

Operational Plan Guidance for Hazardous Waste Management Facilities

Purpose of this document

This document is intended to assist applicants and their agents in preparing an operational plan in a manner that meets the expectations of the Ministry of Environment and Climate Change Strategy (ministry) and in accordance with section 4 of the Hazardous Waste Regulation.

How to use this document

Applicants should develop documents for submission to the ministry using the guidance provided in this template and following site-specific application instructions provided during the [structured application process](#).

Within the template, text in *green italics* is for your information only and should be removed prior to submission. Text framed by square brackets “[]” indicate it may be necessary to insert text. Black text and tables are recommended by the ministry. Template text can be modified if equivalent information is included with adequate rationale.

The ministry expects submissions to be written in a manner that allows them to be implemented with certainty and consistency. Avoid the use of language that is ambiguous, vague or qualitative such as: appropriate, reasonable, general, suitable, and regularly. Provide clarity by stating what will be done and include a specific frequency and method where relevant.

Disclaimer

The guidance provided in this document helps to clarify ministry policy and the provisions of the Environmental Management Act (the Act) and the Hazardous Waste Regulation (HWR). This is not a legal document and the information in it does not constitute legal advice or impose any legally binding requirements. Guidance provided in this document does not replace the Act, the HWR or any other applicable law. Any amendments to the Act, the HWR and other legislation referred to in this document may affect provisions of the guidance; in the event of an inconsistency, the Act, HWR or other applicable legislation will prevail.

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OPERATIONAL PLAN GUIDANCE

Refer to the guidance sections below in conjunction with the corresponding sections of the operational plan template.

The terms effluent and emissions are used this document, aligning with their use in the HWR. Effluent is defined in the *Environmental Management Act* (EMA). Emissions is assumed to be equivalent to air contaminants, as defined in EMA.

Qualified professionals are expected to prepare certain sections of the operational plan, as indicated below. For the definition of a qualified professional and information on the ministry's professional reliance model, please refer to the ministry's [Professional Accountability Policy website](#).

1.0 Introduction

This section should provide a brief, general description of the facility. It should be specific to the hazardous waste management activities that will be conducted at the facility. If other non-hazardous waste management operations occur at the site, describe them briefly to provide context only. List any other waste discharge authorization numbers issued to the facility by the ministry and/or other regulating body. If the hazardous waste facility was previously authorized by another company name or authorization number, state that here as well.

Do not include general information about the company, company history, marketing or promotional material.

2.0 Waste Management

2.1 Hazardous Waste Types and Maximum Quantities

This section describes the management of hazardous waste (as defined in the HWR) at the facility and is intended to capture the information required by section 4(2)(a), (a.1) and (a.2) of the HWR.

If the facility does not engage in any treatment, recycling, disposal of hazardous waste, state so here and indicate "0 or NA" in the appropriate columns of Table 1 or delete these columns. If columns are deleted it must be stated in the text that the facility does not conduct hazardous waste treatment, recycling or disposal (as applicable). Note that Table 1 is for on-site activities only. Off-site treatment, recycling and disposal should not be listed in Table 1.

Hazardous waste names listed in Table 1 must conform to the definition of hazardous waste within section 1 of the HWR (paragraphs (a) through (i)). Units must be stated in kilograms or litres. Follow the below guidance for the correct naming of hazardous wastes:

- Wastes that meet the definition of hazardous waste in paragraph (a) of the definition of hazardous waste in the HWR (i.e. dangerous goods that are no longer used for their original purpose, and meet the criteria for Class 2, 3, 4, 5, 6, 8, or 9 of the federal dangerous goods regulations):
 - Provide waste name and Transportation of Dangerous Goods (TDG) Class. UN number can be listed here also.
 - e.g. 1 Waste gasoline, UN 1203, TDG Class 3
 - e.g. 2 Waste flammable liquids (gasoline, diesel, solvents), TDG Class 3
- Wastes that meet the definition of hazardous waste in paragraphs (b) through (i) of the definition of hazardous waste in the HWR:
 - Provide the name of the hazardous waste as listed in paragraph (b) through (i) and include the common waste name and/or description of media in brackets and the TDG class and UN number if applicable.
 - e.g. 1 Waste oil (oil filters)
 - e.g. 2 Leachable toxic waste (metals, soil)
 - e.g. 3 Waste asbestos (TDG Class 9, UN 2590)
 - e.g. 4 Biomedical waste (clinical and laboratory waste sharps; TDG Class 6.2, UN 3373)

If hazardous waste treatment does not occur at the facility, delete the last two columns of Table 1. If the facility does engage in hazardous waste treatment, fill in these columns to provide context for the remainder of the plan.

