

TEMPLATE Operational Plan for a Hazardous Waste Management Facility

This document should be used in conjunction with the BC Ministry of Environment's *Operational Plan Guidance*.

The purpose of this document

This template is intended to assist an applicant in preparing an operational plan for a hazardous waste storage, treatment, and/or recycling facility. The template outlines the key aspects a plan must contain in order to be acceptable to the Ministry of Environment. By providing complete and accurate information in accordance with Ministry guidance documents an application is less likely to experience delays or rejection.

Section 4(1)(c) and (d) of the Hazardous Waste Regulation (HWR) requires that before beginning the construction or installation of a hazardous waste facility, the owner must obtain approval of a new operational plan, or a modified operational plan.

How to use this document

Text in *highlighted blue italics* is for your information only and should be removed/erased prior to submitting your operational plan. Text framed by square brackets “[]” indicate it may be necessary to insert text. Black text and tables are recommended by the ministry.

Refer to the *Operational Plan Guideline* for supporting information.

Disclaimer

This document does not supersede or replace the *Environmental Management Act* or its regulations; in the case of omissions or discrepancies, the *Act* and Hazardous Waste Regulation apply. It is intended for guidance only.

Updated January 2015

Hazardous Waste Regulation Section 4 - Operational Plan

Company Name (as registered with BC Corporate Registry):

ABC Hazardous Waste Company Ltd.

Doing business as Name:

ABC Waste Depot

Business Licence Number:

BL - 1234567

Mailing Address:

45 – 123 W. Pender Street, Vancouver, BC V1C 1C1

Facility Address:

Provide civic street number & name, Municipality, BC V1A 1A1

Facility Contact:

John Doe, Manager

Phone: 604 512 0000

Fax: 604 423 2345

E-mail: jdoe@serviceprovider.com

Landowner:

ABC Investments Ltd.

123 Pleasant Road, Municipality, BC V1B 2B2

Contact: Tom Smith

Phone: 604 512 1111

Email: Tsmith@investment.com

Legal Description: Lot Z, Block A, Plan 12345, Section 21, R5W, New Westminster District

Property ID: 124-555672

Lat Coordinates: 49.522019

Long Coordinates: 122.301660

Ministry Authorization or Registration Number(s): RS 12345; BCG 12345

Operational Plan Version No.: 1.0

Operational Plan Date: 22-April-2014

TABLE OF CONTENTS

1.0 INTRODUCTION 3

2.0 HAZARDOUS WASTE MANAGEMENT DETAILS 3

 2.1 WASTE TYPES AND MAXIMUM QUANTITIES 3

 2.2 RESIDUAL WASTE GENERATION 3

 2.3 WORKS AT THE SITE..... 4

 2.4 WASTE DISCHARGES..... 4

3.0 MONITORING 5

 3.1 INCOMING WASTE CHARACTERIZATION MONITORING 5

 3.2 WASTE DISCHARGE MONITORING..... 6

 3.3 STORMWATER RUNOFF MONITORING..... 7

 3.4 PROCESS MONITORING 8

 3.5 ENVIRONMENTAL MONITORING..... 8

 3.5.1 BASELINE MONITORING 8

 3.5.2 ENVIRONMENTAL MONITORING PROGRAM..... 8

4.0 REPORTING 9

5.0 AUDITING 10

6.0 CERTIFICATION..... 11

APPENDIX A – DELISTING PROTOCOLS AND DEMONSTRATION TRIALS 12

TABLE OF FIGURES

Table 1. Waste types and maximum quantities. 3

Table 2. Works at the Site 4

Table 4. Waste Characterization Monitoring Program..... 5

Table 5. Effluent Monitoring Program..... 6

Table 6. Air Discharge Monitoring Program. 6

Table 7. Stormwater Monitoring Program..... 7

Table 8. Summary of Treatment and Delisting Protocol Monitoring Requirements 8

Table 9. Continuing Environmental Monitoring Program..... 9

1.0 INTRODUCTION

Refer to the Operational Plan Guideline.

