



*File*

Date: MAR 08 2001

File: MR-01611

**REGISTERED MAIL**

CITY OF VANCOUVER  
453 West 12<sup>th</sup> Avenue  
Vancouver, British Columbia V5Y 1V4

Dear Operational Certificate Holder:

Enclosed is Operational Certificate MR-01611 issued under the provisions of the *Waste Management Act*. Your attention is respectfully directed to the conditions of the operational certificate. An annual fee for the operational certificate will be determined in accordance with the Waste Management Permit Fees Regulation.

This operational certificate does not authorize entry upon, crossing over, or use for any purpose of private or crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the operational certificate holder.

This decision may be appealed by persons aggrieved by the decision in accordance with Part 7 of the *Waste Management Act*. Notice of the appeal must (1) be in writing, (2) include the grounds for appeal, (3) be directed by registered mail or personally delivered to the Chair, Environmental Appeal Board, 4th Floor 836 Yates Street, Victoria, British Columbia, V8W 9V1, (4) be delivered within 30 days from the date notice of the decision is given, and (5) be accompanied by a fee of \$25.00, payable to the Minister of Finance and Corporate Relations.

Administration of this operational certificate will be carried out by staff from our regional office located at 10470 - 152nd Street, Surrey, British Columbia, V3R 0Y3. Plans, data and reports pertinent to the operational certificate are to be submitted to the Regional Waste Manager at this address.

Yours truly,

H.G. Maxwell  
Assistant Regional Waste Manager

enclosure

cc: Environment Canada  
Greater Vancouver Regional District

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• THE GOVERNMENT OF BRITISH COLUMBIA IS AN "EMPLOYMENT EQUITY EMPLOYER" •

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Ministry of Environment,  
Lands and Parks

BC Environment  
Lower Mainland Region  
Pollution Prevention

Mailing/Location Address:  
10470 152 Street  
SURREY BC V3R 0Y3

Telephone: (604) 582-5200  
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MINISTRY OF ENVIRONMENT,  
LANDS AND PARKS

**OPERATIONAL CERTIFICATE  
MR-01611**

Under the Provisions of the *Waste Management Act* and  
in accordance with the Greater Vancouver Regional District  
Solid Waste Management Plan

**CITY OF VANCOUVER**  
**453 West 12th Avenue**  
**Vancouver, British Columbia**  
**V5Y 1V4**

shall operate the Vancouver Landfill, located at 5400 - 72<sup>nd</sup> Street in Delta, British Columbia,  
subject to the conditions listed below. Contravention of any of these conditions is a violation of  
the *Waste Management Act* and may result in prosecution.

**1. AUTHORIZED FACILITIES**

**1.1** This section applies to the **discharge of refuse to a sanitary landfill** from  
sources within **the Greater Vancouver Regional District** and other sources as  
specifically authorized by the Regional Waste Manager. The site reference  
number for this discharge is E208246.

**1.1.1** The discharge is authorized for the full term of the Greater Vancouver  
Regional District Solid Waste Management Plan, dated July 1995. The  
solid waste management plan must be amended to authorize the discharge  
beyond this term.


**1.1.2** The maximum authorized rate of discharge is 750,000 tonnes per year.

Date Issued: October 31, 1973

Date Amended:  
(most recent)

**MAR 08 2001**

Page: 1 of 17

  
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H.G. Maxwell  
Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: **MR-01611**

- 1.1.3** The characteristics of the discharge shall be typical municipal solid waste and other materials as specifically authorized by the Regional Waste Manager. Asbestos waste may be discharged in accordance with the *Special Waste Regulations*.

Materials prohibited from discharge are Special Waste (excluding asbestos), liquids, semi-solid waste, untreated biomedical waste and the following recyclable materials:

- used white goods,
- auto hulks and other large metallic waste,
- used tires,
- used lead acid batteries,
- corrugated cardboard exceeding 10% of any individual load,
- gypsum wallboard,
- other materials banned by the Greater Vancouver Regional District in implementing the solid waste management plan, and
- other materials which may be designated by the Regional Waste Manager when disposal alternatives become available.

- 1.1.4** Waste shall not be discharged within a buffer zone as identified in **Section 2.9**. Putrescible and household waste shall not be discharged into water. The burning of waste is prohibited.

- 1.1.5** The authorized works common to this section and **Sections 1.2, 1.3** and **1.4** are a locking gate to control access by the public, a weigh scale and fire protection equipment, approximately located as shown on attached **Site Plan A**.

- 1.1.6** The authorized works specific to this section are those associated with a landfill operation and include berms, covering material, surface water diversionary works, environmental monitoring systems, leachate collection/pumping works and a landfill gas management system consisting of existing and future collection works, a blower/flare station and gas utilization works, approximately located as shown on attached **Site Plan B**.

- 1.1.7** The location of the point of discharge is Lot 9, Section 5 and 6, New Westminster District, Plan 38013. Discharge within the area identified as the "100 Acre Reserve", approximately as shown on **Site Plan B**, is restricted to construction and demolition waste in accordance with the approved closure plan required in **Section 2.8**.

- 1.2 This section applies to a **landfill transfer station facility** for the management of waste from sources within the Greater Vancouver Regional District and other sources as specifically authorized by the Regional Waste Manager.
- 1.2.1 The characteristics of the waste are the same as set out in **Section 1.1.3**.
- 1.2.2 The authorized works are those associated with a transfer station and include a paved access area and roll off bins, approximately located as shown on attached **Site Plan C**.
- 1.2.3 The location of the facilities is Lot 9, Section 5 and 6, New Westminster District, Plan 38013.
- 1.3 This section applies to a **recycling depot and household hazardous waste storage facility** for the management of recyclable materials and household hazardous waste from sources within **the Greater Vancouver Regional District** and other sources as specifically authorized by the Regional Waste Manager.
- 1.3.1 The type of materials which may be managed at this facility are typical recyclable materials and household hazardous waste.
- 1.3.2 The authorized works are those associated with a recycling depot and household hazardous waste storage facility and include roll off bins, recycling containers, a secure (fenced) storage area and storage shed for household hazardous waste, approximately located as shown on attached **Site Plan C**.
- 1.3.3 The location of the facilities is the same location as set out in **Section 1.2.3**.
- 1.4 This section applies to a **composting facility** for organic wastes from sources within **the Greater Vancouver Regional District** and other sources as specifically authorized by the Regional Waste Manager.
- 1.4.1 The type of waste that may be composted is restricted to fruit and vegetable waste, typical yardwaste and christmas trees.
- 1.4.2 The authorized works are those associated with a composting facility and include an impermeable pad, a stationary grinding plant, and windrow turning equipment, approximately located as shown on attached **Site Plan A**.
- 1.4.3 The location of the facilities is the same location as set out in **Section 1.2.3**.



