	<b>Operational Policy Manual</b> <b>Environmental Protection</b> <b>Division</b>	Section	Subsection
		2.0	2.02.32

**Name of Policy:** Enforceable Requirements for Authorizations

**Replaces:** None.

**Application:** This policy applies to Environmental Protection Officers (EPOs) and Statutory Decision Makers (SDMs) in the Regional Operations Branch of the Environmental Protection Division who build and issue permits and other authorizations under the *Environmental Management Act* (EMA).

This policy may also be useful for staff who build and issue permits under the *Integrated Pest Management Act* (IPMA). While the policy content is specific to EMA, the general principles also apply under the IPMA. Likewise, others in the Environmental Protection Division may find the guidance this policy provides useful.

**Purpose:** To ensure that the values of clarity, consistency and enforceability are taken into consideration when selecting and developing requirements for authorizations under EMA.

**Policy Statement:** This policy provides guidance for including requirements in authorizations issued under the *Environmental Management Act*. This policy establishes a library of requirements (clauses) that were written to be clear and enforceable. These requirements should be considered for use whenever possible. If a situation necessitates a new or modified authorization requirement, this policy provides guidance on how to write this requirement.

SDMs should consider this document and apply it as appropriate. SDMs must not allow this document to fetter their professional discretion. Complex or atypical circumstances will continue to arise and SDMs must apply their professional expertise and judgement when performing their duties.

**References and Relationships:**

*Environmental Management Act*

This policy is to be used with other policies and procedures which include, but are not limited to:

- 1.01.03 Setting Standards, Policies and Guidelines
- 2.01.09 EPD Statutory Decision Making Handbook
- 7.01.01 Compliance & Enforcement Policy and Procedures
- 7.01.03 Inspector's Training Manual for Environmental Protection Division Staff

**Approval:**



**Date:**

*Dec. 20/2017*

David Morel

ADM, Environmental Protection Division

**Contact Person:**

Ed Hoffman, Regional Director, Authorizations North  
AJ, Downie, Regional Director, Authorizations South  
Doug Hill, Regional Director, Mining Operations  
Christine Woodhouse, A/Deputy Director  
Regional Operations Branch

Effective Date if different than Approval Date: N/A
Original Date of Policy: N/A
Date of Policy Amendment(s): N/A

**1) Background**

Under EMA, authorization is required to introduce waste into the environment (air, land, water) in relation to certain industries, trades, businesses, activities and operations in British Columbia. These authorizations include permits and approvals issued by a director (a statutory decision).

Section 14 of EMA states that a director may issue a permit "subject to requirements for the protection of the environment that the director considers advisable...". Likewise, section 15 of EMA states that a director may issue an approval "subject to requirements for the protection of the environment that the director considers advisable...".

Environmental Protection Officers include such requirements in the draft permit or approval for the director's consideration.



## *Auditor General's report*

The BC Auditor General's 2016 Audit of Compliance and Enforcement of the Mining Sector includes the following recommendation:

**1.2 – Permit Language** *We recommend that government ensure both historical and current permit requirements are written with enforceable language.*

If authorizations issued under EMA are not clear and enforceable, authorization holders and ministry staff are challenged to efficiently determine whether compliance has been achieved. Ambiguous and/or unenforceable requirements also reduce public transparency and risk inconsistent application of environmental protection provisions across the province.

s.13,s.14

## *2) Guidance for developing authorization requirements*

### *Categorization of requirements*

Authorization requirements (clauses) in AMS fall into one of two categories:

<b>Category</b>		<i>Example clause:</i>
<b>Standard</b>	Standard language typically applicable for all sectors and all authorization holders or all waste types	<i>The permittee must not discharge under this &lt;&lt;authorization type&gt;&gt; unless the authorized works are complete and fully operational.</i>

---

**Variable** Options are needed for the specific topic addressed in the clause

a) *The permittee must submit records to the director.*

OR

b) *The permittee must submit records for review and approval by the director.*

### *Selecting requirements for an authorization*

When considering requirements to include in an authorization, EPOs should consult the list of clauses in AMS as a first step. EPOs should refer to the clauses on the LAN<sup>1</sup> to look up the category of each clause they intend to use and consider the following guidance:

*Staff should not modify **standard** clauses. Staff should also not modify **variable** clauses, other than to select appropriate options and insert relevant details. Modification of the wording of a **standard** or **variable** clause may place the enforceability of the requirement at risk.*

There is also a third category of clause. **Flexible** clauses are unique to a specific requirement and are not already available in AMS.

*Flexible clauses should only be considered for use when an appropriate **standard** or **variable** clause cannot be found in AMS.*

When writing a **flexible** clause, or when modifying a **standard** or **variable** clause, staff should adhere to the principles outlined in Appendix 1.

The Appendix 1 principles express the following:

- Permit clauses should be clear and concise (who, what, by when);
- Each requirement should be written with a clear compliance point for the purpose of enforceability. Compliance staff must be able to easily determine if an authorization holder is in or out of compliance with a requirement;
- There should not be more than one clause that deals with the same requirement; and
- Environmental protection requirements across the province should be as consistent as possible.

---

<sup>1</sup> P:\WANS\SHARE\ROB\EPD Policy Development 10300-20\Enforceable Auth Reqts

The reason for choosing a **flexible** requirement should be clearly articulated in the authorization file. SDMs should also notify their Regional Director and the Deputy Director (responsible for this policy) if the SDM believes the situation represents a gap or error in the library of clauses in AMS.

If an EPO or SDM is unsure about whether a **flexible** requirement will be clear and enforceable for the authorization holder and inspectors, then advice from the compliance team and/or legal counsel should be sought.

This policy is not intended to fetter the SDM who issues the authorization. SDMs are obliged to consider the unique aspects of each authorization.

### *Plans*

Some authorizations require the holder to prepare a plan, sometimes for SDM approval. For example, a permit might require the preparation of an acceptable operating plan, an emergency response plan or a plan to reduce certain types of waste.

If the plan or any components of the plan are intended to be enforceable, then the following should be considered:

- Consider including the components of the plan that are intended to be enforceable in the authorization itself (or amended authorization);
- Consider including clauses in the authorization that require the authorization holder to comply with the plan, once approved (if subject to approval);
- Any expectations regarding firm (i.e., discrete and measurable) commitments to be contained in the plan should be clearly communicated to a Qualified Professional who may be preparing the plan; and
- The SDM reviewing the plan should consider whether the plan reflects the principles set out in Appendix 1.

### *Consider the authorization as a whole*

Rather than considering requirements in isolation, EPOs and SDMs should also consider the authorization as a whole to ensure that all requirements are complementary and enforceable. Requirements should not be duplicative or contradictory.

For example, staff have in the past experienced difficulty enforcing the requirement to use pollution control works when the authorization requires maintenance of these works but does not explicitly require the works to be installed in the first place.

If staff are preparing a permit amendment, then staff should consider whether additional requirements are needed to improve clarity and enforceability. For example: "...must within 90 days of this amendment install..."

### *3) Permit condition version control*

Version control for the list of clauses in AMS is extremely important. Updates and revisions to the clauses will be required from time to time; however, these must be monitored to ensure that the clauses remain clear and enforceable and so that duplicate clauses are not created.

The list of clauses will be maintained by the Regional Authorizations Directors and Deputy Director and filed on the LAN<sup>2</sup>. The Regional Authorizations Directors and Deputy Director will oversee updates and revisions to the clauses and work with Businesses Services Branch to update AMS as required.

---

<sup>2</sup> P:\WANSHARE\ROM\Planning, Performance, and Projects 00400\Enforceable Auth Reqts Master List

## Appendix 1: Authorization Drafting Principles

The purpose of this appendix is to provide general guidance to ROB staff in drafting **flexible** requirements (clauses) for authorizations. It is not intended to be a substitute for legal advice on any specific requirements. The examples below are for illustrative purposes only.

1. Clauses that impose a requirement should have a subject so that it is clear who is responsible for the requirement. Example:

old:	The authorized works must be inspected regularly and maintained in good working order. [Does not say who must inspect and maintain the works.]
new:	<u>The permittee must</u> regularly <sup>3</sup> inspect the authorized works and maintain them in good working order.

2. Specify timelines where appropriate. It should be clear when an action is required to happen. The reference can be to a date or to a specific event. Example:

old:	The permittee must submit the quality assurance report to the director. [Does not say when the report needs to be submitted.]
new:	The permittee must submit the quality assurance report to the director <u>on or before October 1, 2018.</u> -or- The permittee must submit the quality assurance report to the director <u>prior to discharging under this authorization.</u>

3. Provide details of the content of any obligation, if important. Example:

old:	The permittee must submit a monitoring report to the director on or before October 1, 2018. [Does not say what the monitoring report must contain.]
new:	On or before October 1, 2018, the permittee must submit a monitoring report to the director <u>which contains, at a minimum, the following information: (a), (b), (c), ...</u>

---

<sup>3</sup> See example #6 regarding “regularly”

4. Different words have different meanings, so use consistent language and terminology when referring to the same thing. Example:

old: The permittee may burn waste under this authorization, unless the burning of debris is prohibited by law. [Two different terms – waste and debris – are used for the same thing.]

new: The permittee may burn waste under this authorization, unless the burning of waste is prohibited by law.

5. Use defined terms to shorten clauses and to consistently refer to the same thing. Also consider including definitions from the “Glossary” **standard** condition in AMS if applicable. Example:

old: The permittee may identify an area at the site for open burning. Open burning must be restricted to the designated area. The permittee must clearly identify the open burning area at the site. [Three different terms – an area at the site, designated area and open burning area – are used for the same thing.]

new: “Open Burning Area” means an area at the site identified by the permittee for open burning. Open burning must be restricted to the Open Burning Area. The permittee must clearly identify the Open Burning Area at the site.

6. Avoid ambiguous language. Typical language that can result in uncertainty and ambiguity includes: appropriate, reasonable, generally, suitable, regularly. Examples:

old: The permittee must regularly inspect the authorized works.

new: The permittee must inspect the authorized works on a daily basis.

old: The permittee must submit the report within a reasonable time.

new: The permittee must submit the report on or before March 31 each year this authorization is in effect.

-or-

The permittee must submit the report within two weeks of commencing discharge under this authorization.

-or-

The permittee must submit the report within a time period specified by the director.

old: The permittee must maintain suitable firefighting equipment.

new: The permittee must maintain an operating fire extinguisher.

7. Refer to specific criteria instead of vague requirements. Example:

old: The characteristics of the discharge must be equivalent to that of usual industry standards. [The term "usual industry standards" is ambiguous.]

new: The characteristics of the discharge must not exceed the following parameters: (a), (b), (c), ...

8. If something required to be submitted is subject to the approval of the director, consider including consequences in the event the initial submission is deficient. Example:

old: The permittee must submit a monitoring report to the director for approval. [Does not say what happens if submission is deficient.]

new: The permittee must submit a monitoring report to the director for approval. If the report is incomplete or deficient, then the director may require the permittee to: (i) re-submit the monitoring report in accordance with the specifications of the director, (ii) reduce or suspend the discharge under this authorization until the monitoring report is approved, or (iii) comply with any other requirement of the director.

*The outline of consequence is not necessary for all conditions; however where there are critical submissions it may be appropriate to outline the consequences. Note that the consequences also narrow the SDM's ability to respond – in that SDM action must comply with the consequences outlined. This may or may not be desirable.*

9. Use numbered sub-paragraphs to break-up long provisions and to make the permit requirements more understandable. Example:

old: Any open burning must be restricted to the designated open burning area. This area must be clearly identified at the landfill site. Signs which identify the nature of the waste acceptable at the designated open burning area must be erected and maintained. The lettering on the sign must be such that it is clearly readable by the public when they approach the burning area.

new: The permittee must ensure that:

- (i) any open burning is restricted to the Open Burning Area;
- (ii) the Open Burning Area is clearly identified at the landfill site;
- (iii) signs which identify the nature of the waste acceptable at the Open Burning Area are erected and maintained; and
- (iv) the lettering on such signs is clearly readable by the public when they approach the Open Burning Area.

10. Be specific if referring to any technical reports, guidelines or other documents in permit clauses, by proper title, source, date, version number, etc., so that the reference is certain. Example:

old: The permittee must carry out the analysis in accordance with the procedures described in the Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout report. [Unclear what report is being referred to.]

new: The permittee must carry out the analysis in accordance with the procedures described in "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", Environment Canada, EPS1/RM/13.

*Note that enforceability issues can potentially arise when incorporating external material by reference. To strengthen enforceability consider*



*whether references to external material can be avoided by taking the relevant standard or requirement from the external reference and writing it into the permit. When this is not practical, such as for sampling or analytical methods, and references to external material are used, consider that the external material may be amended over time and whether it is appropriate to reference the material “as amended from time to time”. Consult legal services for further guidance.*

**Principles for reporting requirements:**

11. Avoid clauses which result in the same data being required to be submitted more than once.
12. Request raw data to be submitted electronically (e.g. directly to EMS or another acceptable ministry database) and have the authorization reflect the agreed-upon arrangement.
13. If data is submitted electronically, then quarterly or annual reports can summarize and interpret the data, but should not repeat data previously submitted. Summary reports should identify the location of the raw data and when it was submitted to the Ministry.
14. Authorization requirements should clearly articulate expectations for report content.

	Discharge type	Authorization type	Category	Old condition	Revised condition	Notes
1	All	All	General provision	n/a	Capitalized terms referred to in this authorization are defined in the attached Glossary. Other terms used in this authorization have the same meaning as those defined in the <i>Environmental Management Act</i> and applicable regulations.	<b>REQUIRED</b> New clause to allow defined terms to be included in a glossary, other terms use the definitions in <i>EMA</i> and the regulations.  Glossary terms are highlighted herein.
2	All	All	General provision	n/a	Where this authorization provides that the Director may require an action to be carried out, the <<Permittee/Approval Holder>> must carry out the action in accordance with the requirements of the Director.	<b>REQUIRED</b> There are many provisions where the Director requires something. Instead of adding compliance to each clause, a general clause can be used.
3	Refuse, effluent, air	Approval	Standard	Is authorized to discharge <<Discharge Type>> to <<Discharge to>> from a <<Facility Description>> located <<located in or near>> <<Nearest Municipality>>, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the <i>Environmental Management Act</i> and may lead to prosecution.  This discharge is authorized to occur from the issue date of this Approval to <<Approval Expiry Date>>.	Is authorized to discharge <<Discharge Type>> to <<Discharge to>> from a <<Facility Description>> located <<located in or near>> <<Nearest Municipality>>, British Columbia, subject to the requirements listed below.  ALTERNATIVE WITH GLOSSARY TERM:  [is authorized to discharge <<Discharge Type>> to <<Discharge to>> from the Facility, subject to the requirements listed below.]  Contravention of any of these requirements is a violation of the <i>Environmental Management Act</i> and may lead to prosecution. This discharge is authorized to occur from the issue date of this authorization to <<Approval Expiry Date>>.	<b>GLOSSARY TERM:</b>  “Facility” means the <<Facility Description>> located <<located in or near>> <<Nearest Municipality>>, British Columbia.
4	Refuse, effluent, air	Permit	Standard	Is authorized to discharge <<Discharge Type>> to <<Discharge to>> from a <<Facility Description>> located <<located in or near>> <<Nearest Municipality>>, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the <i>Environmental Management Act</i> and may lead to prosecution.	Is authorized to discharge <<Discharge Type>> to <<Discharge to>> from a <<Facility Description>> located <<located in or near>> <<Nearest Municipality>>, British Columbia, subject to the requirements listed below. Contravention of any of these requirements is a violation of the <i>Environmental Management Act</i> and may lead to prosecution.	

