REGIONAL DISTRICT
of Fraser-Fort George

FOOTHILLS BOULEVARD REGIONAL LANDFILL
2019 ANNUAL REPORT
PRINCE GEORGE, BRITISH COLUMBIA

Prepared by:

THE REGIONAL DISTRICT OF FRASER-FORT GEORGE
155 George Street
Prince George, British Columbia
V2L 1P8

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EXECUTIVE SUMMARY

This 2019 Annual Operations Report has been prepared for the Foothills Boulevard Regional Landfill (Site) located in the northwest portion of the City of Prince George, British Columbia at 6595 Foothills Boulevard, northwest of the intersection with West Austin Road. The landfill site has a total permitted area of approximately 86.7 hectares.

The objective of the 2019 Annual Operations Report is to summarize the development of the Site for the period of January 1, 2019 to December 31, 2019 (reporting period). The results of the Environmental Monitoring Program were submitted to the British Columbia Ministry of Environment and Climate Change (BC MOE) in the report entitled, "2019 Annual Groundwater Monitoring Report Foothills Boulevard Regional Landfill" generated by SNC-Lavalin Environment.

A landfill operated by the City of Prince George commenced at the Site in 1976 and was operated until 1994, when the RDFFG took over management of the Site. It currently operates under Operational Certificate (OC) MR-01697, issued October 31, 2005 by the BC MOE under the provisions of the *Environmental Management Act* and in accordance with the Regional District of Fraser-Fort George Solid Waste Management Plan.

The quantity of materials received which were recycled, used as landfill cover, or composted at the Site during the reporting period was approximately 49,525 tonnes. According to the RDFFG records, there were five composting cycles in 2019 which included yard and garden waste, grass, and manure. The total amount of composted material sold in 2019 was 5,242 cubic metres.

According to the weigh scale records, approximately 73,528 tonnes of waste was landfilled at the Site during the 2019 reporting period. The conservative waste projection for 2019 presented in the draft "Integrated Landfill Management Plan," prepared by XCG (March 2010) was approximately 87,196 tonnes, assuming a population growth rate of 0.8 percent annually. This implies the lifespan for the Site is potentially longer than originally projected. Based on the information currently available, the lifespan of Cell 1 (current fill area) will likely extend beyond 2027.

The remaining operations airspace for Cell 1, as of August 2009, was reported as an estimated value of 2 million cubic metres (excluding final cover). Based on a comparison of the May 2019 and May 2020 topographical contours, approximately 97,591 cubic metres of airspace was consumed at the Site for the period in which the survey took place. It is estimated that the remaining airspace for Cell 1 is approximately 816,901 cubic metres, as of May 1, 2020.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1. INTRODUCTION

The objective of the Annual Operations Report is to summarize the development and operations of the Site for the period of January 1, 2019 to December 31, 2019 (reporting period). The results of the Environmental Monitoring Plan are submitted to the British Columbia Ministry of Environment and Climate Change (BC MOE) under separate cover.

This report fulfills the annual reporting requirements outlined in Section 8.2 of the Operational Certificate (OC) MR-01697, issued by the BC MOE on October 31, 2005, and is in accordance with Section 10.6 of the *British Columbia Landfill Criteria for Municipal Solid Waste*, 2nd Edition June 2016.

2. SITE AND REGULATORY SETTING

2.1 Site Description

The Site is located in the northwest portion of the City of Prince George, British Columbia at 6595 Foothills Boulevard, northwest of the intersection with West Austin Road. The legal description of the Site is Block A of the northwest ¼ of District Lot 4053 and Block A of the northwest ¼ of District Lot 4048, Cariboo District. The location of the Site is shown on Figure 1.

The Site property (Figure 2) is bounded to the east by Foothills Boulevard and to the south by a gravel pit maintained and operated by the BC Ministry of Transportation. The Site is bounded to the north and west by naturalized northern coniferous forest. A residential area, referred to as the Hart Highlands area of Prince George, is located approximately 500 metres east of the Site, and a sport and recreation facility is located approximately 250 metres east of the Site entrance. The Site is located approximately 2.5 kilometres north of the Nechako River.

The Site serves a population of approximately 94,500 people (as per Statistics Canada 2016 Census), and receives approximately 96 percent of the regional solid waste stream (Gartner Lee Ltd., 2008). The Site accepts waste from the Prince George municipal and commercial collection services, the general public, local institutions, businesses, and numerous regional transfer stations.

The property boundary for the Site encompasses an area of approximately 87.3 hectares. The landfill, composting, and recycling activities conducted at the Site encompass an area of approximately 25 hectares within the permitted landfill property.