H.G. Maxwell  
Assistant Regional Waste Manager

## 2. GENERAL REQUIREMENTS

### 2.1 Emergency Procedures

In the event of an emergency which prevents compliance with a requirement of this operational certificate, that requirement will be suspended for such time as the emergency continues or until otherwise directed by the Regional Waste Manager provided that:

- a. Due diligence was exercised in relation to the process, operation or event which caused the emergency and that the emergency occurred notwithstanding this exercise of due diligence;
- b. The Regional Waste Manager is immediately notified of the emergency; and
- c. It can be demonstrated that everything reasonably possible is being done to restore compliance in the shortest possible time.

Notwithstanding (a), (b), and (c) above, the manager may require the authorized discharge to be suspended or reduced to protect the environment while the situation is corrected.

### 2.2 Maintenance of Works

The operational certificate holder shall inspect the authorized works regularly and maintain them in good working order. Notify the Regional Waste Manager of any malfunction of these works.

### 2.3 Inspections

The operational certificate holder shall inspect the property boundaries regularly and notify the Regional Waste Manager of any visual evidence of environmental impacts on adjacent properties.

### 2.4 Site Preparation and Restoration

Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, firebreaks and site restoration as required, shall be carried out to the satisfaction of the Regional Waste Manager.

## 2.5 Base Preparation

In preparation for the placement of putrescible waste, the operational certificate holder shall construct a base cell consisting of an approximate 3 metre lift of demolition and construction waste covered with a minimum 0.15 metre layer of suitable cover material. Firebreaks shall be incorporated into each cell in such quantity and manner as to prevent fires from becoming an environmental or safety hazard. Putrescible and household waste shall not be discharged in the base cell. For the purpose of this section, suitable cover consists of soil, utilized in accordance with **Section 2.7** or other material as deemed acceptable by the Regional Waste Manager.

## 2.6 Waste Compaction and Covering

All waste shall be placed in cells of a size acceptable to the Regional Waste Manager. The working face shall be confined to the smallest practical area. Waste shall be discharged in layers of 0.6 metres or less and compacted to the smallest practical volume. Intermediate cover, consisting of a minimum 0.30 metre of suitable cover material shall be applied as the filling proceeds. Side slopes shall be a maximum of 1:3 (vertical:horizontal). During non-discharge hours, the working face shall be covered with a tarp or other measures to the satisfaction of the manager to provide vector and litter control. The working face shall be covered with a minimum of 0.15 metres of suitable cover material once a week. The manager may vary the frequency of covering when freezing conditions adversely affect normal operation.

For the purpose of this section, suitable cover consists of soil, utilized in accordance with **Section 2.7** or other material acceptable to the Regional Waste Manager.

## 2.7 Soil Management

The following definitions use terminology as set forth in the *Waste Management Act* and its regulations, and are for the purpose of this operational certificate:

- a) “**special waste soil**” means soil that is classified as a special waste; and
- b) “**urban park quality soil**” means soil which does not contain any substance with a concentration exceeding the lowest applicable numerical soil standard for urban park land (PL) as set forth in the *Contaminated Sites Regulation*.

Urban park quality soil may be utilized for berm construction, intermediate and final cover, top dressing and landscaping. Soil with any substance with a concentration exceeding the lowest applicable numerical soil standard for urban park land may only be used for internal berms or intermediate cover. The utilization or discharge of special waste soil is prohibited.

## 2.8 Completed Areas of the Landfill

The operational certificate holder shall submit a closure plan for the area identified as the "100 acre reserve", approximately as shown on **Site Plan B**, to the Regional Waste Manager by **December 31, 2001** for approval. The plan shall include, but is not limited to, information regarding:

- estimated total waste volumes and tonnage discharged to the area;
- a topographical plan showing the final elevation contours of the area and surface water diversion and drainage controls;
- design of the final cover including the thickness and permeability of barrier layers and drainage layers and information on topsoil, vegetative cover and erosion prevention controls;
- proposed implementation schedule for the closure aspects of the plan;
- proposed end use of the property;
- a post-closure monitoring program for groundwater, surface water, landfill gas, erosion and settlement for a minimum period of 25 years;
- post-closure operation of pollution abatement engineering works such as leachate and landfill gas collection/treatment systems for a minimum period of 25 years; and
- contingencies to address environmental impact concerns which may arise during the minimum post-closure period of 25 years.

For the remainder of the landfill, the operational certificate holder shall apply final cover to any area of the landfill, which will not receive any further waste. Final cover shall be applied within one (1) year of completing the subject area.

Final cover shall consist of a minimum of 1.0 metre of low permeability ( $<1 \times 10^{-5}$  cm/s) compacted soil (or equivalent) cap plus a minimum of 0.15 metre of topsoil and suitable vegetative cover. Soil shall be utilized in accordance with **Section 2.7**. Final cover shall be sloped to promote surface water runoff. Surface water runoff shall be directed outside of the leachate collection system.

## 2.9 Buffer Zones

The operational certificate holder shall maintain a buffer zone along the north, east and south perimeters of the site, approximately as shown on **Site Plan B** and as follows:

- a minimum of 50 metres wide along the west half of the northern boundary and 30 metres wide along the balance of the northern boundary; and
- a minimum of 50 meters wide along all remaining boundaries . The buffer zone along the southern boundary of the site shall include a minimum fifteen (15) metre wide natural or landscaped screen.

## 2.10 Posting of Signs

The operational certificate holder shall post a sign, to the satisfaction of the Regional Waste Manager, at the entrance of the landfill site with the following current information:

- site name,
- owner and operator,
- contact telephone number and address for the owner and operator,
- telephone number in case of emergency,
- hours of operation,
- materials and wastes accepted for recycling and landfilling,
- prohibited materials and wastes, and
- tipping fees.

## 2.11 Fire Prevention and Control

The operational certificate holder shall take all reasonable measures necessary to prevent fires from occurring at the site. Provide and maintain fire fighting equipment and materials to the satisfaction of the Regional Waste Manager.