5	Refuse, effluent, air	Permit	Standard	<p>Is authorized to discharge &lt;&lt;Discharge Type&gt;&gt; to &lt;&lt;Discharge to&gt;&gt; from a &lt;&lt;Facility Description&gt;&gt; located &lt;&lt;located in or near&gt;&gt; &lt;&lt;Nearest Municipality&gt;&gt;, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may lead to prosecution.</p> <p>This &lt;&lt;Authorization Type&gt;&gt; supersedes and amends all previous versions of &lt;&lt;Authorization Type&gt;&gt; &lt;&lt;Authorization Number&gt;&gt; issued under Part 2, Section 14 of the Environmental Management Act.</p>	<p>Is authorized to discharge &lt;&lt;Discharge Type&gt;&gt; to &lt;&lt;Discharge to&gt;&gt; from a &lt;&lt;Facility Description&gt;&gt; located &lt;&lt;located in or near&gt;&gt; &lt;&lt;Nearest Municipality&gt;&gt;, British Columbia, subject to the requirements listed below. Contravention of any of these requirements is a violation of the <i>Environmental Management Act</i> and may lead to prosecution.</p> <p>This authorization supersedes and replaces all previous versions of Permit &lt;&lt;Permit Number&gt;&gt; issued under Section 14 of the <i>Environmental Management Act</i>.</p>	
6	Refuse, effluent, air	Approval	Standard	<p>Is authorized to discharge &lt;&lt;Discharge Type&gt;&gt; to &lt;&lt;Discharge to&gt;&gt; from a &lt;&lt;Facility Description&gt;&gt; located &lt;&lt;located in or near&gt;&gt; &lt;&lt;Nearest Municipality&gt;&gt;, British Columbia, subject to the terms and conditions listed below. Contravention of any of these conditions is a violation of the Environmental Management Act and may lead to prosecution.</p> <p>This &lt;&lt;Authorization Type&gt;&gt; supersedes and amends all previous versions of &lt;&lt;Authorization Type&gt;&gt; &lt;&lt;Authorization Number&gt;&gt; issued under Part 2, Section 14 of the Environmental Management Act.</p> <p>This discharge is authorized to occur from the issue date of this amended Approval to &lt;&lt;Approval Expiry Date&gt;&gt;.</p>	<p>Is authorized to discharge &lt;&lt;Discharge Type&gt;&gt; to &lt;&lt;Discharge to&gt;&gt; from a &lt;&lt;Facility Description&gt;&gt; located &lt;&lt;located in or near&gt;&gt; &lt;&lt;Nearest Municipality&gt;&gt;, British Columbia, subject to the requirements listed below. Contravention of any of these requirements is a violation of the <i>Environmental Management Act</i> and may lead to prosecution.</p> <p>This authorization supersedes and replaces all previous versions of Approval &lt;&lt;Approval Number&gt;&gt; issued under Section 15 of the <i>Environmental Management Act</i>.</p> <p>This discharge is authorized to occur from the issue date of this authorization to &lt;&lt;Approval Expiry Date&gt;&gt;.</p>	<p>Use “supersedes and replaces” for clarity.</p> <p>Use correct EMA section for approvals.</p>
7	Refuse	Operational Certificate	Standard	<p>Is authorized to manage waste and recyclable material from the &lt;&lt;Reg. DistrictName&gt;&gt; and environs at the &lt;&lt;Landfill Name&gt;&gt; landfill located near &lt;&lt;MajorCenter&gt;&gt;, 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.</p>	<p>Is authorized to manage waste and recyclable material from the &lt;&lt;Reg. DistrictName&gt;&gt; and environs at the &lt;&lt;Landfill Name&gt;&gt; landfill located near &lt;&lt;MajorCenter&gt;&gt;, British Columbia, subject to the requirements listed below. Contravention of any of these requirements is a violation of the <i>Environmental Management Act</i> and may result in prosecution.</p>	
8	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p>This section applies to the discharge of [[DischargeType]] from a [[DescriptionOfSource]]. The site reference number for this discharge is [[EMSSiteID]].</p>	<p>This section applies to the discharge of [[DischargeType]] from a [[DescriptionOfSource]]. The site reference number for this discharge is [[EMSSiteID]].</p>	
9	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	[[FlowAverage]]	[[FlowAverage]]	Must insert “authorized”
10	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	[[FlowMaximum]]	[[FlowMaximum]]	
11	Refuse,	Approval,	Standard	[[FlowMinimum]]	[[FlowMinimum]]	

	effluent , air	Operational Certificate, Permit				
12	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	[[DurationFrequency]]	[[DurationFrequency]]	
13	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	The characteristics of the discharge must be equivalent to that of typical: [[Contaminant]]	The characteristics of the discharge must be equivalent to or better than: [[Contaminant]]  ALTERNATIVE WHERE SPECIFIC PARAMETERS KNOWN:  The characteristics of the discharge must not exceed the following parameters: [Specific numerical contaminant levels]	Option to use clause with specific parameters, where appropriate.
14	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	The authorized works are [[AuthorizedWorks]] and related appurtenances approximately located as shown on Site Plan **A**.	The discharge is authorized from Authorized Works, which are [[AuthorizedWorks]] and related appurtenances approximately located as shown on Site Plan **A**.	
15	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	The authorized works must be complete and in operation while discharging.	The <<Permittee/Approval Holder>> must not discharge under this authorization unless the Authorized Works are complete and fully operational.	
16	Refuse, effluent , air	Approval, Operational Certificate, Permit	Variable	The location of the facilities from which the discharge originates and the point of discharge is [[LegalLandDescription]].	The location of the facilities from which the discharge is authorized to originate and the point where the discharge is authorized to occur is [[LegalLandDescription]].	
17	Refuse, effluent , air	Approval, Operational Certificate, Permit	Variable	The location of the facilities from which the discharge originates is [[JobLegalLandDescription]].  The location of the point of discharge is [[LegalLandDescription]].	The location of the facilities from which the discharge is authorized to originate is [[JobLegalLandDescription]].  The location of the point where the discharge is authorized to occur is [[LegalLandDescription]].	
18	Refuse, effluent , air	Approval, Operational Certificate, Permit	Variable	The location of the facilities from which the discharge originates and the point of discharge is the same as **Section 1.1.x** above.	The location of the facilities from which the discharge is authorized to originate and the point where the discharge is authorized to occur is the same as specified in **Section 1.1.x** above.	
19	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	<b><u>Future Upgrading of Works</u></b>  The Director may require repair, alteration, removal, improvement or addition to works or construction of new or existing works, and submission of plans and specification for works specified in this authorization.	The Director may require the <<Permittee/Approval Holder>> to repair, alter, remove, improve or add to existing works, or to construct new works, and to submit plans and specifications for works specified in this authorization.	Letter of Transmittal – remove from permit and include in LOT
20	Refuse, effluent , air, hazardous waste	Approval, Operational Certificate, Permit	Variable	<b><u>Future Financial Security</u></b>  Although financial security is not required at this time, the Director may require security in the amount and form subject to the conditions the Director specifies.	The Director may require the <<Permittee/Approval Holder>> to provide security in the amount and form, and subject to the conditions, specified by the Director.	See above note.
21	Refuse,	Approval,	Standard	<b><u>Future Monitoring</u></b>	The Director may require the <<Permittee/Approval Holder>> to conduct	See above note.

	effluent , air	Operational Certificate, Permit		The Director may require may require monitoring, and may specify procedures for monitoring and analysis, and procedures or requirements respecting the handling, treatment, transportation, discharge or storage of waste. The Director may, in writing, change and amend these monitoring requirements.	monitoring, and may specify procedures for monitoring and analysis, and procedures or requirements respecting the handling, treatment, transportation, discharge or storage of waste. The Director may amend any requirements under this section, including requiring increased or decreased monitoring based on data submitted by the <<Permittee/Approval Holder>> and any other data gathered in connection with this authorization.	Amendment language moved from page 5.
22	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	<b><u>Future Impact Assessment</u></b>  The Director may require studies to be conducted and to report information specified by the Director.	The Director may require the <<Permittee/Approval Holder>> to conduct studies and to report information in accordance with the specifications of the Director.  The Director may amend any requirements under this section, including requiring increased or decreased reporting based on data submitted by the <<Permittee/Approval Holder>> and any other data gathered in connection with this authorization	Amendment language moved from ROW 32.
23	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Future Recycling</u></b>  The Director may require recycling of certain wastes and recovery of certain reusable resources, including energy potential from wastes.	The Director may require the <<Permittee/Approval Holder>> to recycle certain wastes and recover certain reusable resources, including energy potential from wastes, in accordance with the specifications of the Director.	
24	Air	Approval, Operational Certificate, Permit	Standard	<b><u>Standard Conditions</u></b>  For the administration of this <<Permit/Approval>> all gaseous volumes must be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.	For the administration of this <<Permit/Approval>> for reporting all air monitoring results, all gaseous volumes must be converted to standard conditions of 293.15 K and 101.325 kPa with zero percent moisture.	
25	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	<b><u>Improvement of Works</u></b>  The authorized works in Section **number**, must be installed and operational on or before **date** In the interim, the <<Permittee/Approval Holder>> must operate the existing equipment in such a manner as to maintain the lowest practical level of contaminants in the discharge to the approval of the Director.	n/a - if using a glossary term for Authorized Works	THIS condition is not being brought forward into new permits. If a phased installation of works is in the permit, there will be two sections of authorized works with specific quantity and quality levels specified.
26	Effluent , air	Approval, Operational Certificate, Permit	Variable	<b><u>Maintenance of Works and Emergency Procedures</u></b>  The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the <<Permittee/Approval Holder>> which prevents effective operation of the authorized works or leads to an unauthorized discharge, the <<Permittee/Approval Holder>> must take appropriate remedial action and notify the Director **immediately/within 60hrs**. The Director may reduce or suspend operations to protect the environment until the authorized works has been restored, and/or corrective steps taken to prevent	The <<Permittee/Approval Holder>> must regularly inspect the authorized works and maintain them in good working order.  ALTERNATIVE WHERE SPECIFIC INSPECTION INTERVAL IS REQUIRED:  [The <<Permittee/Approval Holder>> must regularly inspect the Authorized Works, and must inspect the <<component>> of the authorized works at minimum on a <<daily/weekly/monthly>> basis. The <<Permittee/Approval Holder>> must maintain the Authorized Works in good working order.]  In the event of an emergency or condition beyond the control of the <<Permittee/Approval Holder>> which prevents effective operation of the	Consider using alternative language where specific inspection interval for a component of the authorized works is required.

				<p>unauthorized discharges.</p>	<p>Authorized Works or leads to an unauthorized discharge, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must take remedial action to restore the effective operation of the Authorized Works and to prevent any unauthorized discharges. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately report the emergency or condition and the remedial action that has and will be taken to the RAPP line (1-877-952-7277, #7277 from mobile phone) or electronically at this link: <a href="http://www.env.gov.bc.ca/cos/rapp/form.html">http://www.env.gov.bc.ca/cos/rapp/form.html</a>.</p> <p>The Director may require the &lt;&lt;Permittee/Approval Holder&gt;&gt; to reduce or suspend operations until the Authorized Works have been restored, and/or corrective steps have been taken to prevent unauthorized discharges.</p>	
27	Refuse	Approval, Operational Certificate, Permit	Variable	<p><b><u>Maintenance of Works and Emergency Procedures</u></b></p> <p>The authorized works must be inspected regularly and maintained in good working order. In the event of an emergency or condition beyond the control of the &lt;&lt;Permittee/Approval Holder&gt;&gt;including, but not limited to, unauthorized fires arising from spontaneous combustion or other causes, or detection of leachate on the property, the &lt;&lt;Permittee/Approval Holder&gt;&gt;must take appropriate remedial action and notify the Director <b>**immediately/within 60 hrs**</b>. The Director may reduce or suspend operations to protect the environment until the authorized works has been restored, and/or corrective steps taken to prevent unauthorized discharges.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must regularly inspect the authorized works and maintain them in good working order.</p> <p>ALTERNATIVE WHERE SPECIFIC INSPECTION INTERVAL IS REQUIRED:</p> <p>[The &lt;&lt;Permittee/Approval Holder&gt;&gt; must regularly inspect the Authorized Works, and must inspect the &lt;&lt;component&gt;&gt; of the authorized works at minimum on a &lt;&lt;daily/weekly/monthly&gt;&gt; basis. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must maintain the authorized works in good working order.]</p> <p>In the event of an emergency or condition beyond the control of the &lt;&lt;Permittee/Approval Holder&gt;&gt; including, but not limited to, unauthorized fires arising from spontaneous combustion or other causes, or detection of leachate on the site of the Facility, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must take remedial action to prevent any unauthorized discharges . The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately report the emergency or condition and the remedial action that has and will be taken to the RAPP line (1-877-952-7277, #7277 from mobile phone) or electronically at this link: <a href="http://www.env.gov.bc.ca/cos/rapp/form.htm">http://www.env.gov.bc.ca/cos/rapp/form.htm</a>.</p> <p>The Director may require the &lt;&lt;Permittee/Approval Holder&gt;&gt; to reduce or suspend operations until corrective steps have been taken to prevent unauthorized discharges.</p>	<p>Consider using alternative language where specific inspection interval for a component of the authorized works is required.</p>
28	Refuse, effluent , air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Bypasses</u></b></p> <p>Any bypass of the authorized works is prohibited unless the approval of the Director is obtained and confirmed in writing.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must not allow any discharge authorized by this authorization to bypass the authorized works, except with the prior written approval of the Director.</p>	
29	Refuse, effluent , air	Approval, Permit	Standard	<p><b><u>Transfer of Authorization</u></b></p> <p>A transfer of a Permit or Approval is without effect unless a Director has consented in writing to the transfer.</p>	n/a	<p>Not necessary as it repeats the requirements of EMA s. 17.</p>

30	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Process Modifications</u></b></p> <p>The Director must be notified prior to implementing changes to any process that may adversely affect the quality and/or quantity of the discharge. Despite notification under this section, permitted levels must not be exceeded.</p>	Condition is not being brought forward – as there are max qty and quality requirements which must be met	REMOVED
31	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Plans - Works</u></b></p> <p>Plans and specifications of the works authorized in Section <b>**number**</b> must be certified by a qualified professional, and submitted to the Director on or before <b>**date**</b>. A qualified professional must certify that the works have been constructed in accordance with the plans before discharge commences.</p>	The <<Permittee/Approval Holder>> must ensure the plans and specifications of the works described in <<paragraph <b>**number**</b> >> of the definition of Authorized Works are certified by a Qualified Professional and are submitted to the Director on or before <b>**date**</b> . The <<Permittee/Approval Holder>> must cause a Qualified Professional to certify that the works have been constructed in accordance with such plans and specifications before discharge commences under this authorization.	<p><b><u>GLOSSARY TERM</u></b></p> <p><b>“Qualified Professional”</b> means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who</p> <p>i. is registered with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and</p> <p>ii. through suitable education, experience, accreditation and/or knowledge, may be reasonably relied on to provide advice within their area of expertise.</p> <p>All documents submitted to the Director by a Qualified Professional must be signed by the author(s).</p>
32	Refuse, effluent, air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Change for Monitoring and Reporting</u></b></p> <p>The need for subsequent increased or decreased monitoring and reporting will be assessed on the basis of the data submitted and any other data gathered in connection with the discharges.</p>	n/a	Moved to ROW 22.
33	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Standby Power</u></b></p> <p>The Permittee must provide auxiliary power facilities to ensure continuous operation of the authorized works and</p>	The <<Permittee/Approval Holder>> must provide auxiliary power facilities to ensure continuous operation of the authorized works during power outages.	

				operations building during power outages.		
34	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Odour Control</u></b></p> <p>Should objectionable odours, attributable to operations of the facilities, occur beyond the property boundary, measures or additional works will be required to reduce odour to acceptable levels.</p>	Should objectionable odours, attributable to the operation of the Facility, occur beyond the property on which the Facility is located, the <<Permittee/Approval Holder>> must undertake measures or additional works to reduce odour to acceptable levels.	We discussed whether there is a better term for "objectionable odours" to make the term more certain.
35	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Environmental Impact</u></b></p> <p>Based on results of inspections and/or any other information available to the Director on the effect of the discharge on the receiving environment, changes may be required to undertake additional monitoring, install additional authorized works or change the method of operation.</p>	n/a	We discussed not needing this requirement and dealing with it through permit amendment.
36	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Receiving Environment Monitoring</u></b></p> <p>Between **date** and **date** a receiving environment monitoring program must be carried out by the &lt;&lt;permittee/approval holder&gt;&gt;. The program, to consist of **number** sampling events at selected sites, must be established in consultation with the Director who will advise the &lt;&lt;Permittee/Approval Holder&gt;&gt;in writing of the program requirements. Based on the results from the analyses of the samples, the &lt;&lt;Permittee/Approval Holder&gt;&gt;monitoring requirements may be extended or altered by the Director.</p>	The <<Permittee/Approval Holder>> must carry out a receiving environment monitoring program between **date** and **date**. The program must consist of **number** sampling events at selected sites and must be established by the <<Permittee/Approval Holder>> in accordance with the written requirements of the Director. Based on the results from the analyses of the above samples, the Director may extend or alter monitoring requirements of the <<Permittee/Approval Holder>>.	
37	Air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Incinerator Operation</u></b></p> <p>As a safeguard against accidental fires and to ensure proper operation, an attendant must be on duty at the site when the incinerator is in use.</p>	The <<Permittee/Approval Holder>> must ensure that an attendant is on duty at the Facility when the incinerator is in use.	
38	Air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Disposal of Ash</u></b></p> <p>The residue of combustion must be removed from the &lt;&lt;burner type&gt;&gt; regularly and must be disposed of on a site and in a manner approved by the Director/acceptable by the Director or as authorized by regulation under the Environmental Management Act.</p>	The <<Permittee/Approval Holder>> must remove residue of combustion from the <<burner type>> regularly and dispose of such residue at a location and in a manner approved by the Director or as authorized by regulation under the <i>Environmental Management Act</i> .	If it is possible to replace "regularly" with a specific frequency (e.g., daily, hourly, after each use, etc), then this would add certainty to the provision.
39	Air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Opacity and Correlation Temperature for Wood Waste Burner</u></b></p> <p>a. The &lt;&lt;Permittee/Approval Holder&gt;&gt;must measure the opacity of the discharge at hourly intervals. The method or technique of measuring opacity directly must be acceptable to the Director.</p> <p>b. As an alternative, the &lt;&lt;Permittee/Approval Holder&gt;&gt;may establish a correlation between opacity and</p>	<p>a. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must measure the opacity of the discharge at hourly intervals in accordance with paragraph c. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must use a method or technique of measuring opacity directly that is acceptable to the Director.</p> <p>b. As an alternative to measuring opacity, the &lt;&lt;Permittee/Approval Holder&gt;&gt; may establish a correlation between opacity of discharge and discharge temperature at the exit of the burner. Once such correlation has been established to the satisfaction of the Director, the &lt;&lt;Permittee/Approval Holder&gt;&gt; may measure discharge temperature</p>	