2.2 Background

The presence of the gravel pit located immediately south of the Site is believed to be evidence that the original use of the Site was for gravel extraction. A landfill operated by the City of Prince George commenced at the Site in 1976 and was operated until 1994, when the RDFFG took over management of the Site. Since that time, a number of changes have been made to the Site, including the following (AMEC, 2006):

- Installation or upgrade of site utilities including municipal water supply and a three-phase hydro service;
- Construction of a scale house/operating building and installation of two 80-tonne weigh scales commissioned in January 1995;
- Development of a composting site for green waste, and animal bedding;
- Installation of groundwater monitoring wells and continuation of the Site monitoring program;
- In 2002, final cover, landfill gas collection and flare infrastructure, and a condensate and leachate recirculation system were designed and constructed for the eastern portion of the landfill; and
- The Site is 100% fenced by a chain link fence as of September 2013.

- Leachate connector was constructed in 2015 to consider leachate discharge into the wastewater collection system of City of Prince George.

2.3 Regulatory Setting

The Site currently operates under OC MR-01697 issued October 31, 2005 by the BC MOE under the provisions of the *Environmental Management Act*. The following section provides an overview of the regulatory environment which governs landfill design, operations, and closure of the Site.

2.3.1 Provincial Regulations

There are currently four documents published by the BC MOE, which regulate landfill design, operations, and monitoring:

- Landfill Criteria for Municipal Solid Waste, Second Edition (June 2016);
- Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills (January 1996);
- Environmental Management Act (March 2020); and
- Landfill Gas Management Regulation (March 2020).

Key elements of these documents, addressed in the Plan, are as follows.

2.3.2 Landfill Operational Permit

The landfill is currently approved to operate under Operational Permit No. MR-01697 issued by the BC MOE on October 31, 2005. Key elements of this approval with respect to design, operation, and closure include the following:

- The Regional District is required to monitor wildlife (medium and large carnivores) activity at the facility and keep records of occurrences and observations of wildlife (medium and large carnivores);
- Composting facilities shall be operated and maintained in accordance with the *Organic Matter Recycling Regulation*;
- The management of landfill gas shall be managed in accordance with Sections 4.2 and 9.3 of the *Landfill Criteria for Municipal Solid Waste*;
- Waste asbestos is authorized for disposal subject to compliance with the requirements of Section 40 of the *Hazardous Waste Regulation* and the following conditions:
  - The asbestos waste may not be mixed with any other hazardous waste.
  - The Regional District must approve the disposal before disposal takes place.
  - All other applicable requirements of the *Hazardous Waste Regulation*, including but not limited to manifesting and waste record keeping, must also be complied with.
- The *Environmental Management Act*, the *Contaminated Sites Regulation* and the *Hazardous Waste Regulation* are applicable for the disposal of impacted (contaminated) soil at the facility;

- Hazardous wastes resulting from accidental spills or abandonment of dangerous goods may be accepted at the facility only under the authority of Section 52(1) of the *Hazardous Waste Regulation*;
- A monitoring program shall be developed by a qualified professional to identify potential impacts to the environment and public health from the facility; and
- The monitoring program must address, but not be limited to, subsections 4.1 and 9.2 of the *Landfill Criteria for Municipal Solid Waste* and the *Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills*.

A copy of the Operational Permit is included as Appendix A.

3. LANDFILL OPERATION AND MANAGEMENT

3.1 Site Operations

The Foothills Boulevard Regional Landfill is currently operated under Operational Permit MR-01697 issued by the BC MOE, Lands and Parks, on October 31, 2005. The Site accepts municipal solid waste from the approved service area. In addition, the Site collects recyclable materials as part of the RDFFG's waste diversion initiative.

3.2 Site Facilities

100% of the perimeter of the landfill is secured with a fence. Access to the Site is provided via Foothills Boulevard, northwest of the intersection with West Austin Road. Access gates control entrance and/or exit from the Site at this location. The gate is locked outside of normal operating hours to prohibit vehicle entrance and uncontrolled disposal when the Site is closed.

Existing facilities located at the Site include the following (Figure 2):

- Scale house;
- Public tipping area;
- Asphalt compost area; and
- Landfill gas utilization facility.

Signage is provided at the site entrance and throughout the Site as follows:

- Site owner;
- Traffic control and directions;
- Hours of operation; and
- Tipping fees.

Normal operating hours for the site are:

Monday to Friday	7:00 AM to 5:00 PM
Saturday	8:00 AM to 5:00 PM
Sunday	10:00 AM to 4:00 PM

The facility operates on Easter Monday, Victoria Day, Labour Day and Thanksgiving Day from 9:00 a.m. to 5:00 p.m.

The facility is closed on New Year's Day, Family Day, Good Friday, Canada Day, BC Day, Remembrance Day, Christmas Day and Boxing Day.

3.3 Wildlife Observations

Wildlife tracks of medium or large carnivores were observed on Site during the reported period.