Example of Table 1 illustrating waste that is only stored; waste that is stored, treated and discharged; and waste that is stored, treated and delisted.

Hazardous Waste Type/Name	Maximum Quantity Stored at the Facility	Maximum Daily Capacity for:			Treatment Process ²	Wastes Intended for Delisting*
		Treatment	Recycling	Disposal		
Waste oil (used oil)	180, 000 L	n/a	n/a	n/a	n/a	n/a
Waste oil (used oil)	90, 000 L	10, 000 L	10, 000 L	10, 000 L	Decanting, filtration	n/a
Waste oil (used oil filters)	10, 000 kg	1, 000 kg	1, 000 kg	n/a	Crushing, draining	Filter bricks

*Including wastes intended for delisting in Table 1 does not provide authorization for delisting. Delisting protocols require approval as standalone documents. Once approved, delisting protocols need to be included in Appendix A of the operational plan. The use of the word ‘intended’ in the column title is meant to allow flexibility to develop delisting protocols either concurrently or subsequently to the operational plan. Refer to guidance on Appendix A for further information.

2.2 Works at the Site

This section may not be needed if the requested information is documented in the facility's plans and specifications. However, it can be useful to include in the operational plan, even if also stated in plans and specifications, to allow the operational plan to provide a complete picture of the facility. It may be cut and paste from the plans and specifications.

If using this section of the operational plan, provide the list of works/equipment used for hazardous waste management activities. Refer to ministry guidance on plans and specifications for additional information on works at the site.

2.3 Hazardous Waste Storage

Outline the nature of storage activities at the facility. Describe operational aspects where relevant to hazardous waste storage. For example, this section should include a description of practices related to waste consolidation, emptying containers, etc., if proposed at the facility.

2.3.1 Storage Residues

Residues (residual wastes) are those wastes generated at the facility and may include both hazardous and non-hazardous wastes, liquids, solids and sludges.

In this section, list the waste residues generated from storage, such as tank bottom sludge, catch basin sludge, wash water, etc. Indicate how much of this material is generated over a given timeframe (specify the timeframe) and describe how it is handled. Note that delisting may be required in some cases.

Residual wastes generated at the facility that qualify as hazardous waste as per HWR definitions must be accounted for in Table 1.

2.4 Hazardous Waste Treatment

If there are treatment rates listed in Table 1, the treatment processes must be described in this section. Additionally, in most cases, demonstration trials must be approved prior to operating the hazardous waste treatment system(s) (see note on Appendix A below), and the works associated with treatment must be authorized via approval of the facility plans and specifications.

Within this section of the operational plan, provide a brief plain language description of the treatment process that will be employed at the facility. Include separate sections for each of the different treatment processes identified in Table 1. If a treatment process includes multiple components, include

a flow diagram identifying the treatment components and points of generation of residues (liquid and solid byproducts and/or end products) and emissions (air contaminants). As stated above, detailed descriptions of the treatment system(s) should be provided in the facility's demonstration trial(s) and/or plans and specifications. The description in the operational plan is intended to provide context and a framework for the plan.

Demonstration trials and delisting protocols – List all approved and/or intended demonstration trials and delisting protocols in Appendix A. Reference Appendix A in the treatment section of the operational plan. See further guidance on Appendix A and the approval process for demonstration trials and delisting protocols in section 8 below.

2.4.1 Operating Conditions

Specify operating conditions necessary to ensure adequate waste treatment, as warranted. Otherwise delete the subsection on operating conditions.

2.4.2 Treatment Residues

List all residues of the treatment process(es), including end products (intended final result of the treatment process) and byproducts (incidental or secondary products produced during treatment). Include liquids, solids and sludges. In this section explain how each treatment residue is managed, including any additional treatment, disposal and delisting.

2.4.3 Emissions

Describe emissions (air contaminants) that result from the treatment process. If the treatment process does not have any emission sources, state that in this section. If air discharges are regulated by a permit issued under the *Environmental Management Act* or by Metro Vancouver, state that here. Additional requirements for air discharges outside of Metro Vancouver will be discussed on a case-by-case basis during preliminary application phase of the structured application process.

2.5 Hazardous Waste Recycling

If any quantities are listed under hazardous waste recycling in Table 1, describe the recycling process here. This section is intended for on-site recycling of hazardous waste. If hazardous waste is sent off-site for recycling, it will need to continue to be managed as hazardous waste (e.g. shipped with a manifest) or delisted via an approved delisting protocol.