The operational certificate holder is responsible for complying with all municipal fire safety requirements. In the event of a landfill fire, immediately notify the local fire department, the Provincial Emergency Program and the manager.

Date Issued: October 31, 1973

Date Amended:

(most recent)

Page: 7 of 17

MAR 08 2001



H.G. Maxwell

Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: MR-01611

## 2.12 Leachate Management

This operational certificate does not authorize the discharge of leachate to the environment. The operational certificate holder shall, to the satisfaction of the Regional Waste Manager, take measures to minimize leachate generation, including but not limited to, providing effective covering and surface water runoff. Measures taken, their effectiveness and any proposed measures shall be detailed in the annual report required in **Section 3.5.2**.

The leachate collection works shall be maintained in accordance with sound engineering principles as supported by qualified personnel.

## 2.13 Landfill Gas Management

The Ministry has a policy that municipal waste landfills emitting greater than 150 tonnes per year of non-methane organic compounds (NMOCs) are to have gas collection systems and that captured landfill gases are to be combusted. Energy recovery is also preferred.

Accordingly, the operational certificate holder shall submit a report to the Regional Waste Manager by **April 30, 2001** detailing measures taken to minimize odours and greenhouse gas emissions and their effectiveness. The report shall also include a description of any planned measures, including energy recovery, and an implementation schedule. The annual report required by Section 3.5.2. shall include a description of measures taken and the beneficial results accomplished by those measures, any revisions to the implementation schedule and any new measures planned for the coming year.

If, at any time, the progress attained and maintained by the operational certificate holder's implementation of its voluntary measures are not considered adequate by the Regional Waste Manager, he or she may at such time prescribe a statutory requirement to install and implement additional landfill gas collection, flaring or energy recovery.

## 2.14 Management of Compostable Materials and Compost

The amount of compostable materials and finished compost accumulated at the facility authorized in **Section 1.4** shall be limited to the maximum which can be properly managed at the site.

Classification and distribution of the mature compost shall be in accordance with the *Waste Management Act* and its regulations.

Date Issued: October 31, 1973

Date Amended:

(most recent)

Page: 8 of 17

MAR 08 2001



H.G. Maxwell

Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: MR-01611

## 2.15 Management of Recyclable Materials

The amount of recyclable materials and household hazardous waste accumulated at the facility authorized in **Section 1.3** shall be limited to the maximum which can be properly managed at the site.

## 2.16 Hydrogeological Assessment

The operational certificate holder shall conduct a hydrogeological assessment to determine the following:

- the hydrogeological impact of continuing extraction of sand and water from the dredge pond and its effect on leachate management;
- the natural attenuation properties of the peat and silt layers in the long term;
- the effect of additional height of waste on the horizontal hydraulic conductivity of the demolition layer (base cell); and
- the hydrogeological impact of current operating practices.

In addition, the assessment shall take into consideration recommendations of the hydrogeological study completed in September 1995.

The hydrogeological assessment shall be reviewed and updated every five (5) years. The first review shall occur prior to **December 31, 2005**.

Actions recommended in this assessment and subsequent reviews shall be incorporated into the revised design and operating plan as required in **Section 2.18**.

Hydrogeological assessments and reviews shall be conducted by a qualified professional licensed to practice in the Province of British Columbia.

## 2.17 Legal Survey

The operational certificate holder shall register a covenant or other legal notification acceptable to the Regional Waste Manager, not later than 6 months following the subdivision of the property described in **Section 1.1.7**, that the property was used for the purpose of waste disposal as a charge against the title to the property. Notify the manager of the registration of the covenant or legal notification.

## 2.18 Design and Operating Plan

The operational certificate holder shall operate the facilities authorized in **Sections 1.1, 1.2, 1.3 and 1.4** in accordance with a design and operating plan certified by a qualified professional licensed to practice in the Province of British Columbia. The plan shall include, but is not limited to, information regarding:

- a fill strategy for the design capacity of the landfill. The plan shall incorporate the concept of progressive closure and take into consideration environmental protection measures and the proposed end use of the site.
- a contingency to close the landfill, including funding, prior to the design capacity being achieved should the landfill not be supported by future Greater Vancouver Regional District solid waste management plans or closed for any other reason;
- estimated elevations at five (5) year intervals;
- cell size, compaction details, intermediate and final cover including types of materials used;
- schedule for progressive closure;
- surface water diversion measures;
- measures to minimize leachate generation;
- measures to prevent the discharge of leachate outside of the leachate collection works;
- contingencies to address environmental protection issues, including leachate and landfill gas management, in the event of an earthquake or any other emergency;
- implementation of recommendations from the hydrogeological assessment required in **Section 2.16**;
- fire prevention measures;
- list of recyclable materials and how they are managed at the site;
- incoming waste inspection, removal of unauthorized waste and staff supervision on the active face;
- estimated closure/post closure-costs and details of how the closure/post-closure funds will be accrued;
- operational controls and monitoring of the composting operation;
- measures to minimize hazards to public safety; and
- measures to control vectors, odours, dust, wind-blown litter and scavenging.

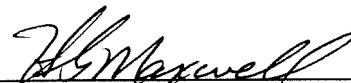
The operational certificate holder shall review the plan on an annual basis. Any revisions to the plan shall be submitted to the Regional Waste Manager as part of the annual report required in **Section 3.5.2**.

Date Issued: October 31, 1973

Date Amended:  
(most recent)

**MAR 08 2001**

Page: 10 of 17



H.G. Maxwell  
Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: **MR-01611**

## 2.19 Closure/Post-closure Funding

The operational certificate holder shall accrue, during the life of the landfill, a dedicated reserve fund in a form acceptable to the Regional Waste Manager, sufficient to finance closure, post-closure and environmental contingencies related to the landfill. The estimated cost of carrying out closure and post-closure activities for a minimum post-closure period of twenty five (25) years and how the fund will be accrued shall be included in the design and operating plan required in **Section 2.18**. The estimated costs of closure and post-closure activities shall be updated annually and reported to the manager as part of the annual report required in **Section 3.5.2**. Should the estimated costs of closure and post-closure increase then the operational certificate holder shall increase the rate of accrual accordingly.