				<p>discharge temperature at the exit of the burner. Once the relationship has been established to the satisfaction of the Director, discharge temperature readings taken either continuously or at least at hourly intervals, will be accepted as representative of the opacity prevailing at the time the temperature was recorded.</p> <p>c. Until a correlation temperature has been determined and whenever the temperature recording system malfunctions, the Permittee must measure and record the opacity of the wood residue burner's air contaminants for three (3) consecutive minutes at fifteen (15) second intervals once each hour during the daylight hours for the total daily operating time of the burner. For monitoring purposes the average of this three (3) minute period must be reported as the opacity of the air contaminants from the burner for the one hour period in which the readings were completed.</p> <p>d. In order to determine a correlation temperature, the Permittee must submit to the regional Ministry office a minimum of fifty (50) opacity readings of the air contaminants with the corresponding exit gas temperature.</p> <p>e. The Permittee must update the data used to determine a correlation temperature at minimum frequency at a minimum frequency of once every two (2) years, or following upgrading of the burner, or at the request of Director. The Director will establish a correlation temperature based on the information provided above.</p> <p>f. Subject to visual opacity reading, the record of exit gas temperatures will be accepted for monitoring purposes alone as representing the opacity of the burner at the time the temperatures were recorded.</p> <p>g. Visual opacity readings, where available, must override the record of exit gas temperatures for evaluating permit compliance.</p>	<p>readings either continuously or at least at hourly intervals, and such measurements will be accepted by the Director as representative of the opacity prevailing at the time the temperature was recorded.</p> <p>c. Until a temperature/opacity correlation has been established to the satisfaction of the Director, and whenever the temperature recording system malfunctions, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must measure and record the opacity of the wood residue burner's air contaminants every 15 seconds during a continuous three minute period once each hour during the daylight hours for the total daily operating time of the burner. For monitoring purposes, the&lt;&lt;Permittee/Approval Holder&gt;&gt; must report the average of the measurements taken during each three minute sampling period as the opacity of the air contaminants from the burner for the applicable hour in which the readings were completed.</p> <p>d. In order to determine a correlation between opacity and temperature, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit to the regional Ministry office a minimum of 50 opacity readings of the air contaminants with the corresponding exit gas temperature.</p> <p>e. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide an updated set of 50 opacity and temperature readings under paragraph d: (i) at least once every two years after the date that the Director was satisfied with the original correlation, (ii) following any upgrades or modifications to the burner, or (iii) at the request of the Director. Upon receipt of such readings, the Director will establish a correlation based on the received readings.</p> <p>f. Subject to paragraph g, a record of exit gas temperatures will be accepted for monitoring purposes by the Director as representing the opacity of the burner at the time the temperatures were recorded.</p> <p>g. Visual opacity readings, if available, will be used to assess compliance with this authorization by the &lt;&lt;Permittee/Approval Holder&gt;&gt; even in situations where a contemporaneous record of exit gas temperatures exists.</p>	
40	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Area for Open Burning</u></b></p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may identify an area for the use of open burning to treat wood and associated products (herein referred to as the open burning area). Any open burning must be restricted to the designated open burning area. This area must be clearly identified at the landfill site. Signs which identify the nature of the waste acceptable at the designated open burning area must be erected and maintained. The lettering on the sign must be such that it is clearly readable by the public when</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may identify an area at the landfill site for the use of open burning to treat wood and associated products (herein referred to as the "open burning area"). The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that: (i) any open burning is restricted to the open burning area, (ii) the open burning area is clearly identified at the landfill site, (iii) signs which identify the nature of the waste acceptable at the open burning area are erected and maintained, and (iv) the lettering on such signs is clearly readable by the public when they approach the open burning area.</p> <p>ALTERNATIVE WITH GLOSSARY TERM:</p>	

				they approach the burning area.	The <<Permittee/Approval Holder>> must ensure that: (i) any open burning is restricted to the Open Burning Area, (ii) the Open Burning Area is clearly identified at the landfill site, (iii) signs which identify the nature of the waste acceptable at the Open Burning Area are erected and maintained, and (iv) the lettering on such signs is clearly readable by the public when they approach the Open Burning Area.	<b>GLOSSARY TERM:</b>  "Open Burning Area" means an area at the landfill site identified by the <<Permittee/Approval Holder>> for the use of open burning to treat wood and associated products.
41	Air	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Location for burn area</u></b>  The operation must be restricted to an area on the site which is satisfactory to the Director. If required, this area must be fenced to restrict access to the burn area stockpile.	The <<Permittee/Approval Holder>> must restrict the operation to an area on the site which is satisfactory to the Director. If required, the <<Permittee/Approval Holder>> must erect a fence around the burn area stockpile that is sufficient to restrict access thereto.	
42	Air	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Burning Prohibition</u></b>  Burning of materials is prohibited other than for the sole purpose of comfort heating in an appliance meeting the Canadian standard as defined by the Solid Fuel Burning Domestic Appliance Regulation.	Burning of materials is prohibited at the site other than for the sole purpose of comfort heating in an appliance meeting the "Canadian standard" as defined in the Solid Fuel Burning Domestic Appliance Regulation.	
43	Air	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Nature of Wastes</u></b>  Generally, waste must not be burned unless it is acceptable to the Director. Acceptable materials include demolition and construction wood wastes, stumps, branches, and trees, but excluding nuisance causing combustibles such as sawdust, rubber, plastics, tars, insulation, cardboard etc.	The <<Permittee/Approval Holder>> must not burn waste unless it is acceptable to the Director. Acceptable materials include demolition and construction wood wastes, stumps, branches, and trees, but excluding nuisance causing combustibles such as sawdust, rubber, plastics, tars, insulation, cardboard etc.	
44	Air	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Open Burning and Smoke Control</u></b>  a. Open burning must be conducted in accordance with the Regional District's approved open burning procedures (Appendix A), which are to be kept on-site at all times. In addition, the Regional District must meet the following additional requirements:  b. Waste must not be burned unless it is acceptable to the Director. Acceptable materials include dry and clean demolition & construction wood wastes but excludes nuisance-causing combustibles such as sawdust, yard wastes, mulch, wood chips, stumps, rubber, plastics, tars, insulation, etc.  c. The burn must not proceed unless the Ventilation Index is at least 55 "good" on the day the open burning is started and forecast to be "good" or "fair" on the second day the debris is anticipated to release smoke.  d. Open burning of wood residue must not be initiated or continued if the local air flow will cause the smoke to impact on a nearby population or cause pollution. As an	The <<Permittee/Approval Holder>> must conduct any open burning in accordance with the Regional District's approved open burning procedures (Appendix A), which are to be kept on-site at all times. In addition, the <<Permittee/Approval Holder>> must meet the following additional requirements:  a. Waste must not be burned unless it is acceptable to the Director. Acceptable materials include dry and clean demolition & construction wood wastes but excludes nuisance-causing combustibles such as sawdust, yard wastes, mulch, wood chips, stumps, rubber, plastics, tars, insulation, etc.  b. The burn must not proceed unless the Ventilation Index is at least 55 "good" on the day the open burning is started and forecast to be "good" or "fair" on the second day the waste is anticipated to release smoke.  c. Open burning of wood residue must not be initiated or continued if the local air flow will cause the smoke to impact on a nearby population or cause pollution. The <<Permittee/Approval Holder>> may conduct a test burn to determine smoke dispersion patterns on the proposed day of ignition of an open burn.  d. Open burns must be monitored and documented in a log which is to be	

				<p>additional measure, the Regional District may wish to conduct a test burn to determine smoke dispersion patterns on the day of ignition.</p> <p>e. Burn events must be monitored and documented in a log which is to be kept on site. Details must include dates, timing, duration, pictures and any other pertinent information for each individual burn.</p> <p>f. This operational certificate does not relieve the Operational Certificate Holder from complying with the requirements of federal, provincial, regional district and municipal authorities and agencies including the Ministry of Forests and Range, and the Wildfire Act and Wildfire Regulation. Burning must not take place when burning is prohibited by government authority, agency, legislation or regulation.</p> <p>g. Open burning of clean wood waste is an interim measure to address wood waste disposal. The Regional District must continue to explore economically viable options for recycling wood waste.</p>	<p>kept on site. Documented details must include dates, timing, duration, pictures and any other pertinent information for each individual open burn.</p> <p>This authorization does not relieve the &lt;&lt;Permittee/Approval Holder&gt;&gt; from complying with the requirements of federal, provincial, regional district and municipal authorities and agencies, or any law, including the Wildfire Act and Wildfire Regulation. Open burns must not occur under this authorization when burning is prohibited by any government authority, agency, legislation or regulation.</p> <p>Open burning of clean wood waste is an interim measure to address wood waste disposal. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must continue to explore economically viable options for recycling wood waste.</p>	
45	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Fire Prevention</u></b></p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must make all reasonable efforts to prevent unauthorized fires from occurring at the landfill site. As a minimum, a fire break clear of all combustible materials at least 15 metres wide must surround all disposal, treatment and individual storage areas which have received or are receiving combustible materials. Disposal areas that have had 30 cm of compacted mineral soil cell cover or final cover applied are exempt. Water supply and pumping capabilities and/or soil and earth moving equipment must be maintained at a sufficient level to extinguish fires. In addition, reasonable efforts must include, but are not necessarily limited to, the preparation of a Fire Prevention and Response Plan.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must make all reasonable efforts to prevent unauthorized fires from occurring at the landfill site. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must maintain a fire break that is clear of all combustible materials and at least 15 metres wide around all disposal, treatment and individual storage areas which have received or are receiving combustible materials. Disposal areas that have had 30 cm of compacted mineral soil cell cover or final cover applied are exempt. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must maintain water supply and pumping capabilities and/or soil and earth moving equipment at a sufficient level to extinguish fires. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must have a Fire Prevention and Response Plan in place at all times.</p>	
46	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Extinguishing Fires</u></b></p> <p>In the event of an unauthorized fire (including any smoldering fire), the &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately make all reasonable efforts to extinguish the fire. Any fire which poses a threat to public health or to neighboring property must be reported to the Provincial Emergency Program (phone: 1-800-663-3456) and any local fire authority.</p>	<p>In the event of an unauthorized fire, including any smoldering fire, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately make all reasonable efforts to extinguish the fire. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately report any fire which poses a threat to public health or to neighboring property to the Provincial Emergency Program (phone: 1-800-663-3456) and any local fire authority.</p>	
47	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Sources of Wastes</u></b></p> <p>Acceptable sources of wood and associated products include typical residential, commercial and institutional sources but does not include any industrial wood</p>	<p>Acceptable sources of wood and associated products include typical residential, commercial and institutional sources but does not include any industrial wood processing facilities (sawmills, pulpmills, re-manufacturing plants, etc.).</p>	

				processing facilities (sawmills, pulpmills, re-manufacturing plants, etc.).		
48	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Authorization of Burning</u></b></p> <p>Each burn event requires separate authorization with respect to adequate dispersion of smoke and prevention of spread of fire as follows:</p> <p>a. Adequate Smoke Dispersion Prior to initiating an open burn, a custom ventilation index forecast must be obtained from the Skeena Region Air Quality Unit by calling 1-866-362-4986. In order to ensure adequate dispersion takes place during and after the burn, a 2-day ventilation forecast of "Good" must be obtained.</p> <p>b. Duration and Extinguishment of Burn The maximum authorized duration of an open burn is from dawn to dusk. The fire must be extinguished by dusk on the day of ignition.</p> <p>c. Prevention of Spread of Fire Burning must take place only when approved by the Ministry of Forests and/or Fire Chief of the local municipality who will determine whether it is safe to burn and may specify conditions under which burning may take place. In addition, the Ministry of Forests requires a burn registration number for each burn (1-888-797-1717).</p> <p>d. Fire Accelerant An approved fire accelerant such as diesel fuel or commercial fire starter gel or a flame-thrower must be used to ensure efficient and rapid ignition of the waste material.</p> <p>e. Minimization of Smoke Each burn must be tended and fed in a manner that ensures smoke emissions are minimized. Measures to minimize smoke must include, but not necessarily be limited to: stacking of waste in a manner that eliminates dirt; stacking and drying any green or wet wastes until reasonably dry; waiting to burn until wastes are reasonably dry after any significant rainfall; and having satisfactory control of feeding waste into the fire through use of adequate equipment and staff. Burning material at the edge of the burn must be periodically pushed into the centre of the burn to promote rapid combustion.</p> <p>f. Smoke Reduction if Weather Changes Wastes must not be added to the open burn pile and burning residue must be extinguished as soon as is practical if: (a) local winds make the dispersion of the</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may only conduct an open burn in accordance with the following:</p> <p>a. Adequate Smoke Dispersion Prior to initiating an open burn, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must obtain a custom ventilation index forecast from the Skeena Region Air Quality Unit by calling 1-866-362-4986 that indicates a 2-day ventilation forecast of "Good".</p> <p>b. Duration and Extinguishment of Burn The maximum authorized duration of an open burn is from dawn to dusk. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must extinguish any open burns by dusk on the day of ignition.</p> <p>c. Prevention of Spread of Fire The &lt;&lt;Permittee/Approval Holder&gt;&gt; may only conduct an open burn when the proposed burn has been approved by the Ministry of Forests, Lands and Natural Resource Operations and/or Fire Chief of the local municipality who will determine whether it is safe to burn and may specify conditions under which burning may take place. Prior to initiating an open burn, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must obtain a burn registration number from the Ministry of Forests, Lands and Natural Resource Operations for each burn (1-888-797-1717).</p> <p>d. Fire Accelerant The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ignite the open burn using an approved fire accelerant such as diesel fuel or commercial fire starter gel, or a flame-thrower to ensure efficient and rapid ignition of the waste material.</p> <p>e. Minimization of Smoke The &lt;&lt;Permittee/Approval Holder&gt;&gt; must manage, and add combustible material to, each open burn in a manner that minimizes smoke emissions. Measures to minimize smoke emissions must include: stacking of waste that will be burned in a manner that eliminates dirt; stacking and drying any green or wet wastes that will be burned until reasonably dry; delaying the burning of waste until such waste is reasonably dry after any significant rainfall; and having satisfactory control of adding waste into the fire through use of adequate equipment and staff. Burning material at the edge of the burn must be periodically pushed into the centre of the burn to promote rapid combustion.</p> <p>f. Smoke Reduction if Weather Changes The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that wastes are not added to the open burn pile and burning residue is extinguished as soon as is practical if: (a) local winds make the dispersion of the smoke inadequate; (b) an inversion forms, trapping smoke near the surface; and/or (c) the Director imposes an open burning restriction.</p>	

				smoke inadequate; (b) an inversion forms, trapping smoke near the surface; and/or (c) the Director imposes an open burning restriction.		
49	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Notification</u></b></p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must notify the Director, in writing or by fax <b>**insert fax number**</b> a minimum of two business days prior to intention to burn.</p>	The <<Permittee/Approval Holder>> must notify the Director <u>or designate by email at EnvironmentalCompliance@gov.bc.ca, or as otherwise instructed by the Director, in writing or by fax <b>**insert fax number**</b></u> a minimum of two business days prior to commencing a proposed open burn.	
50	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Timing</u></b></p> <p>Burning shall occur only when the local ventilation is forecast as "good". The ventilation index is forecast daily by Environment Canada and is available from the nearest Environment Canada office, or via recorded telephone message at 1-888-281-2992. No burning shall take place on weekends, statutory holidays, during periods of fire hazard, when burning is prohibited by other government agencies or at times as determined by the Director.</p>	The <<Permittee/Approval Holder>> may only proceed with an open burn when the local ventilation for that day is forecast as "good" by Environment Canada. Environment Canada forecasts are available from the nearest Environment Canada office, or via recorded telephone message at 1-888-281-2992. The <<Permittee/Approval Holder>> must not conduct open burning on weekends, statutory holidays, during periods of fire hazard, when burning is prohibited by any government agency or at any time the Director imposes an open burning restriction.	
51	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Other Agency Requirements</u></b></p> <p>This &lt;&lt;Permit/Approval&gt;&gt; does not relieve the &lt;&lt;Permittee/Approval Holder&gt;&gt; from complying with requirements of federal, provincial, regional district or municipal authorities.</p>	This <<Permit/Approval>> does not relieve the <<Permittee/Approval Holder>> from complying with requirements of federal, provincial, regional district or municipal authorities or any law.	
52	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Fire Containment</u></b></p> <p>Suitable devices must be available for extinguishing fires to prevent them from spreading to surrounding areas. Such devices may include a pressurized water supply or chemical type fire extinguishers, or an earth stockpile. If an earth stockpile is contemplated for fire control, earth moving equipment must be available at the site during burning. A fireguard must be cleared and maintained free of combustible materials.</p>	The <<Permittee/Approval Holder>> must ensure that suitable devices are available in the immediate vicinity of any burn for extinguishing fires and to prevent them from spreading to surrounding areas. Such devices may include a pressurized water supply or chemical type fire extinguishers, or an earth stockpile. If an earth stockpile is contemplated for fire control, the <<Permittee/Approval Holder>> must ensure that operational earth moving equipment is available at the site during burning. The <<Permittee/Approval Holder>> must maintain a fireguard that is clear of combustible materials.	
53	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Attendant</u></b></p> <p>Burning shall take place only when an attendant is on duty. The attendant shall remain on duty for the duration of the burn.</p>	The <<Permittee/Approval Holder>> must ensure that an attendant is on duty at the [site/Facility] at all times for the duration of any open burn.	