The information described under hazardous waste treatment noted above may also be relevant for on-site hazardous waste recycling processes (operational conditions, residues and emissions).

2.6 Hazardous Waste Disposal

If any quantities are listed under ‘hazardous waste disposal’ in Table 1, describe the disposal process and location in this section and reference the location on the site plan.

This section is intended for on-site disposal of hazardous waste, which may include discharge of solid waste into a secure landfill, or discharge of liquid waste to the environment, storm sewer or municipal or industrial treatment system. If hazardous waste is sent off-site for disposal, do not include it in this section. It will need to continue to be managed as hazardous waste (e.g. shipped with a manifest to an authorized facility) or delisted via an approved delisting protocol.

Discharge of solid hazardous waste to the environment requires a secure landfill permit. If there is a discharge of hazardous waste effluent to the environment, additional conditions may need to be specified in the operational plan, such as maximum flow rates and concentrations of parameters of concern (including or additional to standards in HWR Schedule 1.2). This must be informed by an environmental assessment, for which information requirements will be developed and communicated during preliminary application phase of the ministry’s application process.

2.7 Stormwater Effluent

Stormwater may be considered effluent if there is potential for precipitation to come into contact with contaminants, including but not limited to those listed in schedule 1.2 of the HWR. Refer to the definition of effluent in the *Environmental Management Act* for more information.

In this section, describe discharges of stormwater from the facility. This applies to all facility types (storage, treatment, recycling, and/or disposal).

This section is supplementary to information provided on stormwater management in the facility plans and specifications. The information provided in the operational plan may be scaled depending on how much information was provided in the plans and specifications. If this information is provided elsewhere, reference those documents and summarize the key points in this section of the operational plan.

Regardless of information provided elsewhere, ensure within this section of the operational plan the stormwater effluent discharge location is described. Indicate whether the discharge is to municipal or industrial effluent treatment works, storm sewer, or directly to the environment. If discharge is to a storm sewer, indicate where in the environment the storm sewer discharges (e.g. name of the receiving

waterbody) and the approximate distance from the facility. Note that discharges to ground are considered discharges to the environment.

Justification must be provided if it is stated that the facility does not generate and/or discharge stormwater effluent.

3.0 Monitoring

All monitoring programs must include maintenance of associated records. It is expected that records will list the monitoring results, identification of exceedances/excursions from the required or expected range of results, and the corrective actions taken when these instances occur. Monitoring records should be available on-site for 5 years or more.

3.1 Incoming Waste Characterization Monitoring Program

This section is intended to outline monitoring procedures used to demonstrate compliance with section 5 of the HWR (waste information). All facilities are expected to have procedures in place to verify that the hazardous wastes received at the facility match the description on the manifest and that only hazardous wastes authorized to be received are accepted. Facilities that generate their own hazardous waste and engage in hazardous waste treatment, recycling and/or disposal must also ensure they are fully aware of their waste characteristics. Where registered sites are generators of the hazardous wastes they manage, the wording of this section should be adapted to 'Generated Waste Characterization Monitoring' or something of that nature.

It is the responsibility of the applicant to outline the waste characterization program including the method and frequency of monitoring. The ministry expects the following:

- There will be a waste characterization program for each type of waste accepted and generated at the facility, and
- The program will be specific; vague language will not be accepted.

The columns in Table 3 are explained below:

Waste Name – This must match the waste names listed in Table 1 of the operational plan.

Method of Characterization – Different types of hazardous wastes lend to different characterization methods. For some, a visual inspection may suffice (e.g. lead acid batteries), whereas for others, chemical analysis may be required (e.g. waste oil). Where chemical analysis is the method of characterization, indicate the parameters analyzed.

Sampling Method – Indicate where samples are taken and if the sample is a grab or a composite. Describe the methodology for composite sample collection.

Frequency – The frequency of waste characterization monitoring must be per unit time or per unit waste-quantity received or generated. If characterization is ‘per batch’ explain the batch size/frequency.

3.2 Operational Monitoring

Tank Integrity Testing

Tanks holding liquid hazardous waste are expected to be tested on a routine basis. Describe the tank integrity testing that will be conducted. Include a reference to the recommended testing frequency. This information should be available in the facility’s plans and specifications.

Process Monitoring

Operating conditions listed in section 2 of the plan should have a method of verification. This primarily relates to hazardous waste treatment and recycling processes and may also include emissions treatment processes for discharges to air. In this section of the operational plan, describe how operating conditions will be verified, including the information that will be recorded and the frequency that the records will be made.