## 2.20 Landfill Closure Plan

The operational certificate holder shall submit a closure plan for the facilities authorized in **Sections 1.1** and **1.2** at least six (6) months prior to the closure of the landfill to the Regional Waste Manager for approval. The plan shall incorporate details of the closure plan required in **Section 2.8** and include information regarding:

- estimated total waste volumes and tonnage and the closure date;
- a topographical plan showing the final elevation contours of the landfill and surface water diversion and drainage controls;
- design of the final cover including the thickness and permeability of barrier layers and drainage layers and information on topsoil, vegetative cover and erosion prevention controls;
- procedures for notifying the public about the closure and alternative waste disposal facilities;
- rodent and nuisance wildlife control procedures;
- proposed end use of the property after closure;
- a post-closure monitoring program for groundwater, surface water, landfill gas, erosion and settlement for a minimum period of 25 years;
- post-closure operation of pollution abatement engineering works such as leachate and landfill gas collection/treatment systems for a minimum period of 25 years; and
- contingencies to address environmental impact concerns which may arise during the minimum post-closure period of 25 years.

## 2.21 Site Decommissioning

In accordance with the *Waste Management Act* and its regulations, the operational certificate holder shall submit a site profile to the Regional Waste Manager not less than 10 days prior to decommissioning the facilities authorized in **Section 1**.

**3. MONITORING AND REPORTING REQUIREMENTS**

**3.1 Waste and Recyclable Materials Reporting**

The operational certificate holder shall record the quantity, in tonnes, of waste received at the landfill, recycling and composting facilities. Also, the quantity and destination of recyclable materials and mature compost removed from these facilities shall be recorded.

**3.2 Leachate and Receiving Environment Monitoring**

**3.2.1 Sampling and Analyses**

The operational certificate holder shall maintain leachate, surface water and groundwater monitoring stations, approximately located as shown on the attached **Site Plan D**, and as outlined in **Table 1**. Obtain grab samples at each station and analyze for each parameter at a frequency as indicated in **Table 2**.

Proper care should be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

<b>Table 1</b>		
<b>Reference #</b>	<b>Station</b>	<b>General Location</b>
<b>Leachate Monitoring Stations</b>		
E231636	99	leachate pump station, SW corner of the site
<b>Surface Water Stations</b>		
0301145	11	drainage ditch, S of Hwy. 99, on E side of 72 <sup>nd</sup> Street
0301147	13	drainage ditch, SW corner of the site
0301149	15	drainage ditch, W of the SW corner of the site
0301336	17	drainage ditch, N of the site entrance
E231637	34	dredge pond, NE corner
E243063	44	drainage ditch, NE corner of the fill area
E243064	91	Crescent Slough, NW of the site, background
E243065	92	Crescent Slough, SW of the site, downstream

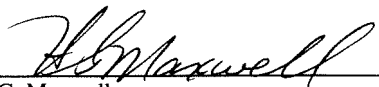
  
 H.G. Maxwell  
 Assistant Regional Waste Manager

Table 1 (continued)		
Reference #	Station	General Location
<b>Groundwater Stations (shallow well)</b>		
0301135	1	W side of 88 <sup>th</sup> Street approx. 750m N of Hwy. 99
0301140	6	W of the SW corner of the site
0301477	26	S of drainage ditch, approx. 150m W of the dredge pond
E231619	54	S of drainage ditch, approx. 100m E of the dredge pond
E231625	67	approx. 150m W of station #44
<b>Groundwater Stations (deep well)</b>		
0301473	23	SW corner of the site, adjacent to the leachate pump station
0301476	27	S of drainage ditch, approx. 150m W of the dredge pond
E105913	37	W property line, approx. 400m N of the leachate pump station
E231628	55	S of drainage ditch, approx. 100m E of the dredge pond
E231631	60	W side of 88 <sup>th</sup> Street approx. 750m N of Hwy. 99
E243096	68	approx. 150m W of Station #44
E243097	70	W of the leachate pump station

Table 2				
Parameter	Units	Analytical Frequency		
		leachate	surface water	groundwater
pH		quarterly <sup>1</sup>	quarterly <sup>1</sup>	quarterly <sup>1</sup>
temperature	°C	quarterly <sup>1</sup>	quarterly <sup>1</sup>	quarterly <sup>1</sup>
dissolved oxygen	mg/L	quarterly <sup>1</sup>	quarterly <sup>1</sup>	not required
specific conductivity	µmhos/cm	quarterly	quarterly	quarterly
alkalinity (as CaCO <sub>3</sub> )	mg/L	quarterly	quarterly	quarterly
ammonia	mg/L N	quarterly	quarterly	quarterly
chloride	mg/L	quarterly	quarterly	quarterly
hardness (as CaCO <sub>3</sub> ), total	mg/L	quarterly	quarterly	not required
hardness (as CaCO <sub>3</sub> ), dissolved	mg/L	not required	not required	quarterly
potassium	mg/L	quarterly	quarterly	quarterly
sodium	mg/L	quarterly	quarterly	quarterly
sulphate	mg/L	quarterly	quarterly	quarterly
total sulphide	mg/L	quarterly	not required	not required
total dissolved sulphide	mg/L	quarterly	not required	not required
arsenic, total	mg/L	quarterly <sup>4</sup>	quarterly <sup>4</sup>	not required
arsenic, dissolved	mg/L	not required	not required	quarterly <sup>4</sup>
cadmium, total	mg/L	quarterly <sup>2</sup>	quarterly <sup>2</sup>	not required
cadmium, dissolved	mg/L	not required	not required	quarterly <sup>2</sup>

Date Issued: October 31, 1973

Date Amended:

(most recent)

**MAR 08 2001**

Page: 13 of 17

  
H.G. Maxwell  
Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: **MR-01611**