3.4 Volume Reduction Statement

The RDFFG encourages the reduction of solid waste generated and subsequently landfilled by the following means:

- The transfer station provides recycling opportunities for the following materials as summarized in Table 2:
  - Scrap metal;
  - White goods including ODS containing appliances;
  - Tires;
  - Automotive batteries;
  - Single use batteries and cell phones;
  - Yard and garden waste;
  - Corrugated cardboard and mixed paper;
  - Plastic cartons and containers, metal food cans;
  - Used motor oil, oil filters and containers; and
  - Used antifreeze and containers

3.5 Waste Disposal

The quantity of waste received at the Site is weighed and recorded. A summary of the mass of waste disposed at the Site is provided in Table 1. According to RDFFG records, the total mass of waste landfilled at the Site during the reporting period was approximately 73,528 tonnes.

3.6 Diverted Materials

The quantity of on-site diverted materials which are either recycled, used as landfill cover, or composted at the Site is weighed and recorded. A summary of these materials is provided in Tables 2 and 3. According to RDFFG records, the total mass of diverted materials (sum mass of reported materials in Tables 2 and 3) at the Site during the reporting period was approximately 49,525 tonnes.

3.7 Composted Materials

According to the RDFFG records, there were five composting cycles in 2019 which included yard and garden waste, grass, and manure. The total amount of compostable materials received at the Site was 7,040 tonnes (Table 3). The total volume of composted material sold in 2019 was 5,242 cubic metres.

3.8 Per Capita Waste Disposal Rates

Based on an estimated population of 94,500 (Statistics Canada 2016 Census) in the Site service area, the average daily mass of waste landfilled per capita (not using the Ministry of Environment and Climate Change Waste Diversion Calculator) was approximately 2.13 kilograms during the reporting period.

3.9 Landfill Volume Consumed

As indicated in Section 3.5, the total amount of waste compacted and buried was approximately 73,528 tonnes during the reporting period (January 1, 2019 to December 31, 2019).

The apparent waste density was used to estimate landfill airspace consumption. The apparent waste density is not a true density, but is a relationship that represents the mass of waste that can be disposed in each cubic metre of landfill air space. Based on a comparison of the May 2019 and May 2020 topographical contours, approximately 97,591 cubic metres (Tetra Tech, 2020) of airspace has been filled at the Site for the period in which the survey took place. Based upon approximately 73,528 tonnes of waste landfilled at the Site during this time period, the apparent density for the landfill was calculated to be approximately 0.73 tonnes per cubic metre.

3.10 Remaining Capacity and Site Life

The remaining operations airspace for Cell 1, as of August 2009, was reported as an estimated value of 2 million cubic metres (excluding final cover) (XCG, 2010). According to the letter "Volume Assessment, Foothills Boulevard Regional Landfill," presented to the RDFFG on May 1, 2020, approximately 97,591 cubic metres of airspace was consumed at the Site from 2019 to 2020, based on a comparison of the May 2019 and May 2020 topographical contours. It is estimated that the remaining airspace for Cell 1 is approximately 816,901 cubic metres, as of May 1, 2020.

3.11 2020 Operation Plan

Site operations during the 2020 reporting period are anticipated to remain unchanged from those outlined in Section 3.1. Additional waste diversion programs will be implemented in accordance with the 2015 Regional Solid Waste Management Plan.

The Regional District Capital Projects for 2020 are as follows:

Entrance relocation:

Phase 1: Connection of leachate collection system to the City sanitary sewer system.

Phase 2: Relocation of existing entrance, including replacement of in and outbound scales, scale house, relocating public tipping area and recycling area.

Landfill Gas System Instrumentation Upgrade:

Research and acquisition of inline gas measurement instrumentation increasing compatibility with current technologies and applications.

Leachate Monitoring System:

Leachate recirculation system was disconnected and is currently discharging into City of Prince George's wastewater collection system.

Leachate monitoring instrumentation installed to the system to monitor the pH and flow of the leachate connected to the City sanitary sewer system, following the parameters set by a permit introduced from the City of Prince George.

4. SUMMARY AND CLOSURE

The 2019 Annual Report was prepared to summarize the development and operations of the Foothills Boulevard Regional Landfill, for the period of January 1, 2019 to December 31, 2019.

According to the weigh scale records, approximately 73,528 tonnes of waste and 49,525 tonnes of recyclable materials were received at the Site during the 2019 reporting period. Based on the information currently available, the lifespan of Cell 1 (current fill area) will likely extend beyond 2027. It is estimated that the remaining airspace for Cell 1 is approximately 816,901 cubic metres, as of May 1, 2020.