	Discharge type	Authorization type	Category	Old condition	Revised condition	Compliance point or determination
54	Air	Approval, Operational Certificate, Permit	StandardStandard	<p><u>Smoke Minimization</u></p> <p>Soil and inert material must be removed from the combustibles to the greatest extent possible prior to burning. Combustibles must be charged to the facility in such a manner as to minimize smoke generation and restrict the uplift of lighter constituents. The facility must be operated to the satisfaction of the Director.</p>	Soil and inert material must be removed from the combustibles to the greatest extent possible prior to burning. Combustibles must be added to the burn facility in such a manner as to make reasonable efforts to minimize smoke generation and prevent light debris from floating upwards and away from the burn facility.. The <<Permittee/Approval Holder>> must operate the facility to the satisfaction of the Director.	
55	Air	Approval, Operational Certificate, Permit	StandardStandard	<p><u>Cessation of Burn</u></p> <p>The &lt;&lt;permittee/approval holder&gt;&gt; must, at the discretion of the Director, immediately extinguish the burn.</p>	The <<Permittee/Approval Holder>> must immediately extinguish an active burn if instructed to do so by the Director or his/her authorized representative.	
56	Air	Approval, Operational Certificate, Permit	StandardStandard	<p><u>Residue of Combustion</u></p> <p>As soon as the residue of combustion has cooled to ambient temperature it must be incorporated into the landfill authorized in Section **number** or a landfill authorized by the Director.</p>	The <<Permittee/Approval Holder>> must incorporate the residue of combustion from a burn into the landfill authorized in Section **number** or a landfill authorized by the Director as soon as such residue has cooled to ambient temperature.	
57	Air	Approval, Operational Certificate, Permit	StandardStandard	<p><u>Wood Residue Management Plan</u></p> <p>a. The &lt;&lt;permittee/approval holder&gt;&gt; must continue to explore every reasonable alternative for reduction, re-use, and recycling of residue and other management options in order to minimize the amount to be burned and/or smoke produced. An updated Wood Residue Management Plan document acceptable to the Director, must be submitted to the Director annually. The plan must include, but need not be limited to, the following information:</p> <p>b. Total volume in cubic metres of logs handled in the previous year and total volume of debris that was routed to each management method used (e.g., chipping, composting, sawmilling, firewood, burning, landfilling, etc.). Specify volumes by debris type and species (e.g., cedar bark, hemlock shavings) as appropriate.</p> <p>c. Total predicted volume of logs sorted and debris routed to each management method for the upcoming year.</p> <p>d. A complete list of management options (equipment or operational practices) used to reduce the quantity of wood residue that is required to be managed and/or the amount of</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must continue to research every commercially reasonable alternative for reduction, re-use, and recycling of residue and other management options in order to minimize the amount to be burned and/or smoke produced. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit by December 31<sup>st</sup> each year an updated Wood Residue Management Plan document that is acceptable to the Director. The plan must include, but need not be limited to, the following information:</p> <p>a. Total volume in cubic metres of logs handled by &lt;&lt;Permittee/Approval Holder&gt;&gt; at the facility in the previous year and total volume of debris that was routed to each management method used (e.g., chipping, composting, sawmilling, firewood, burning, landfilling, etc.). Specify volumes by debris type and species (e.g., cedar bark, hemlock shavings).</p> <p>b. Total predicted volume of logs sorted and debris routed to each management method for the upcoming year.</p> <p>c. A complete list of management options (equipment or operational practices) used to reduce the quantity of wood residue that is required to be managed and/or the amount of</p>	

				<p>smoke produced from burning (e.g., paved yard, improved cut-site practices, improved waste combustion practices, raking debris to reduce the inert content, seasoning of material to be burned, etc.). A description and schematic drawing of the forced air burning system, including equipment types and air flow volumes, must be included.</p> <p>e. A complete list of all management options that the Permittee has explored but has not implemented, and the rationale as to why each has not been incorporated including, but not limited, to paving of the log handling area, delivery of hog or chips to local mills, delivery to a regional compost facility, recovery for firewood or other products, additional burning control equipment, etc. If economic reasons prohibit alternatives, specific costs (stated in dollars per tonne of debris wherever possible) that would be involved must be included.</p> <p>f. Wood residue must be managed according to practices identified in the Plan, or as otherwise approved in writing by the Director.</p> <p>g. Wood Residue Management Plans are non-confidential documents, and may be viewed by the general public.</p>	<p>smoke produced from burning (e.g., paved yard, improved cut-site practices, improved waste combustion practices, raking debris to reduce the inert content, seasoning of material to be burned, etc.). A description and schematic drawing of the forced air burning system at the facility, including equipment types and air flow volumes, must be included.</p> <p>d. A complete list of all management options that the &lt;&lt;Permittee/Approval Holder&gt;&gt; has explored but has not implemented, and the rationale as to why each has not been incorporated at the facility including, but not limited, to paving of the log handling area, delivery of hog or chips to local mills, delivery to a regional compost facility, recovery for firewood or other products, and additional burning control equipment. If economic reasons prohibit alternatives, specific costs (stated in dollars per tonne of debris wherever possible) that would be involved in implementing such alternatives must be included.</p> <p>.Wood residue must be managed by the &lt;&lt;Permittee/Approval Holder&gt;&gt; according to practices identified in the Wood Residue Management Plan, or as otherwise approved in writing by the Director.</p> <p>Wood Residue Management Plans are non-confidential documents, and may be viewed by the general public upon request.</p>	
58	Air	Approval, Operational Certificate, Permit	StandardStandard	<p><u>Fugitive Emission Control</u></p> <p>Fugitive emissions created within the operation area must be suppressed. If the air quality becomes a concern, the Director will evaluate the sensitivity of the receiving environment, the contribution of the &lt;&lt;permittee/approval holder&gt;&gt;'s sources, plus any other pertinent information. The Director may require additional control measures on fugitive emission sources.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must suppress Fugitive Emissions at the Facility and must comply with any additional control measures on Fugitive Emission sources that the Director may require. Fugitive emissions such as dust created within the facility area must be suppressed by the &lt;&lt;Permittee/Approval Holder&gt;&gt;. If the Director becomes concerned about degraded air quality, the Director may require additional control measures on fugitive emission sources.</p>	<p><b>DEFINITION</b></p> <p><b>"Fugitive Emissions"</b> means the release of air contaminants from sources other than the authorized point of discharge that occur during normal operations at the Facility, such as leakage from works or the release of particulates such as dust, but does not include spills to the environment as defined in the Spill Reporting Regulation or the release of air contaminants as a result of the failure of any works at the Facility.</p>
59	Air	Approval, Operational Certificate,	Standard	<p><u>Stack Sampling Facilities</u></p> <p>Sampling ports must be provided with nearby electrical outlets</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide sampling ports with nearby electrical outlets and, where required, Worksafe approved access ladders and adequately sized</p>	

		Permit		and, where required, approved access ladders and adequately sized platforms, for the discharges covered by Section(s) **number(s)**.	platforms for sampling activities, for the discharges covered by Section(s) **number(s)**.	
60	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><u>Sampling Location and Techniques</u></p> <p>All sampling locations, techniques, and equipment must be acceptable to the Director. Sampling and monitoring data, including the rate of discharge, must be accompanied by process data relevant to the operation of the source of the emissions and the performance of the pollution abatement equipment involved in the testing</p>	The <<Permittee/Approval Holder>> must use sampling locations, techniques, and equipment that are acceptable to the Director.	
61a	Refuse, effluent, air	Approval, Operational Certificate, Permit	Choose an item.	<p><u>Sampling Procedures</u></p> <p>Sampling is to be carried out in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2003 Edition (Permittee)", or most recent edition, or by suitable alternative procedures as authorized by the Director.</p> <p>A copy of the above manual is available on the Ministry web page at <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html">www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html</a>.</p> <p>NOTE: this manual supersedes the "Groundwater Quality Monitoring Manual, March 1990 Edition"</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must carry out sampling in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition (Permittee)" or most recent edition, or by alternative procedures as authorized by the Director.</p> <p>A copy of the above manual is available on the Ministry web page at <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html">www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html</a>.</p>	
61b	Effluent Spray Irrigation	Approval, Operational Certificate, Permit		<p>????????????</p> <p>Spray irrigation of effluent shall be conducted in accordance with sound farming practices as per the January, 1983 Pollution Control Guidelines for Municipal Effluent Application to land.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must operate the Facility in accordance with the procedures described in the "Municipal Wastewater Regulation Reclaimed Water Guideline July 2013" manual, as amended or updated from time to time, or by alternative procedures as authorized by the Director.</p> <p>A copy of the above manual is available on the Ministry web page at <a href="http://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/municipal-wastewater-regulation">http://www2.gov.bc.ca/gov/content/environment/waste-management/sewage/municipal-wastewater-regulation</a></p>	
61c	Refuse	Approval, Operational Certificate, Permit		<p>????????</p> <p>Additional requirements for operation of the landfill may be developed by the &lt;&lt;Regional District&gt;&gt; through preparation of a Solid Waste Management Plan and By-law. Any such requirements shall be imposed on the authorized works by the Regional Waste Manager and the &lt;&lt;Regional District&gt;&gt; through the issuance of an Operational Certificate which will supersede this Permit.</p>		REMOVE – Regional District SWMP requirement under EMA
62	Effluent	Approval, Operational Certificate, Permit	Variable	<p><u>Composite Sampling</u></p> <p>A suitable sampling facility must be installed and composite samples of the effluent authorized by Section **1.X** must be obtained once each **day, week, month**. The sample must</p>	The <<Permittee/Approval Holder>> must install, within 30 days of the date of this authorization and maintain a sampling facility acceptable to the Director, and collect samples of the effluent authorized by Section **1.X** each **day, week, month** in accordance with this section. The sample must consist of **number of discrete samples** collected over a	



				<p>consist of <b>**number of discrete samples**</b> taken over a <b>**time period**</b> and mixed to form a single sample. Alternatively an approved flow proportional continuous sampler may be used. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.</p>	<p><b>**time period**</b> and mixed to form a single sample. Alternatively, the &lt;&lt;Permittee/Approval Holder&gt;&gt; may use a flow proportional continuous sampler which is acceptable to the Director. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must take due care in sampling, storing and transporting the samples to control temperature and avoid contamination, breakage, and any other factor or influence that may compromise the integrity of the samples.</p>	
63	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><u><b>Sampling Facilities</b></u></p> <p>Suitable sampling facilities must be installed and maintained. Samples must be collected at each site according to the schedule specified in Section <b>**number**</b> or Table <b>**number**</b>. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc...</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must install by &lt;insert date&gt; and maintain suitable to the Director, sampling facilities. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must collect samples at each site according to the schedule specified in Section <b>**number**</b> or Table <b>**number**</b>. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must take due care in sampling, storing and transporting the samples to control temperature and avoid contamination, breakage, and any other factor or influence that may compromise the integrity of the samples.</p>	
64	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><u><b>Analytical Procedures</b></u></p> <p>Analyses are to be carried out in accordance with procedures described in the "British Columbia Laboratory Manual (2009 Permittee Edition)", or the most recent edition, or by suitable alternative procedures as authorized by the Director. A copy of the above manual is available on the Ministry web page at <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html">www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html</a></p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must carry out analyses in accordance with procedures described in the "British Columbia Laboratory Manual (2015 Permittee Edition)", or the most recent edition or by alternative procedures as authorized by the Director. A copy of the above manual is available on the Ministry web page at <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html">www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html</a>.</p>	
65	Air	Approval, Operational Certificate, Permit	Standard	<p><u><b>Visual Monitoring</b></u></p> <p>Visual monitoring of the authorized works may be carried out by Ministry personnel as part of an ambient monitoring program for the entire mill operation. Based on these inspections and any other information available to the Director, the &lt;&lt;permittee/approval holder&gt;&gt; may be required to undertake source monitoring.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately provide access to Ministry personnel for the purpose of visually monitoring the Authorized Works as part of an ambient monitoring program for the entire mill operation. Based on these inspections and any other information available to the Director, the Director may require the &lt;&lt;Permittee/Approval Holder&gt;&gt; to undertake source monitoring in accordance with specifications of the Director.</p>	
66	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><u><b>Quality Assurance</b></u></p> <p>a. The Permittee must obtain from the analytical laboratory (ies) their precision, accuracy and blank data for each sample set submitted as well as an evaluation of the data acceptability, based on the criteria set by the laboratory.</p> <p>b. A duplicate sample must be prepared and submitted for analysis for each parameter sampled at each monitoring site and each monitoring period.</p> <p>c. The analytical laboratory (ies) must be registered in accordance with CALA (Canadian Association for Laboratory Accreditation) unless otherwise instructed by the Director.</p>	<p>a. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must obtain from the analytical laboratory (ies) their precision, accuracy and blank data for each sample set submitted by the &lt;&lt;Permittee/Approval Holder&gt;&gt; and an evaluation of the data acceptability, based on criteria set by such laboratory.</p> <p>b. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must prepare and submit for analysis by the analytical laboratory (ies) a duplicate sample for each parameter sampled at each monitoring site and each monitoring period.</p> <p>c. The &lt;&lt;permittee/approval holder&gt;&gt; must submit samples to analytical laboratory(ies) that meet the definition of a qualified laboratory under the Environmental Data Quality Assurance Regulation.</p>	

67	Effluent	Approval, Operational Certificate, Permit	Variable	<p><u>Grab Sampling</u></p> <p>A suitable sampling facility must be installed and a grab sample of the effluent authorized by Section **1.x** must be obtained once each **day, week, month**. Proper care must be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.</p>	The <<Permittee/Approval Holder>> must install, by <insert date>, and maintain a sampling facility and obtain a grab sample of the effluent authorized by Section **1.x** once each **day, week, month**. The <<Permittee/Approval Holder>> must take due care in sampling, storing and transporting the samples to control temperature and avoid contamination, breakage, and any other factor or influence that may compromise the integrity of the samples.	
68	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><u>Analysis</u></p> <p>Obtain analysis of the sample for the following:</p> <p>** Parameter 1**, **units**</p> <p>**Parameter 2**, **units**</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must collect sample (s) on a &lt;insert frequency&gt; and obtain analysis of the sample (s) for the following parameters:</p> <p>** Parameter 1**, **units**</p> <p>**Parameter 2**, **units**</p>	
69	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Flow Measurement</u></p> <p>Provide and maintain a suitable flow measuring device and record **monitoring frequency** the effluent volume discharged over **time period**.</p>	The <<Permittee/Approval Holder>> must install, by <insert date>, and maintain a suitable to the Director, flow measuring device, and record **monitoring frequency** the effluent volume discharged over **time period**. The <<Permittee/Approval Holder>> must retain the records for inspection by Ministry staff.	
70	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Posting of Outfall</u></p> <p>A sign must be erected along the alignment of the outfall above high water mark. The sign shall identify the nature of the works. The wording and size of the sign must be acceptable to the Director.</p>	The <<Permittee/Approval Holder>> must erect <insert date – by when> and maintain a sign along the alignment of the outfall above the high water mark. The sign must identify the nature of the works. The <<Permittee/Approval Holder>> must confirm whether the wording and size of the sign is acceptable to the Director prior to installing the sign.	
71	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Outfall Inspection</u></p> <p>The outfall must be inspected once every &lt;frequency&gt; by a qualified professional to ensure it is in good working condition. An inspection report must be submitted to the Director, Environmental Protection, within 30 days after the inspection date. The first report must be submitted by **date**.</p>	The <<Permittee/Approval Holder>> must cause the outfall to be inspected once every <frequency> by a Qualified Professional to ensure it is in good working condition. The <<Permittee/Approval Holder>> must submit an inspection report to the Director within 30 days after the inspection date. The first inspection report must be submitted by **date**.	
72	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Outfall Inspection</u></p> <p>A dye test must be conducted, **annually** on the outfall line, or alternatively, inspected by another method acceptable to the Director. The Director may, in writing, vary the frequency of testing or inspection.</p>	At least **annually**, the <<Permittee/Approval Holder>> must conduct a dye test on the outfall line/pipe, or inspect the [outfall line/pipe] by another method acceptable to the Director. The Director may, in writing, vary the frequency of testing or inspection.	
73	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Disinfection</u></p> <p>Although disinfection of the effluent is not required at this time, suitable provisions must be made to include disinfection facilities in the future. If disinfection is by chlorination, dechlorination facilities may also be required.</p>	Although disinfection of the effluent is not required at this time, suitable provisions must be made to include disinfection facilities in the future. If disinfection is by chlorination, dechlorination facilities may also be required.	Put this into the LOT for sewage permits
74	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Chlorination</u></p> <p>Maintain a chlorine residual (at the point of discharge or prior to dechlorination) between **number** and **number**</p>	The <<Permittee/Approval Holder>> must maintain a chlorine residual in effluent (at the point of discharge or prior to dechlorination) between **number** and **number** mg/L at all times and provide not less than one hour's contact time at average flow rates.	

				mg/L at all times and provide not less than one hour's contact time at average flow rates.		
75	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Dechlorination</u></p> <p>The effluent must be dechlorinated prior to discharge to reduce the chlorine residual below detectable limits.</p>	The <<Permittee/Approval Holder>> must dechlorinate effluent prior to discharge to reduce the chlorine residual below detectable limits.	
76	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Septic Sludge and Scum Removal</u></p> <p>Sludge and scum must be removed from the septic tank <b>**insert time frame**</b> or at other frequencies specified by the Director. The sludge disposal must be at a site approved by the Director, or as authorized by regulation under the Environmental Management Act. Records of quantities, disposal location and dates of sludge and scum removal must be kept available for inspection.</p>	The <<Permittee/Approval Holder>> must remove sludge and scum from the septic tank <b>**insert time frame**</b> or at other frequencies specified by the Director. The <<Permittee/Approval Holder>> must dispose of sludge at a site approved by the Director, or as authorized by regulation under the <i>Environmental Management Act</i> . The <<Permittee/Approval Holder>> must retain records of quantities, disposal location and dates of sludge and scum and keep such records available at the facility for inspection.	
77	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Treatment Plant Sludge Wasting and Disposal</u></p> <p>Sludge wasted from the treatment plant must be disposed of to a site and in a manner approved by the Director, or as authorized by regulation under the Environmental Management Act.</p>	The <<Permittee/Approval Holder>> must dispose of sludge wasted from the treatment plant at a site and in a manner approved by the Director, or as authorized by regulation under the <i>Environmental Management Act</i> .	
78	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Standby Facilities</u></p> <p>A standby area must be set aside equivalent to 50% of the total installed disposal field area. The standby area is to be held in reserve for future use as a disposal field and is to be maintained free of any permanent structures.</p>	The <<Permittee/Approval Holder>> must reserve an area at the site that is not less than 50% of the total installed disposal field area and maintain the area free of permanent structures for the purpose of future use as a disposal field.	
79	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Effluent Filter</u></p> <p>An effluent filter must be provided to protect the ground disposal field from excess solids which may be carried over from the sewage treatment plant. Any sludge or solids removed by the filter must be disposed at a site approved by the Director, or as authorized by regulation under the Environmental Management Act.</p>	The <<Permittee/Approval Holder>> must provide an effluent filter to protect the ground disposal field from excess solids which may be discharged from the sewage treatment plant. The <<Permittee/Approval Holder>> must dispose of any sludge or solids removed by the filter at a site approved by the Director, or as authorized by regulation under the <i>Environmental Management Act</i> .	
80	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Sewer Connection</u></p> <p>The discharge authorized by this &lt;&lt;permit/approval&gt;&gt; must be connected to a municipal sewerage system when such facilities become available, as determined by the Director.</p>	The <<Permittee/Approval Holder>> must connect the discharge authorized by this <<permit/approval>> to a municipal sewerage system when such facilities become available and on timelines determined by the Director.	
81	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Foam</u></p> <p>Should foam, attributable to the effluent, become objectionable in receiving waters, the Director may require additional treatment to remove the foam or eliminate the cause of the foam.</p>	Should foam, attributable to the effluent, become objectionable in receiving waters as determined by the Director, the Director may require the <<Permittee/Approval Holder>> to carry out additional treatment to remove the foam or eliminate the cause of the foam on a timeline specified by the Director.	