Table 2 (continued)				
		Analytical Frequency		
chromium, total	mg/L	quarterly <sup>3</sup>	quarterly <sup>3</sup>	not required
chromium, dissolved	mg/L	not required	not required	quarterly <sup>3</sup>
cobalt, total	mg/L	quarterly <sup>3</sup>	quarterly <sup>3</sup>	not required
cobalt, dissolved	mg/L	not required	not required	quarterly <sup>3</sup>
copper, total	mg/l	quarterly <sup>3</sup>	quarterly <sup>3</sup>	not required
copper, dissolved	mg/l	not required	not required	quarterly <sup>3</sup>
iron, total	mg/l	quarterly	quarterly	not required
iron, dissolved	mg/l	not required	not required	quarterly
lead, total	mg/l	quarterly <sup>4</sup>	quarterly <sup>4</sup>	not required
lead, dissolved	mg/l	not required	not required	quarterly <sup>4</sup>
manganese, total	mg/l	quarterly	quarterly	not required
manganese, dissolved	mg/l	not required	not required	quarterly
nickel, total	mg/l	quarterly <sup>4</sup>	quarterly <sup>4</sup>	not required
nickel, dissolved	mg/l	not required	not required	quarterly <sup>4</sup>
zinc, total	mg/l	quarterly <sup>4</sup>	quarterly <sup>4</sup>	not required
zinc, dissolved	mg/l	not required	not required	quarterly <sup>4</sup>
phenols	mg/L	annual <sup>5</sup>	annual <sup>5</sup>	annual <sup>5</sup>
volatile organic compounds	mg/L	annual <sup>5</sup>	not required	not required

Table 2 Explanatory Notes:

- <sup>1</sup> Analysis is to be conducted **in situ**.
- <sup>2</sup>..Analyzed to a minimum detectable concentration of **0.00001 mg/L**.
- <sup>3</sup>..Analyzed to a minimum detectable concentration of **0.0001 mg/L**.
- <sup>4</sup>..Analyzed to a minimum detectable concentration of **0.001 mg/L**.
- <sup>5</sup> Sample is to be obtained and analyzed in the fourth quarter of each year.

**3.2.2 Leachate Flow Measurement**

The operational certificate holder shall provide and maintain a suitable flow measuring device and record the volume of leachate discharged to sanitary sewer each **month**.

**3.2.3 Leachate/Drainage Ditch Water Level Measurement**

The operational certificate holder shall establish and maintain a minimum of four (4) ditch water level monitoring stations and record **once per month** the water level elevation in the leachate and drainage ditches at each station. The location of the monitoring stations shall be acceptable to the Regional Waste Manager.

### 3.3 Monitoring Procedures

#### 3.3.1 Sampling and Flow Measurement

Sampling and flow measurement shall be carried out in accordance with the procedures described in "British Columbia Field Sampling Manual for Continuous Monitoring plus the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples", 1996 Edition (Permittee), 312 pp., or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manuals are available for viewing on the ministry's web page (<http://www.gov.bc.ca/elp/>) and at all Pollution Protection offices.

#### 3.3.2 Chemical Analyses

Analyses are to be carried out in accordance with procedures described in the latest version of "British Columbia Environmental Laboratory Manual for the Analysis of Water, Wastewater, Sediment and Biological Materials, (March 1994 Permittee Edition)", or by suitable alternative procedures as authorized by the Regional Waste Manager.

A Copy of the above manual is available for viewing on the ministry's web page (<http://www.gov.bc.ca/elp/>) and at all Pollution Protection offices.

#### 3.3.3 Quality Assurance

All data analyses required to be submitted by the permit shall be conducted by a laboratory acceptable to the Regional Waste Manager. At the request of the manager, the operational certificate holder shall provide the laboratory quality assurance data, associated field blanks, and duplicate analysis results along with the submission of data required under **Section 3.2** of the operational certificate.

### 3.4 Records Management

The operational certificate holder shall maintain the following information and records, current and suitably tabulated, at the landfill office for inspection:

- a copy of Operational Certificate MR-01611;
- training procedures and personnel training records;
- contingency plans and notification procedures;
- the current design and operating plan;
- inspection records from staff and regulatory agencies;
- hydrogeological, geotechnical and landfill gas assessments;
- incoming waste, and soil records;
- records of recyclable materials shipped off site;
- environmental monitoring results and interpretations; and
- annual operating and monitoring reports for the previous year.

### 3.5 Reporting

#### 3.5.1 Quarterly Report

Maintain data of analyses and records of waste and recyclable material quantities for inspection. Submit the data of analyses suitably tabulated, to the Regional Waste Manager for the previous **three months**. The reporting period ends **March 31, June 30, September 30 and December 31**. All reports shall be received by the manager within 31 days of the end of the reporting period.

Date Issued: October 31, 1973

Date Amended:

(most recent)

Page: 16 of 17

**MAR 08 2001**



H.G. Maxwell

Assistant Regional Waste Manager

OPERATIONAL CERTIFICATE: **MR-01611**

### 3.5.2 Annual Report

The operational certificate holder shall prepare an annual report which shall include a compendium of data submitted under **Section 3.5.1**. In addition, the annual report shall include the following:

- a review and interpretation of the analytical data from receiving environment monitoring for the preceding year;
- waste, recyclable material and compost records;
- leachate flow data and leachate/drainage ditch levels suitably tabulated;
- an evaluation of leachate generation control measures;
- an evaluation of the efficiency of the landfill gas management system, including an estimation of the landfill gas generation rate, percent recovery and the actual rates/volumes of gas collected, utilized and flared;
- revised closure/post closure costs and amount of funds currently available;
- revised design and operating plan and planned improvements;
- identification of operating problems and corrective actions taken;
- an evaluation of the recycling and composting programs including waste diversion projections; and
- public complaint/resolution log for the landfill.