Other

Any additional operational monitoring can be described here. This may include, for example the monitoring program for waste oil used or sold as fuel.

3.3 Residual Waste Monitoring

This section summarizes the monitoring program for wastes generated on site as a result of hazardous waste management activities (e.g. tank bottom sludge, treatment byproducts). The monitoring program must specify and provide justification on the parameters to be analyzed and indicate the sampling frequency (per unit time or per unit waste).

If the facility has, or is pursuing, a delisting protocol, it is expected that the protocol will include a monitoring program. If the delisting protocol is site-specific, monitoring of delisting waste should be specified directly in the protocol and may be copied into this section of the operational plan for convenience. In the case that the facility is implementing a province-wide delisting protocol, monitoring of delisted waste must be specified within this section of the operational plan.

3.4 Discharge Monitoring

This section summarizes the monitoring program for discharges from the facility, including discharges of:

- Process effluent (treated liquid hazardous wastes);
- Stormwater effluent (stormwater with potential to contact waste management areas); and
- Emissions (air discharges resulting from hazardous waste management).

Discharge monitoring programs are expected to be designed by a qualified professional. Supporting rationale for the program design, including justification for the proposed parameters, monitoring methods and monitoring frequency should be included in an appendix of the operational plan; the body of the operational plan should contain the tabulated monitoring plan only.

The monitoring program(s) must be designed to demonstrate compliance with relevant discharge limits, including but not limited to those listed in Schedules 1.2 and 2 of the HWR as appropriate. Science-based justification should be provided for parameters selected for monitoring. In the case of effluent monitoring (process effluent or stormwater effluent), include rationale for any Schedule 1.2 parameters that are not recommended for monitoring, and/or a proposal for monitoring other parameters not listed in Schedule 1.2.

3.4.1 Process Effluent Monitoring

The design of the monitoring program for process effluent should be scaled according to the discharge scenario. Discharges to municipal or industrial treatment works are expected to be monitored for compliance with HWR limits regardless of whether the owner of the treatment works (e.g. Metro Vancouver) also regulates the discharge.

Process effluent discharges to the environment require rigorous discharge monitoring programs to ensure the environment will be protected.

3.4.2 Stormwater Effluent Monitoring

The ministry expects that stormwater monitoring will be conducted if there is potential for precipitation to be in contact with waste, loading/unloading areas, or waste storage, treatment or recycling works or equipment. Stormwater monitoring programs should be scaled according to site-specific circumstances. Considerations on the scale of the program should include, for example:

- Extent and type of engineering controls in place (e.g. weather protection and storm water diversion),
- Contaminants of concern,

- Flows and seasonality, and
- Receiving environment and receptors.

It is recommended to conduct baseline sampling of all relevant Schedule 1.2 parameters prior to commencing discharge.

If stormwater runoff is directed through an oil/water separator, it is recommended to refer to section 6 of the [Petroleum Storage and Distribution Facilities Stormwater Regulation](#) for guidance on oil/water separator management. Monitoring of sediment collected from the oil/water separator may also be desirable in some cases, depending on the risk to the receiving environment as determined by a qualified professional.

3.4.3 Emissions Monitoring

The ministry expects that emissions (air contaminants) generated from hazardous waste management facilities will be monitored to demonstrate compliance with discharge limits and/or proper operation of pollution control devices. Information requirements for emissions monitoring will be developed on a case-by-case basis during preliminary application phase of the ministry's structured application process.

3.5 Receiving Environment Monitoring

The ministry expects the majority of hazardous waste management facilities will conduct routine monitoring of the receiving environment, scaled based on the nature of waste management activities, risk factors and site-specific conditions. This may include monitoring of one environmental media only, or any combination of groundwater, surface water, sediment, biological community, tissue sampling, and/or ambient air.

A qualified professional is expected to provide justification for the monitoring program, or the recommendation for no receiving environment monitoring where warranted. Monitoring programs must contain the following information, in tabular format:

- Monitoring Station ID: Each monitoring station must be uniquely identified;
- Location Description: Brief description of the location of the monitoring station. (e.g. down gradient, south west corner of site property). These monitoring locations must be indicated on the facility site plan, or on a separate monitoring location map;
- Environmental Media: Identification of the type of environmental media being sampled (groundwater, surface water, air, etc.);
- Parameter(s) Analyzed: List the parameters that the samples will be analyzed for; and
- Sampling Frequency: List the sampling frequency for each of the sampling stations.