82	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Colour</u></p> <p>Should colour, attributable to the effluent, become objectionable in receiving waters, the Director may require additional treatment to remove the colour forming constituents from the effluent prior to discharge.</p>	Should colour, attributable to the effluent, become objectionable in receiving waters as determined by the Director, the Director may require the <<Permittee/Approval Holder>> to carry out additional treatment to remove the colour forming constituents from the effluent prior to discharge on a timeline specified by the Director.	
83	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Taste and Odour</u></p> <p>Should fish tainting or odours in the receiving environment, attributable to the effluent discharge, become objectionable, the Director may require additional treatment to reduce the responsible constituents.</p>	Should fish tainting or odours in the receiving environment, attributable to the effluent discharge, become objectionable as determined by the Director, the Director may require the <<Permittee/Approval Holder>> to carry out additional treatment to reduce the constituents responsible for such fish tainting or odours on a timeline specified by the Director.	
84	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Nutrients</u></p> <p>Should nutrients be added to increase the efficiency of any biological treatment system, the quantity of nutrient must be so controlled that excess nutrients are not discharged to the receiving waters. The ratio of BOD:N:P must be recorded and data kept available for inspection.</p>	If the <<Permittee/Approval Holder>> adds nutrients to any biological treatment system, the <<Permittee/Approval Holder>> must ensure that excess nutrients are not discharged to the receiving waters. The <<Permittee/Approval Holder>> must record the ratio of BOD:N:P in the discharge and retain all data records at the facility for inspection by Ministry staff.	
85	Effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Infiltration Pond</u></p> <p>The infiltration pond must be operated such that:</p> <p>(a) there is no overflow from the infiltration pond to the surrounding environment and</p> <p>(b) surface drainage is diverted away from the infiltration pond.</p> <p>The residue, removed from the infiltration pond, must be disposed of in a manner authorized by the Director, or as authorized by regulation under the Environmental Management Act.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must operate the infiltration pond such that:</p> <p>(a) there is no overflow from the infiltration pond to the surrounding environment; and</p> <p>(b) surface drainage is diverted away from the infiltration pond.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must dispose of any residue removed from the infiltration pond in a manner authorized by the Director, or as authorized by regulation under the <i>Environmental Management Act</i>.</p>	<p>Only use this condition if "infiltration pond" is listed as an auth work</p> <p><b>GLOSSARY</b></p> <p><b>"Freeboard"</b></p> <p>means the difference in elevation between the contained liquid level and the top of the berm structure at its lowest point.</p>
86	Effluent	Approval, Operational Certificate, Permit		<p><u>Facility Classification and Operator Certification</u></p> <p>The Permittee must have the authorized works classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The authorized works must be operated and maintained by persons certified within and according to the program provided by the Society. Certification must be completed to the satisfaction of the Director. In addition, the Director must</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; in a manner and on timelines specified by the Director must have the authorized works classified (and the classification must be maintained) by the Environmental Operators Certification Program Society (Society). The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause the authorized works to be operated and maintained by:</p> <p>a) persons certified within and according to the program provided by the Society to the satisfaction of the Director, or</p> <p>b) persons who are qualified in the safe and proper operation of the</p>	

				<p>be notified of the classification level of the facility and certification levels of the operators, and changes of operators and/or operator certification levels within 30 days of any change.</p> <p>Alternatively, the authorized works must be operated and maintained by persons who can demonstrate to the satisfaction of the Director, are qualified in the safe and proper operation of the facility for the protection of the environment.</p>	<p>facility for the protection of the environment, as demonstrated to the satisfaction of the Director.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must notify the Director of the classification level of the facility and certification levels of the operators, and changes of operators and/or operator certification levels within 30 days of any change.</p>	
87	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Observation Ports and Wells</u></p> <p>Each ground disposal field must include **number** groundwater observation wells, and observation ports on a minimum of **number** disposal pipe runs. The location and structural details of these facilities are subject to the satisfaction of the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause each ground disposal field to include:</p> <ul style="list-style-type: none"> <li>a) **number** groundwater observation wells, and</li> <li>b) observation ports on at least **number** disposal pipe runs, that include structural details, and are located, to the satisfaction of the Director.</li> </ul>	
88	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Groundwater Program</u></p> <p>The Permittee must maintain a groundwater monitoring program that is acceptable to the Director. The numbers, locations and design details of these facilities shall be acceptable to the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must conduct a groundwater monitoring program that is, and includes components that are located, designed, and in a quantity that are, satisfactory to the Director.</p>	
89	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Groundwater Wells</u></p> <p>The &lt;&lt;permittee/approval holder&gt;&gt; must install **number** groundwater wells prior to beginning operations. The locations and structural details of these facilities are subject to the satisfaction of the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, prior to beginning operations, install **number** groundwater wells that include structural details and are at locations that are satisfactory to the Director.</p>	
90	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Ground Disposal Field Operation</u></p> <p>Use of the disposal fields must be alternated on a monthly basis, or at other frequencies as the Director may allow.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must alternate the use of the disposal fields on a monthly basis, or at other frequencies as the Director may allow.</p>	
91	Refuse, effluent	Approval, Operational Certificate, Permit		<p><u>Posting of Security</u></p> <p>Security in the amount of \$**amount** must be posted in a manner and form acceptable to the Director. At the discretion of the Director security may be applied but not limited to, any of the following: To correct any inadequacy of the works relating to their construction, operation and maintenance;</p> <p>To correct any default in compliance with this permit or the Environmental management Act; and Remediation.</p> <p>Any moneys spent from the posted security shall be replenished within sixty (60) days or as otherwise specified by the Director.</p> <p>Security may be returned after property in the works has been transferred to a municipal authority. Granting of the request is</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide prior to commencing the discharge to the Director with and maintain financial security in the amount of \$**amount** and in a manner and form satisfactory to the Director. At the discretion of the Director, such security may be used:</p> <ul style="list-style-type: none"> <li>a) to correct any inadequacy of the works relating to their construction, operation and maintenance;</li> <li>b) to correct any default in compliance with this authorization or the <i>Environmental Management Act</i>; and</li> <li>c) for remediation,</li> </ul> <p>among other things</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must replenish any amounts drawn from the posted security within sixty (60) days of such amounts being drawn or as otherwise specified by the Director.</p> <p>The Director may, at his/her discretion, return posted security to the &lt;&lt;Permittee/Approval Holder&gt;&gt; after ownership of the works has been</p>	

				at the discretion of the Director.	transferred to a municipal authority.	
92	Refuse	Approval, Operational Certificate, Permit	Variable	<p><u>Posting of Security and Costs</u></p> <p>The Permittee must submit a cost estimate for maintenance, monitoring and closure of the landfill for the active life of the site and a minimum twenty-five year post-closure period. The cost estimate shall be prepared or reviewed by a suitably qualified, independent third party. The cost estimate is subject to Director's approval.</p> <p>An updated cost estimate, must be submitted each year with the ANNUAL REPORT proposing the security for the following calendar year. The annual cost estimate, submitted in 2.1 above, requires the approval of the Director.</p> <p>The Permittee must provide and maintain security in a form and amount specified by the Director. At the discretion of the Director security may be applied, to any of the following:</p> <p>To correct any inadequacy of the works relating to their construction, operation and maintenance;</p> <p>To correct any default in compliance with this permit or the Environmental Management Act; and Remediation.</p> <p>Any moneys spent from the posted security shall be replenished within sixty (60) days or as otherwise specified by the Director.</p> <p>The operation of the facility without valid security is not authorized.</p> <p>The Director may extend the post-closure period where the landfill will produce contaminants at levels that could have an unacceptable impact if they were to be discharged to the environment surrounding the landfill.</p> <p>The Permittee may request the return of security where the title of the works has been transferred to a municipal authority or where the posted amount exceeds the estimated closure and post-closure costs, including remediation. Granting the request is at the discretion of the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit to the Director prior to discharging under this authorization a cost estimate for maintenance, monitoring and closure of the landfill for the active life of the site and a minimum twenty-five year post-closure period that:</p> <ul style="list-style-type: none"> <li>a) has been prepared or reviewed by a qualified professional ; and</li> <li>b) is satisfactory to the Director.</li> </ul> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit to the Director an updated cost estimate each year by December 31<sup>st</sup> that:</p> <ul style="list-style-type: none"> <li>a) proposes the financial security to be posted by the &lt;&lt;Permittee/Approval Holder&gt;&gt; for the following calendar year; and</li> <li>b) is satisfactory to the Director.</li> </ul> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide the Director with and maintain financial security in a form and amount specified by the Director. At the discretion of the Director, such security may be used:</p> <ul style="list-style-type: none"> <li>a) to correct any inadequacy of the works relating to their construction, operation and maintenance;</li> <li>b) to correct any default in compliance with this permit or the <i>Environmental Management Act</i>; and</li> <li>c) for remediation,</li> </ul> <p>among other things.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must replenish any amounts drawn from the posted security within sixty (60) days or as otherwise specified by the Director.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may not operate the facility unless it is in compliance with this condition.</p> <p>The Director may extend the post-closure period if the Director determines that the landfill will produce contaminants (leachate, air emissions, etc.) at levels that could have an unacceptable impact on the environment if the contaminants were to be discharged to the environment surrounding the landfill.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may request the return of security where ownership of the works has been transferred to a municipal authority or where the amount of posted security exceeds the estimated closure and post-closure costs, including remediation, as set out in the cost estimate that was most recently approved by the Director. The Director may, after considering such request and at his/her discretion, return any or all of the posted security to the &lt;&lt;Permittee/Approval Holder&gt;&gt;.</p>	

93	Refuse, effluent	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Operations and Maintenance Fund</u></b></p> <p>The Permittee must establish and maintain an Operations and Maintenance fund in the amount of \$**amount**. At the discretion of the Director funds may be applied, but not limited to, any of the following:</p> <p>Maintenance of the sewage collection, treatment and disposal systems, including the correction of any inadequacy of the works relating to their construction, operation and maintenance;</p> <p>To correct any default in compliance with this permit or the Environmental Management Act; and Remediation.</p> <p>This fund must be established by **date**. Any moneys spent from the fund must be replenished within sixty (60) days or as otherwise specified by the Director.</p> <p>A report must be prepared for each calendar year and must be submitted to the Director by **date** of the following year. The Director may require that the report be certified by independent qualified professional.</p> <p>The report must contain the following:</p> <ul style="list-style-type: none"> <li>- the dates when money was spent from the fund,</li> <li>- the amount spent</li> <li>- for what purpose the money was spent</li> <li>- when the money was replenished and</li> <li>- the account balance at years end.</li> </ul> <p>Based on the report, the Director may establish the projected amount for the fund for the coming year. There must be a minimum of \$**amount** in any year.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must establish and maintain an Operations and Maintenance fund in the amount of \$**amount**. At the discretion of the Director, such funds may be used:</p> <ul style="list-style-type: none"> <li>a) to maintain the sewage collection, treatment and disposal systems, including the correction of any inadequacy of the works relating to their construction, operation and maintenance;</li> <li>b) to correct any default in compliance with this permit or the Environmental Management Act; and</li> <li>c) for remediation,</li> </ul> <p>among other things.</p> <p>This fund must be established by **date**. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must replenish any amounts drawn from the fund within sixty (60) days of such amounts being drawn or as otherwise specified by the Director.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must prepare a report in respect of each calendar year and submit such report to the Director by **date** of the following year. Such report must describe:</p> <ul style="list-style-type: none"> <li>a) the dates when funds were drawn from the fund,</li> <li>b) the amount drawn and the amount spent;</li> <li>c) the purpose the funds were spent;</li> <li>d) the date the funds were replenished; and</li> <li>e) the account balance for the fund at years' end.</li> </ul> <p>The Director may require that the report be certified by independent qualified professional.</p> <p>Based on the report, the Director may establish the projected amount for the fund for the coming year. There must be a minimum of \$**amount** in any year and requires the &lt;permittee/approval holder&gt; to replenish the fund within 60 days of drawing it down.</p>	
----	------------------	---	-----------------	---	---	--

	Discharge type	Authorization type	Category	Old condition	Revised condition	Compliance point or determination
94	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Strata Contacts</u></p> <p>The Director must be notified of the names, addresses, telephone numbers, and positions of strata council members, and a strata manager or strata management company, if applicable, within 30 days of any changes.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must notify the Director of the names, addresses, telephone numbers, and positions of strata council members of the &lt;&lt;Permittee/Approval Holder&gt;&gt;, and any applicable strata manager or strata management, within 30 days of any changes to the foregoing.</p>	
95	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Closure Fund</u></p> <p>On or before &lt;date&gt;, the Certificate/Permit Holder must establish and maintain a Closure Fund in a form acceptable to the Director. The ultimate amount of the Closure Fund must meet or exceed the estimated closure and post-closure costs as outlined in the Closure Plan required by Section **number**, plus a contingency for any remediation which may be required.</p> <p>The ultimate amount of the fund is subject to the Director's approval. The Director may require that the estimated closure costs, post-closure costs and contingency costs for remediation be certified by independent qualified professional.</p> <p>Cost estimates for closure and post-closure are to be reassessed at least every 5 years and the amount of the Closure Fund adjusted accordingly. The Director has the discretion to require reassessment on a more frequent basis and to require that the reassessment be certified by an independent qualified professional. The ultimate amount of the fund is always subject to the Director's approval.</p>	<p>On or before &lt;date&gt;, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must establish and maintain a Closure Fund in a form and amount satisfactory to the Director. The amount of the Closure Fund must meet or exceed the estimated closure and post-closure costs as outlined in the Closure Plan required by Section **number**, which also includes a contingency for any remediation which may be required.</p> <p>The Director may require ,at a timeline specified by the Director, the &lt;&lt;Permittee/Approval Holder&gt;&gt; to cause an independent qualified professional to certify the estimated closure costs, post-closure costs and contingency costs for remediation .</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must reassess its cost estimates for closure and post-closure at least every 5 years during the term of this authorization and adjust the amount of the Closure Fund accordingly. The Director may, in her or his sole discretion, require the &lt;&lt;Permittee/Approval Holder&gt;&gt; to reassess such costs estimates on a more frequent basis and require that the &lt;&lt;Permittee/Approval Holder&gt;&gt; cause such reassessment be certified by an independent qualified professional. Notwithstanding the foregoing, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause the Closure Fund to be an amount that is satisfactory to the Director.</p>	
96	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><u>Reporting</u></p> <p>Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Director, for the previous **time period**. The first report is to be submitted by **date**. All reports must be submitted within 30 days of the end of the **time period**.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must collect and maintain data of analyses and flow measurements required under this authorization for inspection when requested by Ministry staff and submit the data for the previous **time period** to the Director in a form satisfactory to the Director. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must make its first data submission in respect of the previous **time period** by **date**. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must make data submissions in respect of each subsequent **time period** within 30 days of the end of the applicable **time period**.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit all data required to be submitted under this section by email to the</p>	