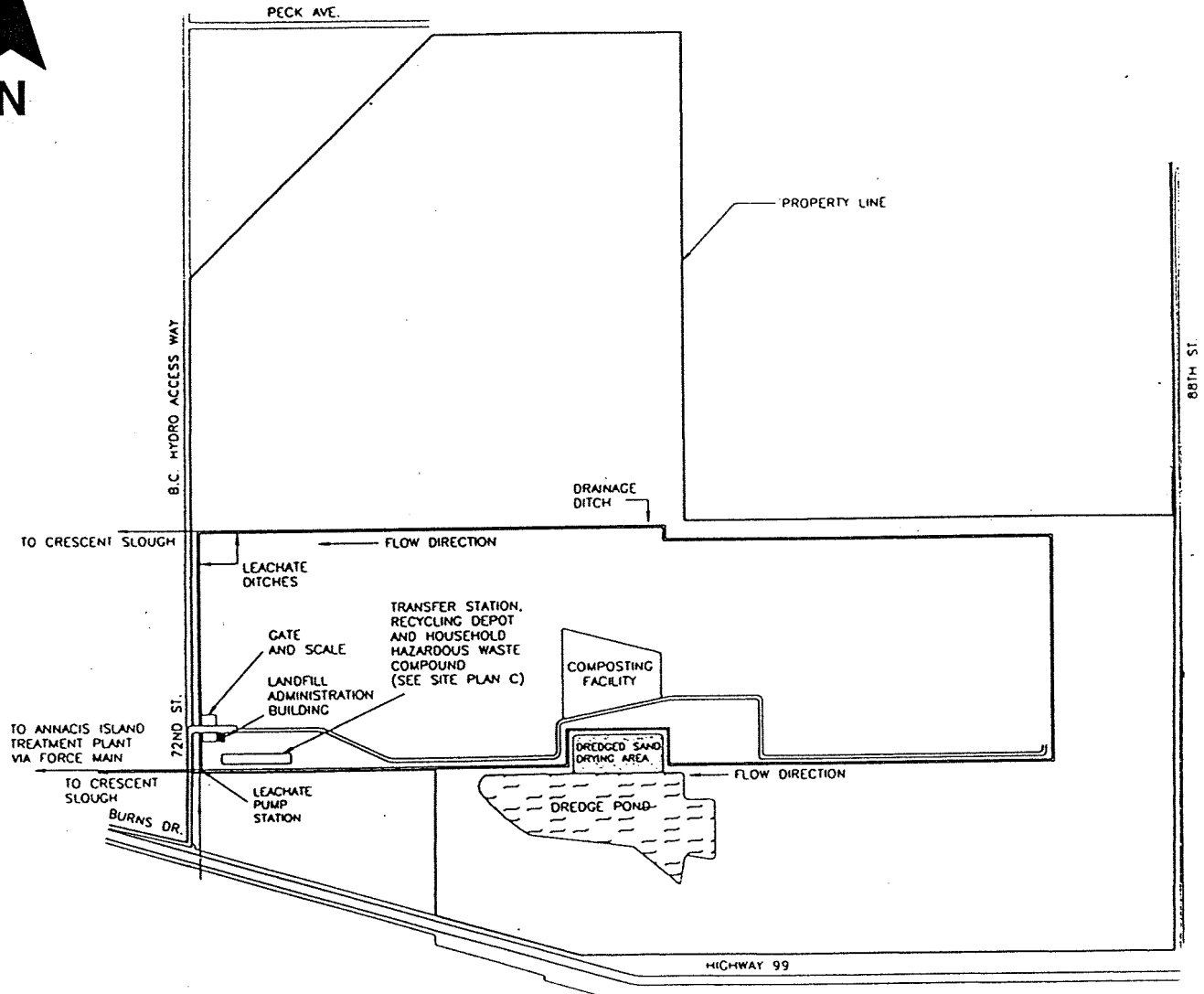
The annual report shall be submitted to the Regional Waste Manager on or before **March 31<sup>st</sup>** of the following year.



H.G. Maxwell

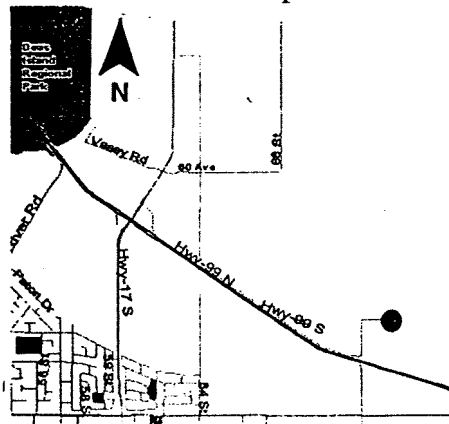
Assistant Regional Waste Manager

# SITE PLAN



Legal Description: Lot 9, Section 5 and 6, NWD, Plan 38013

Location Map



Scale: 1:18000 (approx.)