The qualified professional preparing the receiving environment monitoring program is expected to provide supporting rationale to show that the monitoring program design is adequate to identify potential contamination of the surrounding environment. This should include identification of the relevant ambient air or water quality standards that receiving environment data will be compared to and an explanation of the sampling frequency, locations and parameters chosen. This supporting rationale should be included in an appendix of the operational plan; the body of the operational plan should contain the tabulated monitoring plan only.

If discharges from the facility and/or resultant environmental monitoring is regulated by another jurisdiction or regulatory body, (e.g. Metro Vancouver, WorkSafe BC) this should be stated, and the relevant authorization number and/or legislation should be referenced.

4.0 Reporting

The facility is expected to submit an annual report. The HWR lists numerous requirements for providing reports or notifications to the director, throughout the regulation. These requirements must be followed in addition to the submission of the annual report.

In this section, describe the content of the annual report. The default black text in the template indicates the typical required minimum content. Additional reporting requirements may be requested by the ministry.

The interpretation of the results and any recommendations related to the discharge and receiving environment monitoring programs is expected to be completed by a qualified professional.

Note: Changes to the discharge or receiving environment monitoring programs require an amendment to the facility's approved operational plan. To initiate an amendment to the operational plan please follow the amendment application processes outlined on the ministry website. Additions to the monitoring plan may be implemented by the facility without an amendment although it is recommended to seek ministry input.

5.0 Auditing

Hazardous waste facilities are expected to conduct third party audits to ensure the facility is operating in compliance with requirements of the HWR and with site specific requirements within the facility's approved plans and delisting protocol(s).

The default text in the template indicates the expected minimum content of the audit report.

After three years of audits confirming no non-compliances, the facility can reduce the auditing frequency to between 3 – 5 years (depending on the overall environmental and human risk of the facility, operation, or hazardous wastes managed). The specific frequency should be proposed in the operational plan.

6.0 Certification

The plan should be certified by the author, which may be the facility owner/operator or an agent of the owner /operator. Having a qualified professional certify the facility's operational plan is optional though is expected for the design of the discharge and environmental monitoring programs. However, having a qualified professional certify the entirety of the operational plan may reduce application processing time.

For the definition of a qualified professional and information on the ministry's professional reliance model, please refer to the ministry's [Professional Accountability Policy website](#).

7.0 Site Plan and Monitoring Locations

The operational plan must include a site plan, drawn to scale, showing the main features of the facility, the locations of all discharges, and all discharge and receiving environment monitoring locations. Ensure that north is indicated with an arrow and the map scale is identified. Monitoring locations may be shown on a separate figure if preferred, though relevant site features should still be identified.

8.0 Delisting Protocols and Demonstration Trials (Appendix A)

If the facility engages in hazardous waste treatment, it is expected that the operational plan will have an 'Appendix A' as a repository for copies of all approved demonstration trials, demonstration trial reports and delisting protocols. Attach all approved delisting protocols and demonstration trials within this appendix. Approval letters may also be included. Please ensure that documents are organized in a manner that facilitates efficient retrieval (e.g. logically sequenced, well labelled, linked to document navigation functions).

A table listing approved and pending demonstration trials and delisting protocols is expected to be provided on the first page of Appendix A, including the associated waste names and dates of approval. Routine on-going delisting monitoring programs may also be summarized on this page, if the delisting protocol is approved subsequent to the operation plan. Otherwise delisting monitoring may be listed in residual waste monitoring section of the plan.

Approval process - Demonstration trials and delisting protocols require director’s approval in accordance with sections 18(2) and 53 of the HWR, respectively. These documents may be approved concurrent, or subsequent, to the approval of the operational plan. In some cases, this appendix may be modified by adding approved demonstration trials, trial reports and/or delisting protocols without an amendment to the operational plan. However, should the content of the plan need to be updated as a result of any of the documents provided in Appendix A, a registration amendment will be required. This will be further discussed on a case-by-case basis during preliminary application phase of the ministry’s application process.

Comprehensive guides on demonstration trials and delisting protocols are available from the ministry’s [Guidance, Forms & Fees for Waste Authorizations website](#).

9.0 Supporting Documentation (Appendix B)

Include documentation that supports the content of the operational plan in appendices. This may include, for example, rationale for monitoring program designs provided by qualified professionals. It is preferred that supporting documentation is appended rather than written into the body of the operational plan, in order to keep the plan concise and operational in nature.

Please ensure that supporting documents are organized in a manner that facilitates efficient retrieval (e.g. logically sequenced, well labelled, linked to document navigation functions).