2.0 HAZARDOUS WASTE MANAGEMENT DETAILS

2.1 WASTE TYPES AND MAXIMUM QUANTITIES

The following table lists the types and maximum quantities of hazardous waste that the facility stores, treats, recycles and discharges and includes both incoming wastes and those generated on site. **Note:** *if the facility does not engage in treatment or recycling of hazardous waste, state that here and delete the associated columns in the table below.*

Table 1. Waste types and maximum quantities.

Waste Type/Name <i>name of hazardous waste and TDG Class</i>	Max Quantity Stored¹ (L or kg)	Max Treatment Rate² (L/d, kg/d, n/a)	Max Recycling Rate (L/d, kg/d, n/a)
Flammable Liquids Class 3 (solvents)			
Flammable liquids Class 3 (paint related, sludge)			
Leachable toxic waste (lead)			
Waste oil (contaminated soil)			
Waste oil (liquid, sludge)			
Waste asbestos			

Notes:

¹ Refers to the maximum storage capacity at the facility for each hazardous waste type.

² Information on demonstration trials and delisting protocols is provided in Appendix B.

2.2 RESIDUAL WASTE GENERATION

[Describe wastes generated through facility operations and how they are managed; refer to the Operational Plan Guideline for further instructions]

2.3 WORKS AT THE SITE

The following table lists the works to be employed at the hazardous waste facility. The location of these works should be identifiable in the site plan in the Plans and Specifications.

Table 2. Works at the Site

Storage / Treatment / Recycling Equipment	Storage Capacity (L or kg)	Treatment / Recycling Process	Waste Type Stored / Treated / Recycled	Location

Describe the operating conditions in the treatment processes including temperature, retention time, pressure, reactant concentration, and concentration of contaminants in the waste.

2.4 WASTE DISCHARGES

If the facility does not discharge any wastes, complete the following sentence and delete the remaining text from this section.

There are no discharges from [specify treatment process] because [indicate why, e.g., all resultant waste is captured and transported off-site as hazardous waste].

Or

Waste discharges arise from treatment processes described above. The following table specifies how and where wastes are discharged.

Table 3. Waste Discharges

Discharge Source	Physical State of Discharge (solid, liquid, or gas)	Max Discharge Rate (L/d, kg/d)	Discharge Method (batch or continuous)	Discharge Location

3.0 MONITORING

3.1 INCOMING WASTE CHARACTERIZATION MONITORING

All hazardous waste received at the facility will be characterized to verify that the incoming wastes were correctly characterized by the generator prior to receipt at the facility. The following table specifies the waste characterization monitoring that will be employed at the facility.

Table 4. Waste Characterization Monitoring Program

Waste Name	Method of Characterization <i>analytical method reference or brief description</i>	Frequency

Records of waste characterization monitoring will be maintained at the facility and made available on request.

3.2 WASTE DISCHARGE MONITORING

If there are no discharges at the facility, as described in section 2.4, delete this section.

As listed in Table 3, *[specify solid, liquid and/or air]* wastes are discharged from the facility.

Include the following paragraph if liquid waste will be discharged:

All liquid waste (effluent) discharged from the facility will meet Hazardous Waste Regulation Schedule 1.2 standards and/or standards specified by the Director for discharges to *[indicate the type of receiving environment, storm sewers, municipal effluent treatment works or industrial effluent treatment works]*. The following monitoring program will be employed to demonstrate compliance with Schedule 1.2.

Table 5. Effluent Monitoring Program.

Effluent Source	Parameters Analyzed	Sampling Schedule/ Frequency	Location and location ID#

For air discharges, refer to the operation plan guideline for information on what to put in this section.

Include the following paragraph if air emission is planned:

All air emissions from the facility will meet Hazardous Waste Regulation Schedule 2 or the standards as specified by the director. The following monitoring program will be employed to demonstrate compliance with Schedule 2 and/or director’s specified standards.