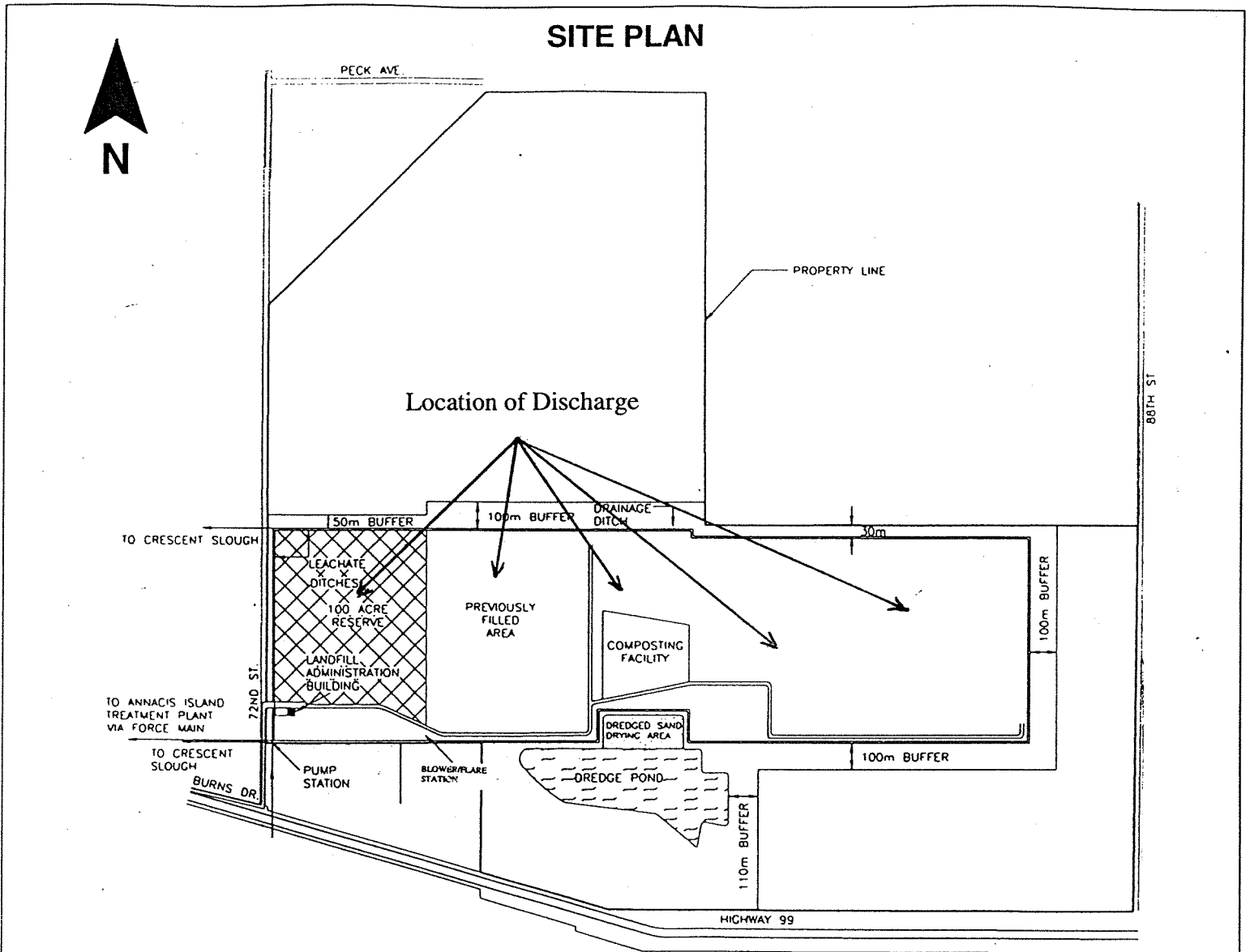
Site Plan: A

Operational Certificate:  
MR-01611

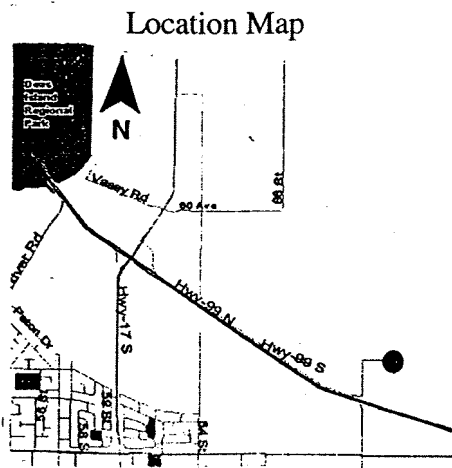
Date:

MAR 08 2001

*H. G. Maxwell*  
H. G. Maxwell  
Assistant Regional Waste Manager  
Lower Mainland Region



Legal Description: Lot 9, Section 5 and 6, NWD, Plan 38013



Scale: NTS

Site Plan: B

Operational Certificate:  
MR-01611

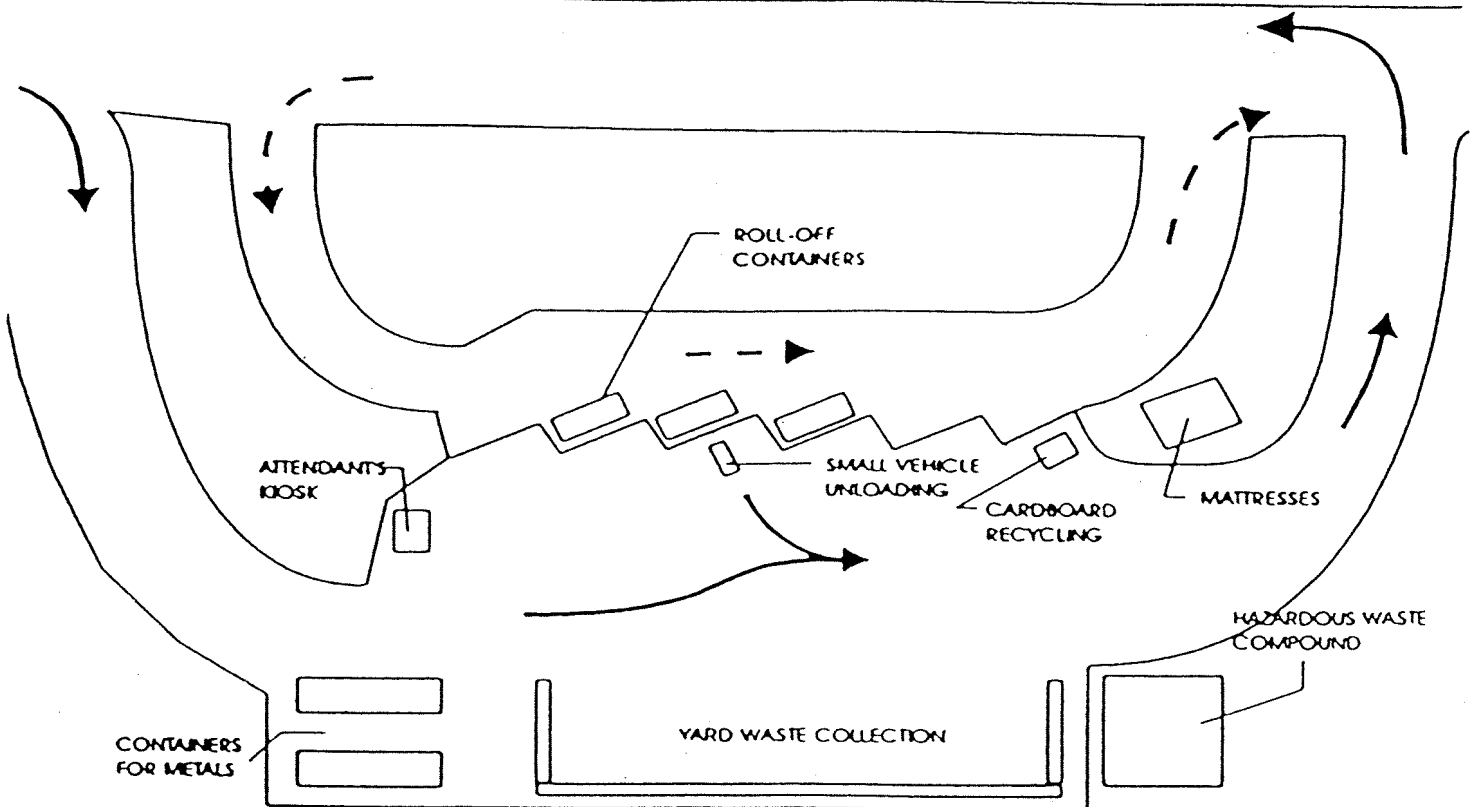
Date: **MAR 08 2001**

*H. G. Maxwell*  
 H. G. Maxwell  
 Assistant Regional Waste Manager  
 Lower Mainland Region