5. REFERENCES

1. AMEC Earth and Environmental Ltd., December 2006. "Design and Operations Plan."
2. British Columbia Ministry of Environment, 1996. "Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills."
3. British Columbia Ministry of Environment, 2006. "Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills."
4. British Columbia Ministry of Environment, 2020. "Environmental Management Act."
5. British Columbia Ministry of Environment, 2020. "Landfill Gas Management Regulation."
6. British Columbia Ministry of Environment, Second Edition (June 2016). "Landfill Criteria for Municipal Solid Waste."
7. Gartner Lee Ltd., September 2008. "2008 Regional Solid Waste Management Plan."
8. McElhanney Consulting Services Ltd., 2019. "Air Survey."
9. Tetra Tech Inc., 2019. "Volume Assessment."
10. XCG Consultants Ltd., March 2010. "Draft – Integrated Landfill Management Plan, Foothills Boulevard Regional Landfill."

FIGURES

FIGURE 1
SITE LOCATION MAP

Foothills Boulevard Regional Landfill
Site Location Map

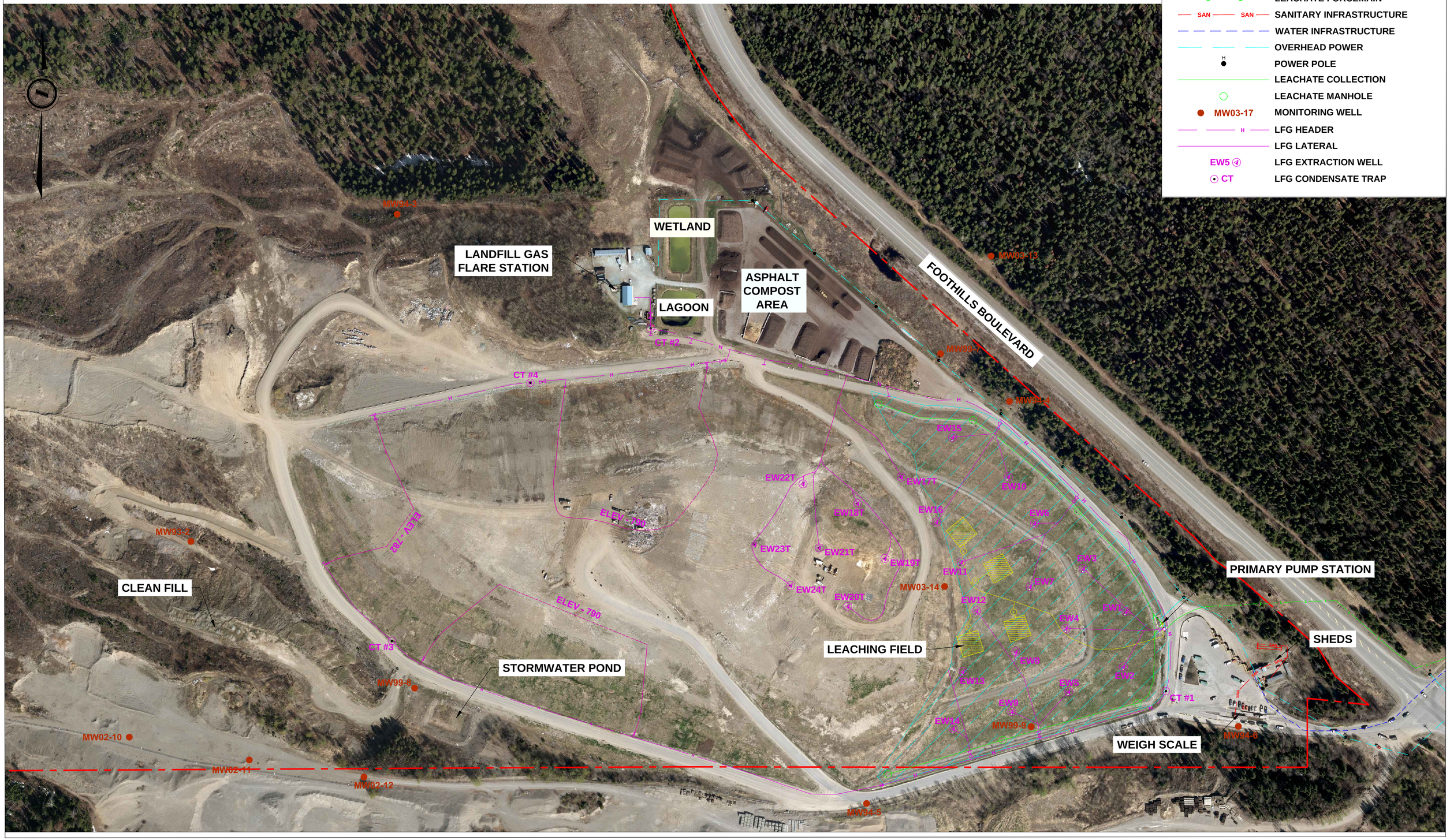
REGIONAL DISTRICT
of Fraser-Fort George

FIGURE 2
SITE PLAN

REGIONAL DISTRICT of Fraser-Fort George

POLLUTION CONTROL INFRASTRUCTURE AT FOOTHILLS BOULEVARD REGIONAL LANDFILL

May 8, 2019



NOTE: EXISTING CONDITIONS AS OF May 8, 2019.