					<p>Ministry's Routine Environmental Reporting Submission Mailbox (RERSM) at <a href="mailto:EnvironmentalAuthorizationsReporting@gov.bc.ca">EnvironmentalAuthorizationsReporting@gov.bc.ca</a> or as otherwise instructed by the Director. For guidelines on how to properly name the files and email subject lines or for more information visit the Ministry website:</p> <p><a href="http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox">http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox</a></p>	
97	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><b><u>Annual Report</u></b></p> <p>Maintain all data of analysis and flow measurements, new works information, and the quality assurance/ quality control data. Submit data and information suitably tabulated, graphically represented and interpreted to the Director annually. The report for the preceding calendar year must be submitted on or before **date**.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must collect and maintain all data of analysis and flow measurements and the analytical quality assurance/ quality control data. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, on or before each **date** that occurs during the term of this authorization, submit such data and information for the preceding calendar year to the Director, <u>by email at</u> <a href="mailto:EnvAuthorizationsReporting@gov.bc.ca">EnvAuthorizationsReporting@gov.bc.ca</a> or as otherwise instructed by the Director, in a form that is tabulated, graphically represented and interpreted to the satisfaction of the Director.</p>	
98	Refuse	Approval, Operational Certificate, Permit	Variable	<p><b><u>Annual Report Detail</u></b></p> <p>An Annual Report must be prepared and submitted to the Director. The report must include, but is not limited to, the following items:</p> <ol style="list-style-type: none"> <li>volume (quantity) of refuse discharged in the reporting period;</li> <li>Volume (quantity) of each major refuse component discharged;</li> <li>Remaining landfill capacity;</li> <li>Volume (quantity) of refuse (wood waste) burned;</li> <li>Burning dates and duration;</li> <li>Summary of monitoring data obtained during the reporting period and interpretation;</li> <li>Any changes in the monitoring program, or landfill operation from the preceding period;</li> <li>Operational plan for the following twelve months; and</li> <li>Review of the closure plan.</li> </ol> <p>Based on the results of the monitoring program and/or other information obtained in connection with this discharge, the &lt;&lt;permittee/approval holder&gt;&gt; may be required to provide additional information. Annual Reports are due on **date** for the period January to December of the previous year. The first report must be submitted by **date**.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, by each **date** that occurs during the term of this authorization, prepare and submit to the Director <u>by email at</u> <a href="mailto:EnvAuthorizationsReporting@gov.bc.ca">EnvAuthorizationsReporting@gov.bc.ca</a> or as otherwise instructed by the Director an Annual Report that is satisfactory to the Director and includes, but is not limited to, the following:</p> <ol style="list-style-type: none"> <li><u>V</u>olume (quantity) of refuse discharged in the reporting period;</li> <li>Volume (quantity) of each major refuse component discharged;</li> <li>Remaining landfill capacity at the site;</li> <li>Volume (quantity) of refuse (wood waste) burned;</li> <li>Burning dates and duration of each burn;</li> <li>Summary of monitoring data obtained during the reporting period and interpretation of such data;</li> <li>Any changes in the monitoring program, or landfill operation from the preceding period;</li> <li>Operational plan for the following twelve months; and</li> <li>a status review of the closure plan identifying progress or changes to the closure plan,</li> </ol> <p>with respect to the preceding calendar year.</p> <p>Based on the results of the monitoring program and/or other information obtained in connection with this discharge, the Director may require &lt;&lt;Permittee/Approval Holder&gt;&gt; to provide additional information in a form and on timelines specified by the Director. Notwithstanding the foregoing, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must prepare and submit the</p>	

					first such Annual Report to the Director by <b>**date**</b> .	
99	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><b><u>Annual Report and Evaluation</u></b></p> <p>a. An Annual Report must be submitted to the Regional Environmental Protection office on or before <b>**date**</b> each year. The Annual Report must review and interpret the monitoring data for the preceding calendar year, and provide a graphical analysis with suitable interpretation of any trends in monitoring results by a qualified professional. An evaluation of the onsite laboratory analysis, quality and precision must be reported based on the results of the quality assurance program required herein.</p> <p>b. The Annual Report must include an evaluation of the performance of the treatment works and identify any necessary changes. The Annual Report must include an implementation schedule for any alterations to the treatment and disposal works.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, by each <b>**date**</b> that occurs during the term of this authorization, submit to the Director an Annual Report that is satisfactory to the Director and includes, but is not limited to:</p> <p>a. a review and interpretation of the monitoring data for the preceding calendar year,</p> <p>b. a graphical analysis with interpretation of any trends in monitoring results prepared by a qualified professional,</p> <p>c. an evaluation of the onsite laboratory analysis, and quality and precision based on the results of the quality assurance program required herein,</p> <p>d. an evaluation of the performance of the treatment works and identify any changes,</p> <p>e. an implementation schedule for any alterations to the treatment and disposal works which may impact the discharge under this authorization.</p>	
100	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Non-compliance Reporting Notification</u></b></p> <p>The Permittee must immediately notify by facsimile <b>**Fax Number**</b> or email the Director or designate of any non-compliance with the requirements of this Permit and take appropriate remedial action. Written confirmation of all non-compliance events, including available test results is required by facsimile within 24 hours of the original notification unless otherwise directed by the Director, Environmental Protection.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately notify the Director or designate by email at <a href="mailto:EnvironmentalCompliance@gov.bc.ca">EnvironmentalCompliance@gov.bc.ca</a>, or as otherwise instructed by the Director of any non-compliance with the requirements of this authorization by the &lt;&lt;Permittee/Approval Holder&gt;&gt; and take remedial action to remedy any effects of such non-compliance.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide the Director with written confirmation of all such non-compliance events, including available test results within 24 hours of the original notification by email at <a href="mailto:EnvironmentalCompliance@gov.bc.ca">EnvironmentalCompliance@gov.bc.ca</a>, or as otherwise instructed by the Director.</p> <p><del>unless otherwise directed by the Director.</del></p>	
101	Refuse, effluent, air	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Non-compliance Reporting</u></b></p> <p>For any noncompliance with the requirements of this permit, the Permittee must submit to the Director, Environmental Protection, and a written report within 30 days of the noncompliance occurrence. The report must include, but is not necessarily be limited to, the following:</p> <p>a. all relevant test results related to the noncompliance.</p> <p>b. an explanation of the most probable cause(s) of the noncompliance, and</p> <p>c. Remedial action planned and/or taken to prevent similar noncompliance(s) in the future.</p>	<p>If the &lt;&lt;Permittee/Approval Holder&gt;&gt; fails to comply with any of the requirements of this authorization, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must, within 30 days of such non-compliance, submit to the Director a written report that is satisfactory to the Director and includes, but is not necessarily limited to, the following:</p> <p>a. all relevant test results obtained by the &lt;&lt;Permittee/Approval Holder&gt;&gt; related to the noncompliance,</p> <p>b. an explanation of the most probable cause(s) of the noncompliance, and</p> <p>c. a description of remedial action planned and/or taken by the &lt;&lt;Permittee/Approval Holder&gt;&gt; to prevent similar noncompliance(s) in the future.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit all non-</p>	

					<p>compliance reporting required to be submitted under this section by email to the Ministry's Compliance Reporting Submission Mailbox (CRSM) at <a href="mailto:EnvironmentalCompliance@gov.bc.ca">EnvironmentalCompliance@gov.bc.ca</a> or as otherwise instructed by the Director. For guidelines on how to report a non-compliance or for more information visit the Ministry website:</p> <p><a href="http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox">http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox</a></p>	
102	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><b><u>Non-compliance Reporting and Exceedances</u></b></p> <p>Each data submission must include a statement outlining the number of exceedances of permitted levels that occurred during the reporting period. The dates of the exceedances must be clearly identified in the data submission and an explanation as to the cause of the exceedances and a description of the measures taken to rectify the situation must be provided. Should no exceedances have occurred over the reporting period, a statement to that effect must be included.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause each data submission required by this authorization to include a statement outlining the number of exceedances of permitted discharges that occurred during the reporting period, the dates of each such exceedance, an explanation as to the cause of the exceedances, and a description of the measures taken by the &lt;&lt;Permittee/Approval Holder&gt;&gt; to rectify the cause of each such exceedance. If no exceedances occurred over the reporting period, the required statement may instead indicate that no exceedance of permitted discharges occurred during the reporting period.</p>	
103	Refuse, effluent, air	Approval, Operational Certificate, Permit	Variable	<p><b><u>Noncompliance reporting and Follow up</u></b></p> <p>Conduct sampling and analysis of discharges which may cause non-compliance with the rate or characteristics of the discharge as specified in Section **number** of this &lt;&lt;permit/approval&gt;&gt; and provide the results to the Director.</p> <p>Within 30 days of the noncompliant event, provide a written report including sampling results, specific permit non-compliance, corrections to the operational system, root cause of the event and decisions for corrective and preventive action.</p>		
104	Effluent	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Noncompliance Reporting of Toxicity</u></b></p> <p>Immediately notify the Director of any toxicity failures.</p>	<p>The &lt;permittee/approval holder&gt; must immediately notify the Director of any toxicity failures.</p>	
105	Air	Approval, Operational Certificate, Permit	Variable	<p><b><u>Sampling under "Normal" Conditions for Power Boilers</u></b></p> <p>Sampling is to be done under "normal" operating conditions. The operating conditions of the power boiler(s) must be reported in terms of steam load (kg/h) and hogfuel content fired (expressed as the ratio of steam produced by hogfuel to the total steam) for both the sampling period and for the</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must sample &lt;&lt;at what frequency&gt;&gt; the power boiler under "normal conditions" and provide the Director with a report that is satisfactory to the Director and includes, but is not limited to steam load (kg/h) and hogfuel content fired (expressed as the ratio of steam produced by hogfuel to the total steam), for both the sampling period and for the ninety day period prior to the sampling</p>	

				ninety day period prior to the sampling event.	event. The report must be submitted to the Director within 30 days of the sample collection.	
106	Air	Approval, Operational Certificate, Permit	Variable	<p><u>Sampling under "Normal" Conditions for Boilers</u></p> <p>Sampling must occur under "normal" conditions. "Normal" operating conditions means those operating conditions that are as close as reasonably practical to the 90th percentile operating conditions for the 100 days prior to the date of sampling. The Permittee must report the operating conditions of the boiler in terms of steam load (kg/hour) and hog fuel content fired (expressed as the ratio of steam produced by hog fuel to total steam) for both the sampling period and the 100 day period prior to the sampling event.</p>	The <<Permittee/Approval Holder>> must sample the power boiler under "normal conditions" and provide the Director with a report that is satisfactory to the Director and includes, but is not limited to the steam load (kg/hour) and hog fuel content fired (expressed as the ratio of steam produced by hog fuel to total steam) for both the sampling period and the 100 day period prior to the sampling event For the purpose of this condition, "normal conditions" means those operating conditions that are as close as reasonably practical to the 90th percentile operating conditions for the 100 days prior to the date of sampling. . The report must be submitted to the Director within 30 days of the sample collection.	
107	Air	Approval, Operational Certificate, Permit	Choose an item.	<p><u>Plant Operating Conditions</u></p> <p>For the purpose of validating the sampling and monitoring data, the "specified operating conditions" of the plant are listed below. These conditions should be created when sampling is done unless "actual operating conditions" can be determined. Sampling may be done under "actual operating conditions" when, in the opinion of the Director, the &lt;&lt;permittee/approval holder&gt;&gt; is able to document that these conditions represent an operational level equal to or greater than the 90th percentile for the ninety (90) days prior to the date the sample is to be taken.</p> <p>For determining "actual operating conditions", the following parameters are to be considered:</p> <p>(a) Total mill production of unbleached kraft pulp in terms of ADUt/d;</p> <p>(b) Recovery boiler black liquor solids burnt in terms of kg/ADUt;</p> <p>(c) Power boiler total and wood waste derived steam production in terms of kg/h.</p> <p>Specified Operating Conditions of the Mill's Main Areas</p> <p>Production rating    unbleached kraft    **number** ADUt/d</p> <p>Recovery boiler    black liquor solids burnt    **number** kg/ADUt</p> <p>Wood burning    steam production    **number** kg/h</p> <p>power boiler    steam characteristics    **number**kPa,</p> <p>temperature**number** degrees C</p> <p>wood waste derived    **number**minimum</p> <p>steam load</p> <p>salt content in    **number** (dry basis)</p>	<p>Sampling may be done under "actual operating conditions" when, in the opinion of the Director, the &lt;&lt;Permittee/Approval Holder&gt;&gt; is able to document that these conditions represent an operational level equal to or greater than the 90th percentile for the ninety (90) days prior to the date the sample is to be taken.</p> <p>For determining "actual operating conditions", the following parameters are to be considered:</p> <p>(a) Total mill production of unbleached kraft pulp in terms of ADUt/d;</p> <p>(b) Recovery boiler black liquor solids burnt in terms of kg/ADUt;</p> <p>(c) Power boiler total and wood waste derived steam production in terms of kg/h.</p> <p>Specified Operating Conditions of the Mill's Main Areas</p> <p>Production rating    unbleached kraft    **number** ADUt/d</p> <p>Recovery boiler    black liquor solids burnt    **number** kg/ADUt</p> <p>Wood burning    steam production    **number** kg/h</p> <p>power boiler    steam characteristics    **number**kPa,</p> <p>temperature**number** degrees C</p> <p>wood waste derived    **number**minimum</p> <p>steam load</p> <p>salt content in    **number** (dry basis)</p> <p>hog fuel burned</p>	Move highlighted part of condition to LOT – it is not enforceable

				<p>hog fuel burned</p> <p>Lime kiln 100% on lime mud at normal production rate.</p>		
108	Air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Wood Burning Power Boiler Emissions - Salt Content</u></b></p> <p>In view of the significant amount of sea water salt present in the wood waste burned in power boiler(s), an allowance has been made for uncollected salt particles in the flue gas as part of the total particulate matter load.</p>	Due to the amount of sea water salt present in the wood waste that will be burned by the <<Permittee/Approval Holder>> in power boiler(s), the <<Permittee/Approval Holder>> may permit uncollected salt particles in the flue gas as part of the total particulate matter load.	
109	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<p><b><u>Emergency Response Plan</u></b></p> <p>The Permittee must prepare and maintain an Emergency Response Plan that describes the procedures to be taken to prevent or mitigate any deposit of deleterious substance out of the normal course of events. The Emergency Response Plan must be immediately implemented if there is a deposit, or any risk of a deposit, of a deleterious substance out of the normal course of events. In addition, an up-dated emergency response plan, including a report on any emergency responses, taken in the previous year, must be kept available, on site for inspection. The Permittee must also prepare, update annually and keep available for inspection, a remedial plan describing procedures to be taken by the Permittee to eliminate all unauthorized deposits of deleterious substances if the effluent fails an acute lethality test using rainbow trout.</p>	The <<Permittee/Approval Holder>> must prepare within 30 days of receiving this authorization ,maintain and update annually an Emergency Response Plan that describes the procedures that have or will be taken by the <<Permittee/Approval Holder>> to prevent or mitigate any deposit to the receiving environment by the facility of any deleterious substance to the environment . The <<Permittee/Approval Holder>> must implement the Emergency Response Plan immediately if there is a deposit, or any risk of a deposit, of a deleterious substance. In addition, an up-dated Emergency Response Plan, including a report on any emergency responses taken by the <<Permittee/Approval Holder>> in the previous year, must be kept available on site for inspection by Ministry staff. The <<Permittee/Approval Holder>> must also prepare, update annually and keep available for inspection by Ministry staff, a remedial plan describing procedures to be taken by the <<Permittee/Approval Holder>> to eliminate all unauthorized deposits of deleterious substances into the environment.	
110	Effluent	Approval, Operational Certificate, Permit	Standard	<p><b><u>Additional Toxicity Monitoring</u></b></p> <p>For the discharges described in Section **number**, rainbow trout toxicity testing must be increased from once per month to once per week if a sample of effluent fails the rainbow trout toxicity test. For the purpose of this section, a sample is considered to have failed if more than 50% of the test fish die in a 100% effluent solution. Samples must continue to be collected and tested on one day each week until they pass three consecutive tests, at which time testing can revert to once per month.</p> <p>Daphnia magna toxicity testing must be conducted weekly as described above. However, if a sample of effluent fails the Daphnia magna toxicity test, a sample of effluent must be collected without delay and tested for 96HRLC50 using rainbow trout in accordance with accepted procedures.</p> <p>For 96HRLC50 and 96HRLC20 tests, the percent of fish survival after 96 hours in the undiluted sample must also be recorded. For 48HRLC50 tests, the percent of Daphnia magna survival</p>	<p>For the discharges described in Section **number**, rainbow trout toxicity testing must be increased from once per month to once per week if a sample of effluent fails the rainbow trout toxicity test. For the purpose of this section, a sample is considered to have failed if more than 50% of the test fish die in a 100% effluent solution. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must continue to collect and test samples of effluent on one day each week until the effluent samples pass three consecutive tests, at which time testing can revert to once per month.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must conduct Daphnia magna toxicity testing must be conducted weekly. For the purpose of this section, a sample is considered to have failed if more than 50% of the test Daphnia magna die in a 100% effluent solution However, if a sample of effluent fails the Daphnia magna toxicity test, a sample of effluent must be collected without delay and tested for 96HRLC50 using rainbow trout in accordance with accepted procedures.</p> <p>For 96HRLC50 and 96HRLC20 tests, the percent of fish survival</p>	

				after 48 hours in the undiluted sample must also be recorded.	after 96 hours in the undiluted effluent sample must also be recorded. For 48HRLC50 tests, the percent of Daphnia magna survival after 48 hours in the undiluted effluent sample must also be recorded.	
111	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Use of Qualified Professional(s)</u></p> <p>All facilities and information, including works, plans, assessments, investigations, surveys, programs and reports related to the design must be certified by qualified professionals. As-built drawings must be sealed by a qualified professional.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause a qualified professional to (1) certify all facilities and information, including works, plans, assessments, investigations, surveys, programs and reports related to the design must be certified by qualified professionals, and (2) seal all as-built drawings.</p>	<p><b>GLOSSARY TERM</b></p> <p><b>“Qualified Professional”</b> means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who</p> <p>i. is registered with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and</p> <p>ii. through suitable education, experience, accreditation and/or knowledge, may be reasonably relied on to provide advice within their area of expertise.</p> <p>All documents submitted to the Director by a Qualified Professional must be signed by the author(s).</p>
112	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><u>Design and Operating Plan</u></p> <p>A Design and Operating Plan prepared by a qualified professional which addresses, but is not limited to, the design, operation, acceptable materials and/or discharges, leachate management, landfill gas management, monitoring, reporting, closure and post-closure care, security, liability and</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause a qualified professional to prepare a Design and Operating Plan which addresses, but is not limited to, the design, operation, acceptable materials and/or discharges, leachate management, landfill gas management, monitoring, reporting, closure and post-closure care, security, liability and performance requirements for the facility authorized in</p>	