# SITE PLAN

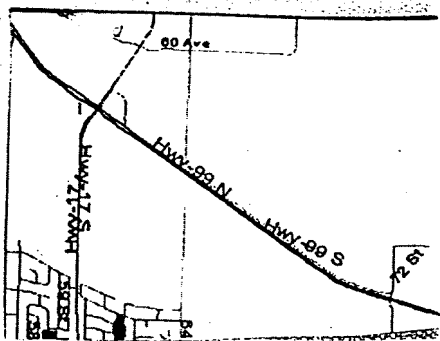


← ENTRANCE / EXIT



Legal Description: Lot 9, Section 5 and 6, NWD, Plan 38013

Location Map

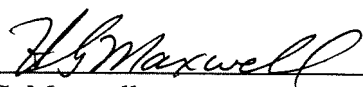


Scale: NTS

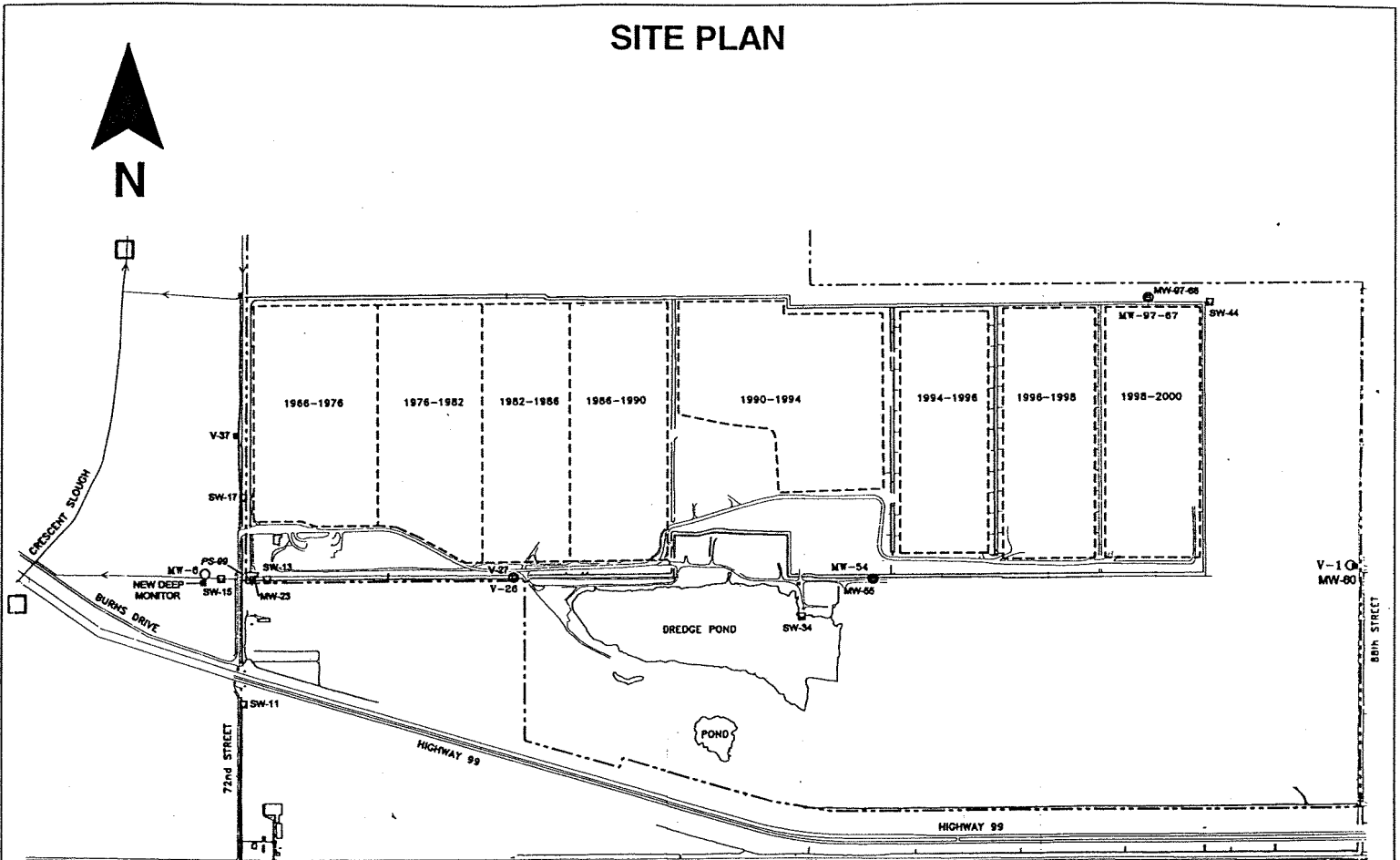
Site Plan: C

Operational Certificate:  
MR-01611

Date: MAR 08 2001

  
H. G. Maxwell  
Assistant Regional Waste Manager  
Lower Mainland Region

# SITE PLAN

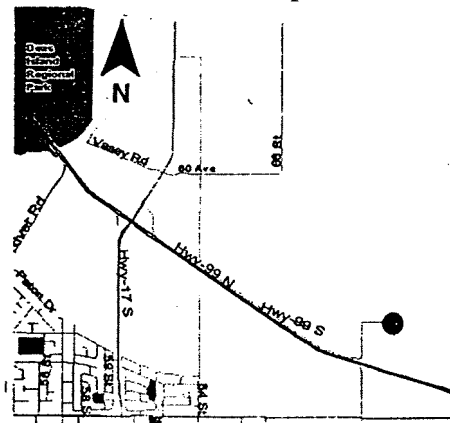


**LEGEND**

- |         |                   |             |                       |
|---------|-------------------|-------------|-----------------------|
| ---     | PROPERTY BOUNDARY | ■ GLL-05-01 | DEEP WELLS            |
| - - - - | EXTENT OF WASTES  | ○ MW-0      | SHALLOW WELLS         |
| ---     | DITCH             | □ SW-11     | SURFACE WATER SAMPLES |
| ==      | ROAD              | ▽ PS-00     | LEACHATE SAMPLE       |
| ▭       | BUILDING          |             |                       |

Legal Description: Lot 9, Section 5 and 6, NWD, Plan 38013

**Location Map**



SCALE 1:10,000  
0 100 200 300 metres

Site Plan: D

Operational Certificate:  
MR-01611

Date:

**MAR 08 2001**

*H. G. Maxwell*  
H. G. Maxwell

Assistant Regional Waste Manager  
Lower Mainland Region