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TABLES

REGIONAL DISTRICT of Fraser-Fort George

Table 1 Solid Waste Disposal Summary

Date	Residential (tonnes)	Industrial and Commercial (tonnes)	Construction and Demolition (tonnes)	Asbestos (tonnes)	TS Correction (-) (tonnes)	Total Landfilled (tonnes)
Jan-19	2,356.2	2,209.6	724.5	40.0	358.0	4,972.2
Feb-19	1,759.9	1,654.5	597.8	24.6	371.1	3,665.7
Mar-19	2,389.2	2,029.6	809.4	14.7	523.9	4,718.9
Apr-19	3,340.5	2,380.3	1,597.9	21.3	919.1	6,420.8
May-19	3,788.9	2,737.4	3,169.4	44.5	998.9	8,741.4
Jun-19	3,243.4	2,190.1	1,945.1	80.2	800.2	6,658.6
Jul-19	3,506.5	2,400.0	2,011.2	79.8	946.0	7,051.4
Aug-19	3,450.8	2,146.8	1,843.5	242.1	897.0	6,786.1
Sep-19	3,195.6	2,150.4	3,101.4	29.9	908.5	7,568.9
Oct-19	3,184.0	2,320.3	1,951.8	19.4	862.3	6,613.2
Nov-19	2,695.6	2,245.0	1,281.5	16.4	506.4	5,732.1
Dec-19	1,315.8	2,824.9	784.3	1.9	327.8	4,599.2
Total	34,226.3	27,288.8	19,817.9	614.6	8,419.1	73,528.5

Notes:
1. Data provided by the RDFFG.
2. TS Correction adjustment for double weighted materials originating from on-site transfer station.

REGIONAL DISTRICT of Fraser-Fort George

Table 2 Recycled and Non-Landfilled Materials

Date	Tires (tonnes)	Appliances (tonnes)	Scrap Metal (tonnes)	Cover and Soils (tonnes)	Multi-Material (tonnes)	Other Recycling (tonnes)	Total (tonnes)
Jan-19	1.0	8.2	40.7	9.7	12.0	0.2	71.8
Feb-19	0.3	4.1	22.8	-	7.9	0.4	35.5
Mar-19	0.8	6.3	47.9	23.1	12.5	2.7	93.3
Apr-19	3.4	10.7	98.1	2,155.9	8.7	3.8	2,280.5
May-19	6.4	11.5	122.3	11,412.6	7.3	3.3	11,563.4
Jun-19	3.6	15.8	101.7	11,167.3	9.4	1.9	11,299.7
Jul-19	6.0	10.1	101.0	4,247.5	7.1	1.3	4,373.1
Aug-19	3.0	10.1	100.0	3,880.8	7.0	1.6	4,002.5
Sep-19	3.3	11.8	102.4	3,157.7	7.3	1.8	3,284.4
Oct-19	9.3	15.4	101.8	3,650.6	9.5	2.3	3,788.8
Nov-19	3.2	10.6	63.0	1,417.6	8.2	2.1	1,504.6
Dec-19	0.7	5.9	34.6	129.5	16.4	0.5	187.6
Total	41.1	120.5	936.2	41,252.3	113.2	21.8	42,485.2

Notes:
1. Data provided by the RDFFG.

REGIONAL DISTRICT of Fraser-Fort George

Table 3 Composted Materials

Date	Manure		Grass		Chipped Yard and Garden		Yard and Garden		Total (tonnes)
	Industrial and Commercial (tonnes)	Residential (tonnes)	Industrial and Commercial (tonnes)	Residential (tonnes)	Industrial and Commercial (tonnes)	Residential (tonnes)	Industrial and Commercial (tonnes)	Residential (tonnes)	
Jan-19	108.8	0.6	-	-	11.9	1.5	9.8	30.8	163.4
Feb-19	93.4	0.9	-	-	29.5	0.6	2.8	2.3	129.5
Mar-19	121.4	0.9	-	0.0	18.6	-	-	29.2	170.0
Apr-19	116.3	18.7	0.2	6.5	33.7	3.2	89.5	575.2	843.5
May-19	83.1	9.4	0.2	16.5	53.9	0.9	123.0	922.8	1,209.9
Jun-19	55.2	0.1	0.2	22.5	57.0	-	70.8	635.8	841.5
Jul-19	73.7	-	0.4	19.6	33.9	-	88.7	513.7	730.0
Aug-19	102.1	8.6	4.8	26.1	47.7	-	102.3	473.1	764.7
Sep-19	80.2	0.2	0.2	20.4	73.7	-	117.6	395.4	687.7
Oct-19	104.1	0.2	0.6	19.6	48.7	-	98.0	623.1	894.4
Nov-19	106.0	0.3	0.9	3.8	65.9	-	35.4	236.9	449.2
Dec-19	89.3	0.2	-	0.3	23.6	-	10.0	33.3	156.7
Total	1,133.6	40.2	7.5	135.4	498.0	6.3	748.0	4,471.6	7,040.4

Notes:
1. Data provided by the RDFFG.

