

MANITOBA
ENVIRONMENT

C, 0630

Jan 18 / 1994



Revised 93.09.15

**UNDERGROUND GRADE & ABOVEGRADE
PETROLEUM TANK REMOVAL REPORT**

This form is to be completed by the petroleum installer and submitted to Manitoba Environment after completion of the project.

Site Information:

Business Name

Gateway Industries

Address:

2 Point Douglas

Wpg. MB. R3B-0C7

Operating Permit Number:

562-93 C of W.

Petroleum Tank Installer:

Paragon Envirocycle Inc.

3133 Birds Hill Rd. Birds Hill, MB ROE-0H0

Tank Information: Include site plan using tank numbers listed in table.

Was Liquid Removed From Tanks:



Yes

No

Were Tanks Purged Prior To Removal:



Yes

No

Indicate Purging Procedure:

Dry Ice

Tank #	Capacity	Perforations Found in Tank Shell		Other Visible Physical Damage		Product last Stored in Tank	Date Tank Removed
		yes	no	yes	no		
1	2250L	No	sign	of this	tank		?
2	4500L		✓	✓	rusty	Gas	Aug 13/93
3	27,900 L		✓		✓	Bunker	✓
4	27,900 L		✓		✓	Bunker	✓
5							

(For additional tank information see next page)

Product Piping Removed



Yes

No

Vent Piping Removed



Yes

No

TESTING

Was vapour concentration measured in each tank? _____ Yes



No

Were field head space tests done on soils? _____ Yes



No

- instrument used

Explosimeter

- calibrated on

L.E.L.

Number of field tests:

Excavation walls

E1

highest reading

20%

Excavation base

B2

highest reading

95%

Excavated fill

highest reading

Pipe trenches

highest reading

Others

Were soil samples submitted for lab analyses?

David Klassen

Name of Lab

MacPlan Environmental Services

Address

#600 - 5 Donald St.

Number of samples

Type of analysis requested

BTEX - Total purgables

Will any additional site investigations be done? _____ Yes



No

* 2-27,900 L. Bunker Tanks are located under the edge of a building foundation. They seem to be encased in concrete on all sides and ~~will~~ will have to remain where they are. The tanks were steamed and pumped by Gateway personnel. Barrels of bunker oil will be re-used in their operation.

DISPOSAL

USE OF HAZARDOUS WASTE DISPOSAL FORM

Tank disposal site General Scrap

Date Shipped Aug. 13/93

Liquid disposal method Hand pumped by Gateway personnel

Disposal date Pumped in barrels for re-use

Was any excavated soil removed from site? Yes ☒ No ☐

Volume removed 150 cu. yd.

Disposal/treatment method Till and aerate

Disposal/treatment site Asphalt Parking lot at Gateway Industries.

CERTIFICATION

Date Jan. 18/94

Signed M. B. Smith

09627

MacPLAN*Environmental Planners & Consultants*

MacPlan Environmental Services Ltd.
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September 14, 1993

Gateway Industries Ltd.
2 Point Douglas Avenue
Winnipeg, Manitoba

*Merv*Attention: Mr. Chochinov

Dear Sir;

**RE: REPORT ON SOIL SAMPLES TAKEN DURING TANK REMOVAL
GATEWAY INDUSTRIES, WINNIPEG, MANITOBA**

MacPlan Environmental Services Ltd. was retained by yourselves to provide environmental testing services during the excavation and removal of an underground gasoline storage tank from your property at 2 Point Douglas Road in Winnipeg. The purpose of the testing was to determine if gasoline contamination had taken place at the location of the underground tank.

1.0 SITE INSPECTION

The site was inspected by MacPlan on August 15, 1993. The investigation was limited to the excavation area at the location of the underground tank. The tank had already been removed from the ground at the time of the inspection. The excavation and tank removal was performed by Paragon Industries Ltd.

