 1.7 bar)	2.5 CFM @ 25 PSI (4.25 m³/h @ 1.7 bar)
Stack size	6 inch dia. (152.4mm dia.)	8 inch dia. (203mm dia.)	8 inch dia. (203mm dia.)	8 inch dia.(203mm dia.)	8 inch dia. (203mm dia.)	10 inch dia. (254mm dia.)
Furnace dimensions, assembled L x W x H (inches) (millimeters)	45" L x 28 W x 20 H (1143 x 711.2 x 508)	83 x 29.25 x 31.5 (2190 x 743 x 787)	103.25 x 29.25 x 31.5 (2623 x 743 x 787)	121" L x 31.25 W x 35 H (3073 x 794 x 889)	74 x 35 x 61 (1880 x 889 x 1549)	78 x 38 x 73 (1981 x 965 x 1845)
Approx. weight (Uncrated furnace system)	300 pounds (136.07 kg)	406 pounds (182.7 kg)	509 pounds (229.1 kg)	641 pounds (288.7 kg)	836 pounds (376.2 kg)	1036 pounds (466.2 kg)
Electrical requirements	115 VAC 60 Hz, single phase 20 A circuit breaker	115 VAC 60 Hz, single phase 20 A circuit breaker	115 VAC 60 Hz, single phase 30 A circuit breaker	115 VAC 60 Hz,single phase 30 A circuit breaker -or- 230 VAC 60 Hz,single phase 20 A circuit breaker	230 VAC 60 Hz, single phase 30 A circuit breaker	230 VAC 60 Hz, single phase 30 A circuit breaker

* Values indicated above are nominal. Actual values will vary depending on fuel and installation.

Clean Burn, LLC. 4109 Capital Circle, Janesville, WI USA 53546 1-800-331-0183 Fax: 717-656-0952 www.CleanBurn.com

This one

Appendix D


vent
tank
truck
currently unheated
proposed furnace
Clean Burn furnace Unit
currently heated with propane heater
12,000 ft²
1115 m²
120 ft
Town of Churchill Maintenance Shop
451 Kelsey Blvd