APPENDIX A

OPERATIONAL CERTIFICATE MR-01697

MINISTRY OF ENVIRONMENT

OPERATIONAL CERTIFICATE

MR-01697

Under the Provisions of the Environmental Management Act
and in accordance with the
Regional District of Fraser-Fort George
Solid Waste Management Plan

Regional District of Fraser-Fort George

155 George Street

Prince George, British Columbia

V2L 1P8

is authorised to manage recyclable material and municipal solid waste at a sanitary landfill located at **6595 Foothills Boulevard**, Prince George, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

1. LOCATION OF AUTHORISED FACILITY

The location of the facility for the management of recyclable material and municipal solid wastes to which this Operational Certificate is applicable is the Foothills Landfill, Block A of the Northeast ¼ of District Lot 4053 and Block A of the Northwest ¼ of District Lot 4048, Cariboo District as shown in the attached plan and containing 87 hectares more or less.

2. ENTRANCE FACILITIES

The authorised facility includes recyclable material and municipal solid waste drop-off facilities, weigh scales and related appurtenances approximately as shown on the attached Site Plan.

3. MANAGEMENT OF MUNICIPAL SOLID WASTE

3.1. Sanitary Landfill

3.1.1. The authorised facilities are a sanitary landfill area, composting area, landfill gas management, recyclable material storage areas and related appurtenances approximately as shown on the attached Site Plan. The site reference number for the discharge is E211018.

Date Issued: OCT 31 2005

Del Reinheimer, P.Eng.
for Director, Environmental Management Act

3.1.2. The characteristics of the discharge must be municipal solid waste as defined under the *Environmental Management Act* and other wastes as approved in writing by the Director.

3.1.3. Waste may be discharged to the areas specified in the Regional District's Design and Operation Plan, approximately located as shown on the attached Site Plan.

4. GENERAL REQUIREMENTS

4.1. Qualified Professionals

All facilities and information, including works, plans, assessments, investigations, surveys, programs and reports, must be certified by qualified professionals.

4.2. Plans

4.2.1. The Regional District shall prepare a Design and Operation Plan that will include considerations for site operation and development, leachate and landfill gas management, composting operations, monitoring programs and environmental impact mitigation management.

The Design and Operation Plan must be submitted to the Director by November 30, 2005.

4.2.2. The Design and Operation Plan must address, but not be limited to, each of the subsections in the *Landfill Criteria for Municipal Solid Waste* including performance, siting, design, operational and closure and post-closure criteria.

4.2.3. The facilities must be developed and operated in accordance with the Design and Operation Plan.

4.2.4. Any updates to the plan shall be immediately submitted to the Director.

4.3. Additional Facilities or Works

The Director may require investigations, surveys, and the construction of additional facilities or works. The Director may also amend information requirements of this Operational Certificate including plans, programs, assessments and reports.

Date Issued: OCT 3 1 2005

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for Director, Environmental Management Act

5. OPERATIONAL REQUIREMENTS

5.1. Operator Training and Development

At a minimum, the Regional District will ensure that operating personnel are trained to industry standards and at least one member of the on-site personnel are trained and current in a SWANA recognized landfill operator course or equivalent.

5.2. Wildlife Management and Control

At the time of issuance of this certificate the Regional District is not required to install electric fencing for the purpose of preventing access to the site by bears.

The Regional District is required to monitor wildlife (medium and large carnivores) activity at the facility and keep records of occurrences and observations of wildlife (medium and large carnivores).

The Director may request the Regional District to develop a Wildlife Management Plan that presents solutions for preventing wildlife access to the facility.

5.3. Compost

Composting facilities shall be operated and maintained in accordance with the *Organic Matter Recycling Regulation.*

5.3. Management of Landfill Gas

The management of landfill gas shall be managed in accordance with sections 4.2 and 6.4 of the *Landfill Criteria for Municipal Solid Waste.* In addition, the Regional District will have a qualified professional prepare an Operations and Maintenance Manual for the landfill gas management system.

6. HAZARDOUS WASTE MANAGEMENT

6.1. Hazardous Waste

"Hazardous Wastes" as defined by the *Hazardous Waste Regulation* pursuant to the *Environmental Management Act* are prohibited from disposal unless expressly authorised by the *Hazardous Waste Regulation*, approved by the Director or as specified in the Operational Certificate.