The site inspection consisted of obtaining samples from the excavation walls in accordance with the Manitoba Guideline For The Environmental Investigation And Remediation Of Petroleum Storage Sites In Manitoba dated July 1993. Figure 1 provides a map of sample locations. Each sample was split and sealed in glass jars for further testing as required. One portion of each sample was field analyzed for hydrocarbon vapours using an MSA 2A Explosimeter to measure the lower explosive limit (L.E.L.). Gasoline vapours were detected at two test hole locations, B2 and E1 (see Figure 1). Test hole locations S1, S2 and B1 and F2 were found to have 0% of the L.E.L. in the field. Location B2 had 95% of the L.E.L. and E1 had 20% L.E.L.



TABLE 1
RESULTS OF SOIL ANALYSES

Parameter	Soil Samples		Remediation Criteria for Soil* (i.e. maximum levels)		
	Test Hole B2 Bottom (East)	Test Hole E1 End Wall (East)	High Risk	Medium Risk	Low Risk
Benzene	5.4	<0.5	0.05	0.5	5.0
Toluene	880	73	0.1	3.0	30.0
Ethyl Benzene	420	<0.5	0.1	5.0	50.0
Xylene	2900	1800	0.1	5.0	50.0
Total Purgables	6000	7400	100	150	800

All units are mg/kg

* Guideline for the Environmental Investigation and Remediation of Petroleum Storage Sites in Manitoba.

**Environmental Testing
Gateway Industries Ltd.
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3.0 SUMMARY

In summary, the site inspection at the location of the underground gasoline storage tank has indicated that hydrocarbon contamination exists at the east wall and east bottom side of the tank site. Laboratory analysis indicates the concentration of BTEX and total purgeables exceed criteria for all levels of risk in these areas. Additional investigation will be required to delineate the area of contamination.

If you require any further information, please contact the undersigned.

Yours truly,

MacPlan Environmental Services Ltd.



**P. David Klassen
Environmental Scientist**

MacPLAN

2.0 LABORATORY ANALYSIS AND RESULTS

Two selected soil samples with the highest vapours readings obtained during the field investigation were submitted to the Economic Innovation and Technology Council, Environmental and Analytical Chemistry Services. The samples were analyzed for benzene, toluene, ethyl benzene, xylene (BTEX) and total purgeables. The test method was purge and trap gas chromatography with a flame ionization detector after methanol extraction. This method conforms to EPA 5030/8015 high level method. The results of the soil analysis are shown in Table 1.

The Guideline For The Environmental Investigation And Remediation Of Petroleum Storage Sites In Manitoba specifies remediation criteria based on site sensitivity rankings. The three levels of remediation criteria are presented in Table 1 for comparison.

The concentrations of BTEX and total purgeables at sample location B2 exceeds the remediation criteria for all risk levels. At test location E1, the concentration of benzene and ethyl benzene exceeds the high risk level but not the medium or low risk, while toluene, xylene and total purgeables exceed all three risk levels. The excavated soils are considered contaminated and must be disposed of either at an approved and licensed disposal or treatment facility. If approval is granted by Manitoba Environment, the soils may also be treated on-site.

The results indicate that a further clean up of the site will be required to a level in accordance with the remediation criteria determined from a site specific sensitivity assessment.

It is recommended that Manitoba Environment in Winnipeg be informed of the results of this investigation. The location and level of hydrocarbons detected at the site indicates that the contamination has penetrated into the undisturbed ground adjacent to the underground tank. For a site contaminated with hydrocarbons, Manitoba Environment typically requires subsurface investigation to completely delineate the hydrocarbon plume. Zero closure is to be determined at the extremity of the plume. After delineation has been completed, a subsurface clean up proposal must be submitted to Manitoba Environment for review. The extent of the clean up will depend on the site sensitivity assessment and the remediation criteria applied to the site.

It is our understanding that further excavation has been undertaken at the site to attempt to delineate and remove the contaminated soils. At this point, it is recommended that further testing be done at the excavation site to determine if all hydrocarbon contaminated soils have been removed. If hydrocarbons are still found to exist at the site, a proper subsurface investigation would subsequently be recommended.