REVISION HISTORY			
Approval Date	Effective Date	Document Version	Notes
January 2015	January 2015	Ver. 1	Document created
June 4, 2020	June 4, 2020	Ver. 2	Content enhancements and updates
June 22, 2020	June 22, 2020	Ver. 3	Title adjustment

OPERATIONAL PLAN TEMPLATE

Hazardous Waste Regulation Section 4 – Operational Plan

Company Legal Name: *as registered with the BC Corporate Registry*

Doing Business As: *if applicable*

Facility Address:

[Civic Address], [Municipality], [Postal Code],

P.O. Box numbers are not acceptable for the facility address. If the facility does not have a civic address, provide alternative location information (latitude and longitude), and driving directions to the facility.

Ministry Registration Number(s): [RS# and/or BCG#]

Operational Plan Version Number: [##] *most recently updated version number*

Operational Plan Date: [YYYY-MM-DD] *date of most recent version of the plan*

Reminder: *Section 43(2)(4) of the HWR requires that the ministry be notified of any material changes to the information provided at the time of application, within 30 days of the date of the change.*

This includes but is not limited to:

- *Facility contact information, phone number, email, etc.*
- *Mailing address, billing address, billing email address*

Also, any changes to the content of the plan requires prior written approval of the director. In order to provide notification of changes to this registration, or to propose changes to the operational plan, an amendment application form is required to be submitted to the ministry.

**OPERATIONAL PLAN
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Please include page numbers in your submission

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SITE PLAN AND MONITORING LOCATIONS

APPENDIX A – DEMONSTRATION TRIALS AND DELISTING PROTOCOLS

APPENDIX B – SUPPORTING DOCUMENTATION

1.0 INTRODUCTION

[Company Name] operates a hazardous waste facility located at [street address] (the facility).

Include a brief overview of activities carried out at the hazardous waste management facility.

2.0 WASTE MANAGEMENT

2.1 Hazardous Waste Types and Maximum Quantities

The types, maximum quantities, and maximum daily [treatment, recycling, and/or disposal] rates managed at the facility are listed in Table 1. Table 1 also lists the facility’s hazardous waste treatment process[es] and wastes intended for delisting.

Or

The types and maximum quantities of hazardous waste stored at the facility are listed in Table 1. [Company Name] does not engage in the treatment, recycling, or disposal of hazardous waste at the facility.

Table 1: Hazardous Waste Types, Maximum Quantities and Maximum Rates

Hazardous Waste Type/Name	Maximum Quantity ¹ Stored at the Facility	Maximum Daily Capacity for: ¹			Treatment Process ²	Wastes Intended for Delisting ²
		Treatment	Recycling	Disposal		

Notes:

¹ Storage quantities are in litres (L) or kilograms (kg) and treatment, recycling, or disposal capacities are in L or kg per day.

² Demonstration trials [and delisting protocols] are provided in Appendix A.

2.2 Works at the Site

The works at the site are summarized below in Table 2.

Table 2: Works at the site

Hazardous Waste Storage			
Works	Storage Capacity (L or kg)	Hazardous Waste Type/Name	Location

Hazardous Waste Treatment, Recycling and/or Disposal			
Works	Process Description	Hazardous Waste Type/Name	Location

Emissions Treatment <i>for discharges to air</i>			
Works	Process Description	Associated Hazardous Waste Type/Name	Location

Stormwater Effluent Management			
Works	Process Description	Storage Capacity (L)	Location

2.3 Hazardous Waste Storage

Describe the storage activities and any site-specific operational information related to hazardous waste storage.

2.3.1 Storage Residues

The following residual wastes are generated at the facility:

List each type of residual waste that is generated from storage activities (e.g. waste oil sludge) and indicate the source of the waste (e.g. tank bottoms, blind sumps, wash water), and how it is managed. Use a table if useful to provide clarity.

2.4 Hazardous Waste Treatment

Delete this section if treatment rates are not listed in Table 1

The hazardous waste treatment processes listed in Table 1 are described below. Documentation related to demonstration trials [and delisting protocols] are provided in Appendix A of this document, as well as in the facility's plans and specifications.

2.4.1 [Name of Treatment Process Referenced in Table 1]

Provide a brief description of the components of the treatment process (one paragraph). Do not include information provided below. Consider including a treatment process flow diagram.

2.4.1.1 Operating Conditions

List any conditions that must be maintained to guarantee waste treatment.