Date Issued: OCT 3 1 2005

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for Director, Environmental Management Act

6.2. Waste Asbestos

Waste asbestos is authorized for disposal subject to compliance with the requirements of section 40 of the *Hazardous Waste Regulation* **and** the following conditions:

6.2.1. The asbestos waste may not be mixed with any other hazardous waste.

6.2.2. The Regional District must approve the disposal before disposal takes place.

6.2.3. All other applicable requirements of the *Hazardous Waste Regulation*, including but limited to manifesting and waste record keeping, must also be complied with.

6.3. Handling of Impacted Soil

The *Environmental Management Act*, the *Contaminated Sites Regulation* and the *Hazardous Waste Regulation* are applicable for the disposal of impacted (contaminated) soil at the facility.

6.4. Hazardous Wastes from Accidental Spills or Abandonment

Hazardous wastes resulting from accidental spills or abandonment of dangerous goods may be accepted at the facility only under the authority of Section 52(1) of the *Hazardous Waste Regulation*.

7. MONITORING

7.1. Monitoring Program

7.1.1. A monitoring program shall be developed by a qualified professional to identify potential impacts to the environment and public health from the facility.

7.1.2. The monitoring program shall be submitted as part of the Design and Operation Plan.

7.1.3. The monitoring program must address, but not be limited to, subsections 4.1, 4.2 and 7.15 of the *Landfill Criteria for Municipal Solid Waste* and the *Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills.*

7.1.4. Monitoring must be conducted in accordance with the monitoring program.

Date Issued: OCT 31 2005

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for Director, Environmental Management Act

8. REPORTING

All reports and drawings shall be submitted in electronic format unless otherwise requested by the Director.

8.1. Drawings

All drawings shall be certified correct and sealed by a qualified professional. Drawings shall be submitted to the Director within 30 days of completion or as otherwise specified by the Director.

8.2. Annual Report

The Regional District shall submit an Annual Report to the Director on or before June 30 each year for the previous calendar year. The report shall contain, but not be limited to the following information:

i.) an executive summary;

ii.) the type and tonnage of waste received, recycled and landfilled for the year;

iii.) a current topographic map detailing airspace consumption, on-site borrow pit changes and future developments;

iv.) updated estimates for the remaining capacity, closure date for the current phase and closure date for the current landfill footprint;

v.) any new information or proposed changes relating to the facilities and Design and Operation Plan;

vi.) composting operation activity including amount of material received for composting, material composted, material sold and number of composting cycles;

vii.) occurrences or observations of wildlife (medium and large carnivores) at the facility;

viii.) a statement regarding the facility's progress in reducing the regional solid waste stream, in accordance with the hierarchy of reduce, reuse and recycle principles; and,

ix.) the results of all monitoring programs as specified in this Operational Certificate. Data interpretation and comparison to the performance criteria in the *Landfill Criteria for Municipal Solid Waste* and the *Guidelines for Environmental Monitoring and Municipal Solid Waste*

Date Issued: OCT 31 2005

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for Director, Environmental Management Act

Landfills. Trend analysis, as well as an evaluation of the impacts of the discharges on the receiving environment in the previous year shall be carried out by a qualified professional.

9. CLOSURE PLAN

At least one year in advance of decommissioning the landfill, or as otherwise specified by the Director, a Closure Plan shall be submitted which includes at least the following information:

i) a topographic plan showing the final elevations contours of the landfill and surface water diversion and drainage controls;

ii) specifications for the final cap and proposed end use of the site; and,

iii) provisions for a minimum 25 year post-closure care period at the facility which, at a minimum, considers the following: groundwater monitoring, surface water monitoring, landfill gas management, erosion and settlement monitoring and management.

10. CLOSURE AND POST-CLOSURE FUND

The Regional District will conform to the Public Sector Accounting and Auditing Board's requirements (PS 3270) to recognize solid waste landfill closure and post-closure liability. The Regional District will develop a plan to ensure that sufficient funds are available for closure and post-closure care work.