				performance requirements for the facility authorized in Section <b>**number**</b> , must be submitted and receive the written approval of the Director prior to commencing discharge. The facility must be operated in accordance with the approved design and Operating Plan, and any requirements which the Director may attach to the Operating Plan as a condition of approval.	Section <b>**number**</b> . The <<Permittee/Approval Holder>> must not commence discharge under this authorization until the Director has received and provided written approval of the Design and Operating Plan. The <<Permittee/Approval Holder>> must operate the facility in accordance with the approved Design and Operating Plan, and any requirements which the Director may attach to the Design and Operating Plan as a condition of approval.	
113	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Plans</u></b>  Plans and specifications of the works must be submitted to the Director and the Director's approval obtained before construction commences. The works must be constructed in accordance with such plans.	The <<Permittee/Approval Holder>> must not commence construction until the <<Permittee/Approval Holder>> has submitted, and received the approval of the Director for, plans and specifications of the works. The <<Permittee/Approval Holder>> must only construct such works in accordance with such approved plans.	
114	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<b><u>Landfill Construction</u></b>  Inspections must be carried out by a qualified professional during construction of the landfill to ensure construction methods and materials meet the facility design. Drawings, certified correct and sealed by the qualified professional must be submitted within <b>**30 days / 60 days**</b> upon completion of construction.	The <<Permittee/Approval Holder>> must cause a qualified professional to carry out inspections during construction of the landfill to ensure that construction methods and materials are consistent with the facility design. The <<Permittee/Approval Holder>> must submit to the Director drawings that are certified correct and sealed by the qualified professional within <b>**30 days / 60 days**</b> upon completion of construction.	
115	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Additional Facilities or Works</u></b>  The Director may require investigations, surveys, and the construction of additional facilities or works. The Director may also amend any information requirements of this Operational Certificate.	The Director may require the <<Permittee/Approval Holder>> to conduct investigations, surveys, and the construction of additional facilities or works. The Director may also amend any information requirement set out in this authorization.	
116	Refuse	Approval, Operational Certificate, Permit	Variable	<b><u>Engineered Footprint</u></b>  The landfill design must include preparation of an engineered footprint delineating the maximum extent of solid waste disposal allowable at the facility horizontally (in plan view). The engineered footprint must be clearly shown on a scaled plan of the site and the plan must be made available in an electronic format as a computer aided design (CAD) drawing (see section <b>**number**</b> ).	The <<Permittee/Approval Holder>> must cause the landfill design to include preparation of an engineered footprint delineating the maximum extent of solid waste disposal allowable at the facility horizontally (in plan view). The engineered footprint must be clearly shown on a scaled plan of the site and the plan must be made available in an electronic format as a computer aided design (CAD) drawing (see section <b>**number**</b> ). The landfill design must be retained by the <permittee/approval holder> and made available to Ministry staff for inspection.	
117	Refuse	Approval, Operational Certificate, Permit	Variable	<b><u>Engineered Excavation and Final Grade Contours</u></b>  The landfill design must include preparation of engineered excavation grade (if below grade landfilling is to occur) and final grade contours delineating the maximum extent of solid waste disposal allowable at the facility vertically (in cross-sectional view). The engineered excavation and final grade contours must be clearly shown on scaled drawings (accompanied with typical cross sections to aid in depicting the landfill profile) and the drawings must be made available in an electronic format as computer aided design (CAD) drawings (see Section <b>**number**</b> ).	The <<Permittee/Approval Holder>> must cause the landfill design to include preparation of engineered excavation grade (if below grade landfilling is to occur) and final grade contours delineating the maximum extent of solid waste disposal allowable at the facility vertically (in cross-sectional view). The engineered excavation and final grade contours must be clearly shown on scaled drawings (accompanied with typical cross sections to aid in depicting the landfill profile) and the drawings must be made available in an electronic format as computer aided design (CAD) drawings (see Section <b>**number**</b> ). The landfill design must be retained by the <permittee/approval holder> and made available to Ministry staff for inspection.	

118	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Scaled Drawings</u></b></p> <p>In addition to the scaled site plan with legal survey, engineered footprint, and final design contours that have already been submitted, additional scaled drawings showing excavation contours (if relevant) and typical cross sectional views of the site must also be submitted to the Director, if requested, in hardcopy and in electronic format (in a standard CAD drawing file format).</p>	In addition to the scaled site plan with legal survey, engineered footprint, and final design contours that have already been submitted to the Director, the <<Permittee/Approval Holder>> must, if requested by the Director, prepare and submit to the director additional scaled drawings showing excavation contours (if relevant) and typical cross sectional views of the site in hardcopy and in electronic format (in a standard CAD drawing file format).	
119	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Gas Venting or Recovery and Management Systems</u></b></p> <p>If the emission of non-methane organic compounds (NMOCs) exceeds 150 tonnes/year, the installation and operation of a landfill gas recovery system is required.</p>	If the emission of non-methane organic compounds (NMOCs) from the facility exceeds 150 tonnes/year, the <<Permittee/Approval Holder>> must install and operate a landfill gas recovery system that is approved by the Director.	
120	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Lower Explosive Limit</u></b></p> <p>The landfill must be operated such that combustible gas concentrations do not exceed the lower explosive limit in soils at the property boundary or 25% of the lower explosive limit in any on-site or off-site structure or facility, including any services (water, sewer, electrical, etc.). This provision does not apply to leachate or landfill gas works where appropriate signage and maintenance controls have been established to protect health and safety. Such provisions must be specified in an approved Design and Operating Plan.</p>	The <<Permittee/Approval Holder>> must operate the landfill such that combustible gas concentrations do not exceed the lower explosive limit in soils at the property boundary or 25% of the lower explosive limit in any on-site or off-site structure or facility, including any services (water, sewer, electrical, etc.). This provision does not apply to leachate or landfill gas works where appropriate signage and maintenance controls have been established to protect health and safety. Such provisions must be specified in an approved Design and Operating Plan.	
121	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Landfill Gas Assessment</u></b></p> <p>a. When 100,000 tonnes of waste have been discharged at the landfill, an assessment of the potential for landfill gas generation must be submitted to the Director.</p> <p>b. The landfill gas assessment must address, but is not limited to, subsections 4.2 and 6.4 of the Landfill Criteria for Municipal Solid Waste and section 6 of the Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills.</p> <p>c. The potential for landfill gas generation is to be re-assessed at least once every 5 years after the initial assessment.</p>	<p>a. When 100,000 tonnes of waste have been discharged at the landfill, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must prepare and submit to the Director an assessment of the potential for landfill gas generation that is satisfactory to the Director. This assessment must be submitted to the Director within 60 days of reaching 100,000 tonnes of waste discharged.</p> <p>b. The landfill gas assessment must address, but is not limited to, subsections 4.2 and 6.4 of the Landfill Criteria for Municipal Solid Waste and section 6 of the Guidelines for Environmental Monitoring at Municipal Solid Waste Landfills.</p> <p>c. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must prepare and submit to the Director a reassessment of the potential for landfill gas generation that is satisfactory to the Director at least once every 5 years after the initial assessment has been received by the Director.</p>	
122	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><b><u>Groundwater Monitoring</u></b></p> <p>A monitoring program must be developed by a qualified professional and identify potential environmental impacts. The Permittee must maintain a ground water monitoring program which is acceptable to the Director. The Permittee must install and maintain ground water monitoring wells. The numbers, locations and design details of these facilities must be acceptable to the Director.</p>	The <<Permittee/Approval Holder>> must cause a qualified professional to develop a monitoring program and identify potential environmental impacts of the discharge to the receiving environment. The <<Permittee/Approval Holder>> must conduct a ground water monitoring program that is satisfactory to the Director. The <<Permittee/Approval Holder>> must install and maintain ground water monitoring wells, with the numbers, locations and design and installation details that are satisfactory to the Director.	



123	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Groundwater Impacts</u></p> <p>Groundwater at the property boundary (or as otherwise specified by the Director) must not be impacted by leachate beyond levels specified in a separate letter from the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must not impact groundwater at the property boundary (or as otherwise specified by the Director) by leachate beyond levels specified by the Director.</p>	
124	Refuse, effluent	Approval, Operational Certificate, Permit	Standard	<p><u>Groundwater Model</u></p> <p>The Operational Certificate Holder must have a qualified professional develop a groundwater model of the landfill site and immediate downstream receiving environment using all available, relevant groundwater and surface water monitoring, stream flow, and precipitation data. Development of the groundwater model must include a water balance assessment for the drainage area in which the landfill site is situated. The groundwater model must define, where possible, the groundwater regime (flow directions, flow rates, groundwater divide, any evidence of a leachate plume, extent of contaminant plume, etc.). The results of the modeling exercise must be summarized in a report and submitted to the Director on or before **date**.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause a qualified professional to develop a groundwater model of the landfill site and immediate downstream receiving environment using all available, relevant groundwater and surface water monitoring, stream flow, and precipitation data. The groundwater model must:</p> <ol style="list-style-type: none"> <li>include a water balance assessment for the drainage area in which the landfill site is situated;</li> <li>define, making all reasonable possible efforts, the groundwater regime (flow directions, flow rates, groundwater divide, any evidence of a leachate plume, extent of contaminant plume, etc.).</li> </ol> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause the qualified professional to summarize the results of the modeling exercise in a report that is satisfactory to the Director and submit such report to the Director on or before **date**.</p>	
125	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Electric Fencing</u></p> <p>Areas where putrescible materials are stored or discharged including the entrance facilities and the landfill must be surrounded by an electric fence.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause areas where putrescible materials are or will be stored or discharged (including the entrance facilities and the landfill) to be surrounded by an electric fence.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must design, construct and maintain such electric fencing such that bears are prevented from penetrating the fence throughout the operation of the facility. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must advise the Director of any modifications made to the fence.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that such electric fence is fully operational during the period of **April 15 or alternative date** to **November 15 or alternative date** inclusive each year. If snow is present during this period, any electrified strands above snow line must be isolated from the remainder of the system and energised. The Director may vary the operating period with prior written authorisation.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must operate the electric fence with a minimum voltage of 6,000 volts. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must inspect the entire perimeter of the electric fence each day the landfill is open during the operating period and measure the voltage of the fencing at several points along the fence and record the results of the voltage testing in a logbook. If any measurements show a voltage of less than 6,000 volts, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately investigate the cause of the low voltage. The &lt;&lt;Permittee/Approval</p>	Electric fence con

					<p>Holder&gt;&gt; must immediately correct any issues that affect operation of the fence in accordance with the requirements of this authorization.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that electric fence strands are tightened to a minimum of 125 lbs. tension at 20 degrees Celsius. The required tension is to be corrected for temperature by use of the following formula for 12 1/2 gauge high tensile steel wire:  Tension = 125-2.5(Temperature - 20)  where: Tension is in pounds force; Temperature is in degrees Celsius</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must cause the electric fencing to be either high tensile smooth wire or fence fabric (e.g., mesh-wire, page-wire, chainlink or the like). The configuration of a high tensile smooth wire fence must consist of a minimum of eight strands, with four energized strands alternating with four grounded strands. The bottom strand must be a grounded or (-) strand and must not be more than 10 cm from the ground (soil) at any location. The strands must be spaced apart, starting from the bottom strand, as follows (tolerance 2cm): 15, 15, 15, 20, 20, 20, and 25.  or  A fence fabric may be used instead of high tensile smooth wire. The fence fabric must be a minimum of 1.22 metre high, be constructed of a minimum wire thickness of 11 gauge, and have a maximum mesh size of 15 cm. The bottom of the fabric must not be more than 10 cm from the ground (soil) at any location. Any uncharged fence fabric must have a minimum of four strands of charged wires on an outrigger system, spaced as follows: the first strand must not be higher than 25 cm from the ground; and each of the remaining three strands must be spaced approximately 25 cm apart from adjacent charged strands.</p> <p>Fence posts must be spaced a maximum of 7.5 (tolerance 0.5 metres apart).</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must install a grounding system for the electric fencing that consists of solid grounding rods (i.e., not pipe) with a minimum diameter of 16 mm (5/8 inch) that have a buried length of at least 2 metres. A minimum of three grounding rods (spaced at least 3 metres apart) must be installed and connected to the energizer. Alternative energizer grounding systems (e.g., grounding plates, or a deep-driven grounding system) may be used provided that the grounding is equivalent to or better than three grounding rods installed in accordance with the foregoing. A grounding rod (or equivalent) must be installed at least once every 450 metres along the fence and connected to the grounded wire strands or uncharged fence fabric.</p>	
--	--	--	--	--	---	--

					<p>Additional grounding may be required for dry sites or if other conditions affect proper grounding.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that any access through electric fencing for vehicles, equipment and personnel consists of an electrified gate system that is closed during hours that the facility is not operating. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that the gate system is electrified to a minimum voltage of 6,000 volts at all times except when being opened or closed. Any gate that is open during operating hours must be periodically checked by the attendant for bear activity during hours of facility operation. Gaps between the gate and the fence and ground, and between gate panels (for a double-hung gate) must not exceed 10 cm.</p> <p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must record any signs of digging or other attempts to penetrate electric fencing in a log book. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must immediately report any penetrations through electric fencing by bears to the Conservation Officer Service.</p>	
126	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Design, Construction and Maintenance</u></b></p> <p>The electric fencing must be designed, constructed, and maintained such that bears are prevented from penetrating the fence throughout the operating period. The Director must be advised of any modifications to the fence.</p>		
127	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Operating Period</u></b></p> <p>The electric fence must be fully operational during the period of **April 15 or alternative date** to **November 15 or alternative date** inclusive each year. If snow is present during this period, any electrified strands above snow line must be isolated from the remainder of the system and energised. The Director may vary the operating period with prior written authorisation.</p>		
128	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Minimum Voltage</u></b></p> <p>The electric fence must be operated with a minimum voltage of 6,000 volts. The entire perimeter of the electric fence must be inspected each day the landfill is open during the operating period and the voltage of the fencing measured at several points along the fence. The results of the voltage testing must be recorded in a logbook. Any results less than the minimum 6,000 volts must be immediately investigated for the cause of the low voltage (e.g., low battery, litter, vegetation, loose or crossed wires, broken insulators, breaks in the grounding system, etc.). Any problems that affect operation of the fence are to be immediately corrected (e.g. replacement of broken insulators, brush and litter removal to prevent grounding, etc.).</p>		

129	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Fence Tension</u></b></p> <p>The electric fence strands must be tightened to a minimum of 125 lbs. tension at 20 degrees Celsius. The required tension is to be corrected for temperature by use of the following formula for 12 1/2 gauge high tensile steel wire:  <math display="block">\text{Tension} = 125 - 2.5(\text{Temperature} - 20)</math> where: Tension is in pounds force; Temperature is in degrees Celsius</p>		
130	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Fence Type - Fabric, Spacing, Posts</u></b></p> <p>Fencing may be either high tensile smooth wire or fence fabric (e.g., mesh-wire, page-wire, chainlink or the like). The configuration of a high tensile smooth wire fence must consist of a minimum of eight strands, with four energized strands alternating with four grounded strands. The bottom strand must be a grounded or (-) strand and must not be more than 10 cm from the ground (soil) at any location. The strands must be spaced apart, starting from the bottom strand, as follows (tolerance 2cm): 15, 15, 15, 20, 20, 20, and 25.</p> <p>A fence fabric may be used instead of high tensile smooth wire. The fence fabric must : be a minimum of 1.22 metre high; be constructed of a minimum wire thickness of 11 gauge, and have a maximum mesh size of 15 cm. The bottom of the fabric must not be more than 10 cm from the ground (soil) at any location. Any uncharged fence fabric must have a minimum of four strands of charged wires on an outrigger system, spaced as follows: the first strand must not be higher than 25 cm from the ground; and each of the remaining three strands must be spaced approximately 25 cm apart from adjacent charged strands.</p> <p>Fence posts must be spaced a maximum of 7.5 (tolerance 0.5 metres apart).</p>		
131	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Fence Grounding</u></b></p> <p>A grounding system must be installed consisting of solid grounding rods (i.e., not pipe) with a minimum diameter of 16 mm (5/8 inch) that have a buried length of at least 2 metres. A minimum of three grounding rods (spaced at least 3 metres apart) must be installed and connected to the energizer. Alternative energizer grounding systems (e.g., grounding plates, or a deep-driven grounding system) may be used provided the grounding is equivalent to or better than three grounding rods. A grounding rod (or equivalent) must be installed at least once every 450 metres along the fence and connected to the grounded wire stands or uncharged fence fabric. Additional grounding may be required for dry sites or if</p>		

				other conditions affect proper grounding.		
132	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Gate(s)</u></p> <p>Any access through electric fencing for vehicles, equipment and personnel must consist of an electrified gate system that is closed during non-operating hours. The gate system must be electrified to a minimum voltage of 6,000 volts at all times except when being opened or closed. Any gate that is open during operating hours must be periodically checked by the attendant for bear activity during hours of operation. Gaps between the gate and the fence and ground, and between gate panels (for a double-hung gate) must not exceed 10 cm.</p>		
133	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Recording of Bear Activity near Fencing</u></p> <p>Signs of digging or other attempts to penetrate electric fencing must be recorded in a log book. Any penetrations through electric fencing by bears must be immediately reported to the Conservation Officer Service.</p>		
134	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Bear-Proof Containment of Putrescibles</u></p> <p>All putrescible wastes that arrive at the landfill facility must be immediately contained within a bear-proof bin (i.e., on-site transfer station of bear-proof design and construction) or within an area enclosed by an electric fence. Grass, leaves, weeds, branches and woodwaste are not considered putrescible for the purposes of this operational certificate.</p>	The <<Permittee/Approval Holder>> must contain all putrescible wastes that arrive at the landfill facility within a bear-proof bin (i.e., on-site transfer station of bear-proof design and construction) or within an area enclosed by an electric fence, immediately upon arrival of such wastes at the landfill facility. Grass, leaves, weeds, branches and woodwaste are not considered putrescible for the purposes of this authorization.	
135	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Wildlife Nuisance</u></p> <p>This discharge is one of concern because of the possibility of a nuisance or hazard being caused by bears or other animals attracted to the site. Additional works may be required or other operating instructions may be issued by the Director if such problems arise.</p>	The Director may require the <<Permittee/Approval Holder>> to construct or modify works, or follow specific operating instructions, if the Director is of the opinion that there is a possibility of a nuisance or hazard being caused by bears or other animals that are attracted to the site.	
136	Refuse	Approval, Operational Certificate, Permit	Variable	<p><u>Compaction</u></p> <p>Wastes at the active face of the putrescible disposal area must be spread in layers of 0.60 metres or less and compacted with a minimum of three (3) passes with heavy equipment. All waste must be compacted before the application of cover.</p>	The <<Permittee/Approval Holder>> must spread wastes at the active face of the putrescible disposal area in layers of 0.60 metres or less and, compact such layers with a minimum of three (3) passes with heavy equipment. All waste must be compacted before the <<Permittee/Approval Holder>> applies cover.	
137	Refuse	Approval, Operational Certificate, Permit	Variable	<p><u>Compaction</u></p> <p>Wastes at the active face of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area must be spread in layers of 60 centimetres or less on the active face and then compacted with a minimum of three (3) passes with heavy equipment.</p>	The <<Permittee/Approval Holder>> must spread wastes at the active face of the <<putrescible/non-putrescible>> disposal area in layers of 60 centimetres or less on the active face, and compact such layers with a minimum of three (3) passes with heavy equipment.	
138	Refuse	Approval, Operational Certificate, Permit	Variable	<p><u>Cover Material Application</u></p> <p>The Permittee must compact the refuse and apply cover material at least **number of times** per **year**. A compacted lift of reuse must not exceed a depth of 3 metres prior to application of intermediate or final cover. Material</p>	The <<Permittee/Approval Holder>> must compact the refuse and apply cover material at least **number of times** per **year**. A compacted lift of refuse must not exceed a depth of 3 metres prior to application of intermediate or final cover. Material used for cover must be to the satisfaction of the Director.	