2.4.1.2 Residues (Treatment Products)

List all liquid and solid end product(s) and byproducts of the treatment process. State how each is managed (e.g. removed from site to an authorized hazardous waste facility, discharged to [specify] or delisted)

2.4.1.3 Emissions (air contaminants)

This treatment process generates no emissions. *Or, describe where emissions are generated in the treatment process.*

If emissions are regulated under a separate authorization:

These discharges are regulated by [reference the authorization].

If emissions are not regulated under a separate authorization:

The works associated with this discharge are described in the facility's plans and specifications. [Company Name] will ensure that the following operating conditions are met while discharging:
List any limits or operational conditions necessary to ensure the discharge is safe.

2.5 Hazardous Waste Recycling

Delete this section if recycling rates are not listed in Table 1.

Describe on-site hazardous waste recycling process. List operating conditions, recycling products and byproducts, and emissions in an itemized list where relevant.

2.6 Hazardous Waste Disposal

Delete this section if disposal rates are not listed in Table 1.

Process effluent – Effluent from the treatment of [hazardous waste type] is discharged to [specify the receiving environment, storm sewer, municipal effluent treatment works, or industrial effluent treatment works]. The discharge will meet [specify limits as applicable, including discharge rate and HWR schedule 1.2 standards].

If the discharge is regulated by another agency, specify that the discharge will also meet the limits required by that agency. Reference the agency and the associated authorization number, bylaw, etc.

Solid wastes – [type of hazardous waste] is discharged to the secure landfill authorized under Environmental Management Act permit [authorization number] and in accordance with the conditions described in that permit.

2.7 Stormwater Effluent

Stormwater generated at the facility is diverted from waste management areas by [briefly describe stormwater diversion and weather protection measures]. Stormwater effluent with potential to contact waste management areas is [briefly describe stormwater collection and treatment measures]. Stormwater effluent discharged from the facility enters the receiving environment at [water body] located approximately [distance and direction from the site].

Stormwater effluent discharges will meet the limits specified in Schedule 1.2 of the HWR.

3.0 MONITORING PROGRAMS

[Company Name] will maintain records of the results of the monitoring programs listed below in hardcopy or electronic format at the facility for a minimum period of five years. Records will identify non-compliances with regulatory limits and/or excursions from expected results and the corrective measures taken. Monitoring records will be made available upon request.

3.1 Incoming Waste Characterization Monitoring

[Company Name] will verify that the incoming wastes received at the facility were correctly characterized by the generator. Table 3 outlines the method of characterization and monitoring frequency for each of the hazardous wastes received at the facility.

If the facility is the generator of all hazardous wastes managed at the facility, modify this section to indicate that hazardous waste generated at the facility will be monitored.

Table 3: Waste Characterization Monitoring Program

Waste Name	Method of Characterization	Frequency

3.2 Operational Monitoring

3.2.1 Tank Integrity Testing

[Company Name] will test the integrity of storage tanks on the following frequency:

Table 4: Tank Integrity Monitoring Program

Tank Identification	Monitoring Method	Frequency

3.2.2 Process Monitoring

[Company Name] will monitor the operation of [name of process] described in section 2 of this plan. Operating conditions and their monitoring frequency are listed Table 5.

Table 5: Operating Conditions Monitoring Program

Waste and Process Description	Operating Condition	Frequency

3.3 Residual Waste Monitoring

[Company Name] will monitor residual wastes generated at the facility according to the program described in Table 6. [Additionally, the delisting monitoring program is provided in Appendix A].

Table 6: Residual Waste Monitoring Program

Residual Waste Type	Method(s) of Waste Generation	Parameter(s) Analyzed	Sampling Frequency

3.4 Discharge Monitoring

[Company Name] will monitor [process effluent, stormwater effluent, and/or emissions (air contaminants)] according to the program described in Table 7. Further information is provided in the corresponding sub-sections and supporting documentation prepared by a qualified professional is included in [Appendix X].

Table 7: Discharge Monitoring Program

	Parameter(s) Analyzed	Sampling Frequency	Sampling Method	Sampling Location
[Hazardous Waste Name/Type] Treatment Process Effluent				
Stormwater Effluent				
Emissions				

3.5 Receiving Environment Monitoring

Table 8 summarizes the facility’s receiving environment monitoring program. A map of the monitoring locations is provided in [reference attached figure]. Supporting rational for the monitoring program design is included in [reference relevant appendix].