Date Issued: OCT 3 1 2005

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for Director, Environmental Management Act

PROVINCE OF
BRITISH COLUMBIA

Environmental Protection

SITE PLAN

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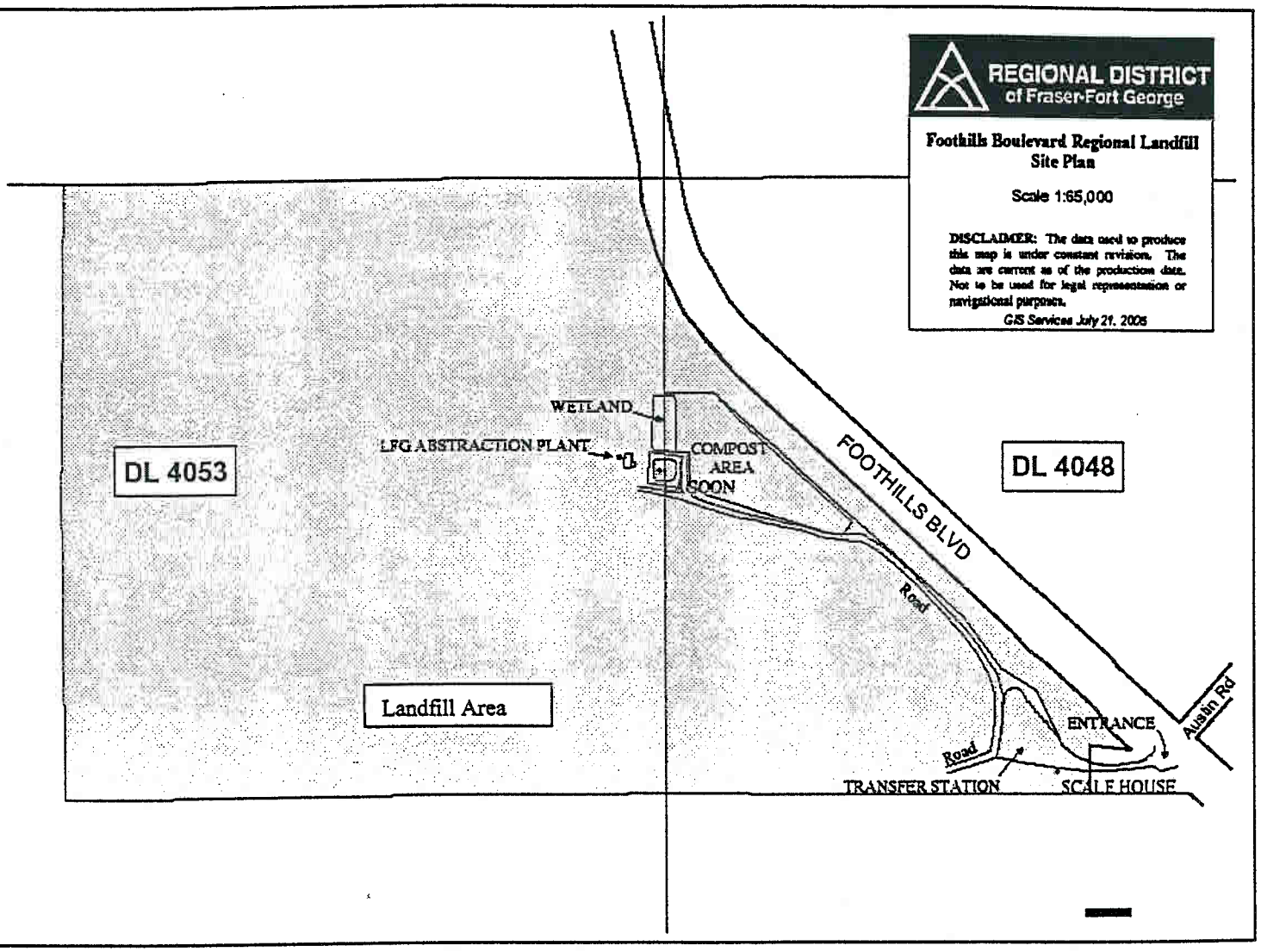
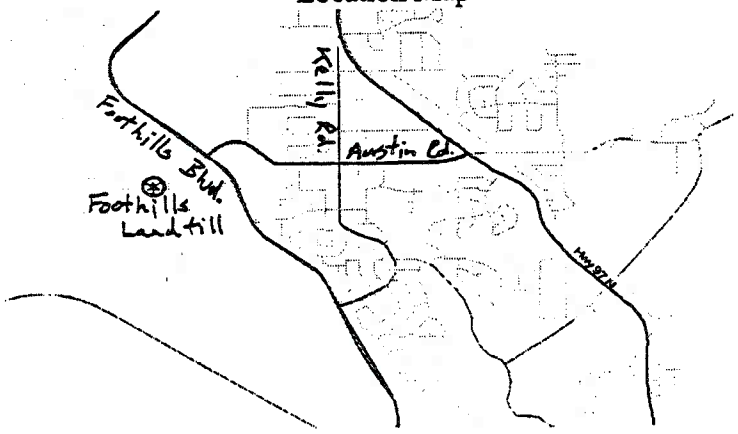


Location Map



Scale: Not to Scale

OCT 3 1 2005

Operational Certificate No. MR-01697

D. Reinheimer

Del Reinheimer, P.Eng.
for Director, Environmental Management Act
Omineca and Peace Regions