Table 6. Air Discharge Monitoring Program.

Emission Source	Parameters Analyzed	Sampling Schedule/ Frequency	Location and location ID#	Monitoring method ¹

--	--	--	--	--

Note:

¹ For thermal treatment facilities refer to HWR Schedule 2. For other treatment processes, method must be approved by the director.

3.3 STORMWATER RUNOFF MONITORING

Stormwater from the facility is directed to [specify how stormwater is collected and treated], following which it is discharged to [insert: municipal effluent treatment works (specify the owner of the system), industrial effluent treatment works (specify the owner of the system), storm sewer, or name of the receiving body].

The stormwater discharge from the facility will meet Hazardous Waste Regulation Schedule 1.2 standards for discharges to [indicate the environment, storm sewers, municipal effluent treatment works or industrial effluent treatment works]. Stormwater discharge monitoring will be carried out according to the following table.

Table 7. Stormwater Monitoring Program¹.

	Sampling Location(s) and location ID#	Parameters Analyzed	Sampling Schedule

Note:

¹ The stormwater monitoring program is appropriate for normal facility operations. Additional monitoring will be performed during non-routine operations, such as spill events.

If at any time a result from this sampling program indicates an exceedance of the Schedule 1.2 standards, immediate corrective action will be taken to prevent on-going exceedances. This includes re-sampling the discharge within [specify] days to verify compliance with Schedule 1.2 standards. [Indicate what additional monitoring or program re-evaluation will be conducted in the event of exceedances.]

Records of monitoring results, noting non-compliances with Hazardous Waste Regulation Schedule 1.2 and corrective measures taken, will be maintained at the facility for [insert how long] and made available on request.

3.4 PROCESS MONITORING

Table 8 summarizes the monitoring requirements for the treatment process(es) and delisting protocol monitoring. Monitoring records will be maintained at the facility for *[insert how long]* and made available on request.

Table 8. Summary of Treatment and Delisting Protocol Monitoring Requirements

Treatment	Waste Produced	Parameters Analyzed	Analytical Frequency

3.5 ENVIRONMENTAL MONITORING

Note: It is critical that this section is based on recommendations from a qualified professional. Refer to the Operational Plan Guideline for details. If environmental monitoring is not recommended for specific environmental media (groundwater, surface water, sediment, biological community or ambient air) provide justification here.

Analytical results will be compared to applicable regulatory criteria *[specify regulatory criteria for each of the media being sampled; include rationale from a qualified professional and a comparison of baseline data and subsequent analytical data to check for trends]*. Comparisons will be made to assess trends overtime in and compared with baseline data *(if applicable)*.

3.5.1 BASELINE MONITORING

The baseline monitoring program for the facility will characterize *[geographical, hydrogeological, chemical and biological]* data.

Use this space to describe the baseline monitoring program, including rationale from the qualified professional and assessment of the effectiveness of the baseline assessment to detect potential environmental contamination. Refer to the Operational Plan Guideline for further information.

3.5.2 ENVIRONMENTAL MONITORING PROGRAM

The following table summarizes the environmental monitoring program. Monitoring locations are shown on the site plan in the Plans and Specifications; *where applicable, specify off-site environmental monitoring locations as well. Specify qualified*

professional rationale, including assessment of the continuing monitoring program to detect potential environmental contamination.

Table 9. Continuing Environmental Monitoring Program.

Environmental Media (e.g. soil, water, air)	Monitoring Location ID	Location Description	Parameters Analyzed	Sampling Schedule

4.0 REPORTING

The annual report will be electronically submitted to the Director by March 1 for the previous calendar year. The annual report will include the following information:

1. A monthly summary of waste quantity received, shipped and processed. For each month, indicate the number of days and degree by which the maximum daily storage quantity, the treatment and or recycling rate for any waste type was exceeded.
2. A summary of the manifest discrepancies with an outline of any efforts taken to reduce discrepancies in the future as per HWR section 5(5).
3. A summary of the results from the monitoring program in section 3 including:
 - a) a comparison to relevant standards, including baseline as applicable, with an interpretation of the results and recommendations to change the monitoring program, if any,
 - b) A statement outlining the exceedances compared to relevant standards that occurred during the reporting period, including the dates of the exceedances and an explanation of the cause of the exceedances and a description of the measures taken to rectify the situation. If no exceedances occurred over the reporting period, a statement to that effect will be included,
 - c) The environmental monitoring results and interpretation will be prepared by a qualified professional, and
 - d) A summary of process monitoring results, including delisting protocol monitoring and the quantity of hazardous waste delisted per protocol.
4. A confirmation statement that an emergency system testing was conducted as per section 12 of the Hazardous Waste Regulation; and

5. A summary of incidents that required the facility to implement its contingency plan.

5.0 AUDITING

The facility will be audited annually by an independent qualified professional registered in British Columbia with an appropriate professional organization. This annual frequency will continue for three years to develop a track record of compliance. After three consecutive audits with results showing no non-compliance, a reduced auditing frequency of once every *[insert proposed number, to be agreed upon by director]* years will be used. If any subsequent audit contains a non-compliance, then normal auditing frequency of once per year will resume until three consecutive audits with results showing no non-compliance is achieved.

The audit will assess:

- 1) Whether or not the hazardous waste facility is in compliance with the Hazardous Waste Regulation, including compliance with approved plans, waste information documentation, and delisting protocols (if applicable),
- 2) Recommendations for resolving any current non-compliance issues and supporting technical information and rationale for the findings or recommendations set out in the report,
- 3) Status of resolutions/responses to issues of non-compliance identified on previous-year(s) audits. Trends showing continuing non-compliance will also be identified.

The audit report will include a summary of the professional qualifications of the auditor and will include a summary of non-compliance issues. The audit report will be signed by the auditor with the following statement “**Standard auditing principles were followed and the audit represents a true compliance assessment of the facility in terms of applicable provisions of the *Environmental Management Act* and *Hazardous Waste Regulation*”.**

The audit report will be electronically submitted to the Director by March 1 for the previous calendar year.

6.0 CERTIFICATION

The *[choose any or all that applies: design, recommendations or content in the documents]* were prepared in accordance with and meet(s) the requirements of the Hazardous Waste Regulation.

The information contained in *[choose any or all that applies: the plan, report or document]* is true and complete to the best of my knowledge.

I am a qualified professional registered in good standing in British Columbia *with [insert name of the professional organization]*. I am acting under that organization's code of ethics and subject to disciplinary action by that organization, and through suitable education, experience, accreditation and knowledge, I can reasonably be relied on to provide advice within the area of expertise applicable to the duty or function I am carrying out.

My qualifications are provided *[choose any: below or enclosed]*.
[insert description here or enclose]

_____	_____
Name	Signature
_____	_____
Title	Stamp, if applicable
_____	_____
Name of Company	Date

APPENDIX A – DELISTING PROTOCOLS AND DEMONSTRATION TRIALS

Attach all approved delisting protocols and demonstration trials, including proof of approval, within this appendix. Delete this appendix if there is no hazardous waste treatment at the facility.

The following table lists the approved demonstration trials and approved delisting protocols for the facility.

Table B. Summary of Approved Demonstration Trials, Trial Results Report and Delisting Protocols

Hazardous Wastes Treated [include TDG Class if applicable]	Demo Trial Approval Date & Report Date [HWR s. 18 (2 & 4)]	Delisting Protocol Approval Date [HWR s. 53]
<i>[Waste name in accordance with HWR definitions]</i>		
<i>[common name]</i>	Demo trial approval date: Report date:	<i>[Date or N/A]</i>
<i>[Waste name in accordance with HWR definitions]</i>		
<i>[common name]</i>	Demo trial approval date: Report date:	<i>[Date or N/A]</i>
<i>[common name]</i>	Demo trial approval date: Report date:	<i>[Date or N/A]</i>