Table 8: Receiving Environment Monitoring Program

Environmental Media	Monitoring Location ID	Monitoring Location Description	Parameter(s) Analyzed	Sampling Method	Sampling Frequency

4.0 REPORTING

[Company Name] will electronically submit an annual report to the director within 60 days of the end of the previous calendar year. The annual report will include the following information:

1. A monthly summary of waste quantity received, shipped, processing, and stored.
For each month, the number of days and degree by which the maximum storage quantity and/or daily treatment, recycling and/or discharge rates, as listed in Table 1, were exceeded for any waste type will be included. Corrective and mitigative action will also be described.
2. The results of the facility's incoming waste characterization monitoring program (section 3.1).
As per HWR section 5(5), a summary of any remedial actions taken to reduce or eliminate these discrepancies in the future will be included.
3. A summary of incidents that required the facility to implement its contingency plan.
4. A copy of the written record of the annual test or inspection of the emergency system(s) as required in section 12 of the HWR. The record will include:
 - a) the measures, systems, procedures, equipment and clothing tested,
 - b) a description of the test method,
 - c) the date [YYYY-MM-DD] of the tests on each component,
 - d) the results of the tests, and
 - e) description and date [YYYY-MM-DD] of any corrective action.
5. A summary of any significant planned or corrective maintenance performed in the previous year and/or planned for the coming year.
6. Results and interpretation of the discharge and receiving environment monitoring programs, prepared by a qualified professional, including:
 - a) A tabulated summary and/or graphical representation of the monitoring results, with comparisons to relevant standards and baseline data as applicable, and interpretive text;

- b) A statement outlining any exceedance(s) of relevant standards, including the dates of the exceedance(s), an explanation of the cause of the exceedance(s), and a summary of the actions taken and/or planned to further investigate and/or prevent future occurrences;
 - c) An assessment of the monitoring results over time, including identification and discussion of any trends in the data. This will include graphical representation of key parameters of concern and will cover the period from commencement of discharge and/or receiving environment monitoring up to and including the reporting year;
 - d) Recommendations for additional monitoring, if warranted, and
 - e) The complete, tabulated results from the monitoring programs.
7. The audit report as described in section 5.

5.0 AUDITING

[Company Name] will engage an independent qualified professional to conduct an annual audit of the facility to assess whether the facility is managing hazardous waste in accordance with the requirements of the HWR and any additional requirements in the facility's approved plans [and delisting protocols].

Following the completion of the audit, an audit report will be prepared and included in the facility's annual report. The audit report will contain the following information:

1. A summary of the facility's compliance status with the requirements of the HWR, the facility's approved plans, and any delisting protocols.
2. Recommendations for resolving any current non-compliance issues including supporting technical documentation as required.
3. Status of resolutions/responses to issues of non-compliance identified in the previous year(s) audits. Trends showing continuing non-compliance will be identified.

[Company Name] will conduct an audit once per year for three years from the approval date of this operational plan. After three consecutive annual audits that indicate no non-compliance at the facility, a reduced auditing frequency of once every [3-5] years may be implemented. 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.

6.0 CERTIFICATION

This operational plan was prepared in accordance with, and meets the requirements of, the Hazardous Waste Regulation.

The information contained in this operational plan is true and complete to the best of my knowledge.

Name

Signature

Title

Stamp, if applicable

Name of Company

Date

SITE PLAN AND MONITORING LOCATIONS

Please insert appropriate diagrams and maps in this section.

APPENDIX A – DEMONSTRATION TRIALS AND DELISTING PROTOCOLS

Table A1 lists the approved demonstration trials and approved delisting protocols for the facility. Copies of the documents listed in Table A1 are included within this Appendix.

Table A1: Summary of Approved Demonstration Trials, Trial Results Reports and Delisting Protocols

Hazardous Wastes Treated <i>The hazardous waste names in this table must match those in Table 1.</i>	Demonstration Trial Approval Date and Report Date HWR s. 18 (2 & 4)	Delisting Protocol Approval Date HWR s. 53
	Trial Approval Date: [YYYY-MM-DD or pending] Report Date: [YYYY-MM-DD or pending]	[YYYY-MM-DD, pending or n/a]

Monitoring program(s) described in the approved delisting protocol(s) are summarized in Table A2. [Company Name] will carry out delisting monitoring as described in Table A2 and the approved delisting protocol. In the case of any discrepancies, the approved protocol will apply.

Table A2: Summary of Delisting Protocol Monitoring Requirements

[Title of Delisting Protocol], approved [date]	Waste Produced	Sampling Method	Parameters Analyzed	Sampling Frequency

APPENDIX B – SUPPORTING DOCUMENTATION