				used for cover must be to the satisfaction of the Director.		
139	Refuse	Approval, Operational Certificate, Permit	Variable	<p><u>Landfill Operation</u></p> <p>All refuse must be compacted and confined to the smallest practical area and reduced to the smallest practical volume at the operating face of the landfill. A minimum 0.15 m of suitable cover material must be applied on all exposed solid waste at the end of <b>frequency</b>. The Director may vary the frequency of covering when freezing conditions adversely affect normal operation <b>**</b> or when sufficient quantities of soil material are incorporated with the waste<b>**</b>.</p>	The <<Permittee/Approval Holder>> must compact all refuse and confine such compacted refuse to the smallest practical area and volume at the operating face of the landfill. The <<Permittee/Approval Holder>> must apply a minimum 0.15 m of cover material that is to the satisfaction of the Director, on all exposed solid waste at the end of <b>frequency</b> . The Director may vary the frequency of covering when freezing conditions adversely affect normal operation <b>**</b> or when sufficient quantities of soil material are incorporated with the waste <b>**</b> .	
140	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Daily Cover</u></p> <p>Daily cover must be applied to all putrescible waste at the end of each day of operation. Daily cover must consist of 0.15 metres of compacted soil or functionally equivalent depth of other material as specified in an approved Operating Plan.</p>	The <<Permittee/Approval Holder>> must apply daily cover to all putrescible waste at the end of each day of operation. Such daily cover must consist of 0.15 metres of compacted soil or functionally equivalent depth of other material as specified in an approved Operating Plan.	
141	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Intermediate Cover</u></p> <p>Intermediate cover must be applied to areas of the site where no additional waste has been or will be deposited within a period of 30 days. Intermediate cover must consist of 0.30 metres of compacted soil or functionally equivalent depth of other material as specified in an approved Operating Plan.</p>	The <<Permittee/Approval Holder>> must apply intermediate cover to areas of the site where no additional waste has been or will be deposited within a period of 30 days. Intermediate cover must consist of 0.30 metres of compacted soil or functionally equivalent depth of other material as specified in an approved Operating Plan.	
142	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Final Cover</u></p> <p>Final cover must be applied as soon as practical to all areas of the site that have reached final landfill elevations. Final cover requirements must be in accordance with the approved Operating Plan and Closure Plan and will require a minimum of 1 metre of low permeability compacted soil plus a minimum of 0.15 metres of topsoil with vegetation, or, a functionally equivalent cover system.</p>	The <<Permittee/Approval Holder>> must apply final cover to all areas of the site that have reached final landfill elevations as soon as practical thereafter. Final cover requirements must be in accordance with the approved Operating Plan and Closure Plan and will require a minimum of 1 metre of low permeability compacted soil plus a minimum of 0.15 metres of topsoil with vegetation, or, a functionally equivalent cover system.	
143	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Alternative Cover</u></p> <p>The Director may authorize the use of alternative cover materials and/or vary the frequency of covering when freezing conditions adversely affect normal operations. Any revision to the cover requirements requires the prior written authorisation of the Director.</p>	The Director may authorize the use of alternative cover materials and/or vary the frequency of covering when freezing conditions adversely affect normal operations. Any revision to the cover requirements requires the prior written authorisation of the Director.	
144	Refuse	Approval, Operational Certificate, Permit	Standard	<p><u>Progressive Application of Final Cover</u></p> <p>Completed portions of the landfill must progressively receive final cover during the active life of the landfill. The maximum area of disposed refuse that has not yet received final cover must not exceed 25% of the total final footprint area. Final cover is to be applied according to the specifications identified in section <b>number</b>.</p>	Completed/filled portions of the landfill must progressively/actively receive final cover during the active life of the landfill. The maximum area of disposed refuse that has not yet received final cover must not exceed 25% of the total final footprint area. Final cover is to be applied according to the specifications identified in section <b>number</b> .	

145	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Maximum Lift Height</u></b></p> <p>The maximum allowable height of any lift of compacted refuse in the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area is 3 metres.</p>	The maximum allowable height of any lift of compacted refuse in the <<putrescible/non-putrescible>> disposal area is 3 metres.	
146	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Waste Cover</u></b></p> <p>Cover must be applied to refuse in the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area as specified below. The Operational Certificate Holder shall maintain a log book to record all dates of cover application.</p> <p>a. Active Face - Except as otherwise stated in Section **number**, the active face of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area does not normally require cover. Based on information concerning environmental or public health concerns related to exposed refuse at the active face, however, the Director may require that the active face be covered completely at a specified frequency with 0.15 m of soil (or functional equivalent) for a specified period.</p> <p>b. Cell Cover - A uniform cover of 30 cm compacted soil must be applied to all sides of the active refuse cell in the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area such that no more than 300 m2 of refuse are exposed at the active face at any time and such that the volume of refuse in the cell does not exceed 2500 m3. Once the maximum volume of refuse has been reached in a cell, the active face must be covered with 30 cm of compacted soil and a new refuse cell begun.</p> <p>c. Final Cover - Completed portions of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area must progressively receive final cover during the active life of the landfill (see section **number**).</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must apply cover to refuse in the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area as specified below. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must maintain a log book to record all dates and details of the material used for the for the cover application.</p> <p>a. Active Face - Except as otherwise stated in Section **number**, the active face of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area does not normally require cover. Based on information concerning environmental or public health concerns related to exposed refuse at the active face, the Director may require the &lt;&lt;Permittee/Approval Holder&gt;&gt; to apply cover to the entire active face at a specified frequency with 0.15 m of soil (or functional equivalent) for a specified period.</p> <p>b. Cell Cover - The &lt;&lt;Permittee/Approval Holder&gt;&gt; must apply a uniform cover of 30 cm compacted soil to all sides of the active refuse cell in the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area such that no more than 300 m2 of refuse is exposed at the active face at any time and the volume of refuse in the cell does not exceed 2500 m3. Once the maximum volume of refuse has been reached in a cell, the &lt;&lt;Permittee/Approval Holder&gt;&gt; must apply 30 cm of compacted soil to the active face and begin a new refuse cell.</p> <p>c. Final Cover - The &lt;&lt;Permittee/Approval Holder&gt;&gt; must apply final cover to completed portions of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area during the active life of the landfill (see section **number**).</p>	
147	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Access Security</u></b></p> <p>The &lt;&lt;permittee/approval holder&gt;&gt; must provide adequate security for the facility and restrict access to authorized personnel. All valves, pumps, doors and controls, accessible if security were breached, are to be locked.</p>	The <<Permittee/Approval Holder>> must provide adequate security for the facility and restrict access to authorized personnel. The <<Permittee/Approval Holder>> must ensure that all valves, pumps, doors and controls, that would be accessible if security were breached, are locked unless under active use and supervision by facility staff.	
148	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Site Identification</u></b></p> <p>A sign must be erected at the main entrance to the site which identifies the following: site name, owner and operator, contact phone number and address, hours of operation, tipping fees (if applicable) and prohibition of hazardous special wastes. The lettering on the sign must be such that it is clearly readable by the public when they approach the entrance of the landfill site.</p>	The <<Permittee/Approval Holder>> must erect a sign at the main entrance to the site which identifies the following: site name, owner and operator, contact phone number and address, hours of operation, tipping fees (if applicable) and prohibition of hazardous special wastes. The lettering on the sign must be such that it is clearly readable from a distance of 3 meters by the public when they approach the entrance of the landfill site.	
149	Refuse	Approval,	Standard	<p><b><u>Authorized Works</u></b></p>	The authorized facilities are waste drop-off facilities for	

		Operational Certificate, Permit		The authorized facilities are waste drop-off facilities for commercial vehicles, weigh scales, area for open burning clean wood waste and related appurtenances approximately as shown on the attached Site Plan **number**.	commercial vehicles, weigh scales, area for open burning clean wood waste and related works and appurtenances approximately as shown on the attached Site Plan **number**.	
150	Refuse	Approval, Operational Certificate, Permit	Standard	<u>Hazardous Waste Requirements</u>  The <<permittee/approval holder>> must comply with all applicable provisions of the Hazardous Waste Regulation of the Environmental Management Act. Where conflict exists between this <<permit/approval>> and the Hazardous Waste Regulation, the latter must take precedence.	The <<Permittee/Approval Holder>> must comply with all applicable provisions of the Hazardous Waste Regulation of the Environmental Management Act. Where conflict exists between this <<permit/approval>> and the Hazardous Waste Regulation, the latter must take precedence.	
151	Refuse	Approval, Operational Certificate, Permit	Variable	<u>Hazardous Waste Requirements Exemptions</u>  "Hazardous Wastes" as defined by the Hazardous Waste Regulation pursuant to the Environmental Management Act are prohibited from disposal unless expressly authorized by the Hazardous Waste Regulation, approved by the Director or as specified in the <<permit/approval>>.	The <<Permittee/Approval Holder>> must not allow "Hazardous Wastes" as defined by the Hazardous Waste Regulation pursuant to the Environmental Management Act to be disposed of at the facility unless expressly authorized by the Hazardous Waste Regulation, approved by the Director or as specified in this <<permit/approval>>.	<u>Very similar to 163 but references permit</u>
152	Refuse	Approval, Operational Certificate, Permit	Standard	<u>Hazardous Wastes from Accidental Spills or Abandonment</u>  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.	The <<Permittee/Approval Holder>> may only accept hazardous wastes resulting from accidental spills or abandonment of dangerous goods at the facility in accordance with Section 52(1) of the Hazardous Waste Regulation.	
153	Refuse, effluent, air	Approval, Operational Certificate, Permit	Standard	<u>Spill Reporting</u>  All spills to the environment (as defined in the Spill Reporting Regulation) must be reported immediately in accordance with the Spill Reporting Regulation. Notification shall be via the Provincial Emergency Program at 1-800-663-3456.	The <<Permittee/Approval Holder>> must immediately report all spills to the environment (as defined in the Spill Reporting Regulation) in accordance with the Spill Reporting Regulation, which among other things, requires notification to the <del>Provincial Emergency Program</del> Emergency Management BC at 1-800-663-3456.	<b>REQUIRED</b>
154	Refuse	Approval, Operational Certificate, Permit	Variable	<u>Prohibited Wastes</u>  Hazardous wastes as defined by the Hazardous Waste Regulation must not be received, stored or disposed of at this site except as authorized by the Director. Lead-acid batteries must not be landfilled but may be salvaged/recycled provided they are stored, handled and shipped in compliance with the Hazardous Waste Regulation and with section 28) of this operational certificate. Tires equal to or less than 43.2 centimetres (17 inches) in rim size and autohulks must not be landfilled.	The <<Permittee/Approval Holder>> must not receive, store, or dispose of "Hazardous wastes" as defined by the Hazardous Waste Regulation at this site except as authorized by the Director. The <<Permittee/Approval Holder>> must not land fill lead-acid batteries at the site, but the <<Permittee/Approval Holder>> may be salvage/recycle lead-acid batteries at the site provided they are stored, handled and shipped in compliance with the Hazardous Waste Regulation and with section 28) of authorization. The <<Permittee/Approval Holder>> must not landfill autohulks or tires equal to or less than 43.2 centimetres (17 inches) in rim size.	
155	Refuse	Approval, Operational Certificate, Permit	Standard	<u>Waste Asbestos</u>  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 <<Permittee/Approval Holder>> is authorized to dispose of waste asbestos at the site. Subject to compliance with the requirements of section 40 of the Hazardous Waste Regulation and the following conditions:  a. The asbestos waste may not be mixed with any other	



				<p>a. The asbestos waste may not be mixed with any other hazardous waste.</p> <p>b. The Regional District must approve the disposal before disposal takes place.</p> <p>c. All other applicable requirements of the Hazardous Waste Regulation, including but limited to manifesting and waste record keeping, must also be complied with.</p>	<p>hazardous waste.</p> <p>b. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must obtain the approval of the Regional District I before such disposal takes place.</p> <p>c. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must comply with all other applicable requirements of the Hazardous Waste Regulation, including but limited to, manifesting and waste record keeping.</p>	
156	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Handling of Impacted Soil</u></b></p> <p>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.</p>	.	
157	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Contaminated Soil</u></b></p> <p>Soil that contains contaminants in concentrations less than "hazardous waste" as defined by the Hazardous Waste Regulation may be disposed at the landfill site. Disposal includes monofilling, co-disposal with other wastes, use as a refuse cell berm material and use as a refuse cell cover material. Disposal must occur within a disposal area as authorized by sections **number** of this operational certificate. Disposal does not include use as final cover material.</p>	The <<Permittee/Approval Holder>> may dispose of soil at the landfill site if such soil contains contaminants in concentrations that are insufficient to cause such soil to be "hazardous waste" as defined by the Hazardous Waste Regulation. Permitted disposal includes monofilling, co-disposal with other wastes, use as a refuse cell berm material and use as a refuse cell cover material. Disposal of such soil must occur within a disposal area as authorized by sections **number** of this authorization. For greater certainty, such soil may not used as final cover material.	
158	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Ozone Depleting Substances</u></b></p> <p>Release of ozone depleting substances from the storage, handling and disposal of used refrigerator equipment, freezers, motor vehicle air conditioners and other air conditioning equipment, fire extinguishers or other equipment containing ozone depleting substances is strictly forbidden as per the requirements of the Ozone Depleting Substances Regulation.</p>		Repeats requirement of reg
159	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Inert Materials</u></b></p> <p>Specific inert materials may be exempted from the requirements of section **number** by the Director. The permission of the Director must be obtained in writing prior to any disposal or handling of inert materials on an exemption basis.</p>	The Director may exempt specific inert materials from the requirements of section **number**. The <<Permittee/Approval Holder>> must obtain the written permission of the Director prior to any disposal or handling of inert materials on the bases of any such exemption.	
160	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b><u>Municipal Solid Waste Separation</u></b></p> <p>Municipal solid waste may be separated into the following streams: (1) a mixed waste stream including putrescibles for disposal; (2) a mixed waste stream not including any putrescibles for disposal; (3) an organic waste stream, including untreated wood wastes, for composting; (4) a selected waste stream for salvage and recycling, and (5) a selected combustibles waste stream for open burning or air-curtain burning. Each of these waste streams is subject to all</p>	The <<Permittee/Approval Holder>> must separate municipal solid waste into the following streams: (1) a mixed waste stream including putrescibles for disposal; (2) a mixed waste stream not including any putrescibles for disposal; (3) an organic waste stream, including untreated wood wastes, for composting; (4) a selected waste stream for salvage and recycling, and (5) a selected combustibles waste stream for open burning or air-curtain burning. Each of these waste streams is subject to all of the general requirements contained in sections b) through 6.15 above, as well as being subject to	

				of the general requirements contained in sections b) through 6.15 above, as well as being subject to specific requirements as outlined in a separate section for each below.	specific requirements as outlined in a separate section for each below.	
--	--	--	--	--	---	--

	Discharge type	Authorization type	Category	Old condition	Revised condition	Compliance point or determination
161	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<b><u>MANAGEMENT OF SELECT WASTE</u></b>  Select wastes are subject to the provisions of this Section. The Director may specify alternate operating procedures or prohibit disposal of the waste identified in this Section or other materials.	.	The Director may amend – delete condition
162	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Industrial Solid Waste</u></b>  Despite Section **number**, the Director may specifically authorize disposal of a discrete type and source of industrial solid waste.	Despite Section **number**, the Director may authorize disposal of any type and source of industrial solid waste specified by the Director.	
163	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Hazardous Waste</u></b>  "Hazardous Wastes" as defined by the Hazardous Waste Regulation pursuant to the Environmental Management Act are prohibited from disposal unless expressly authorized by the Hazardous Waste Regulation and specified in the Operating Plan.	The <<Permittee/Approval Holder>> must not dispose of "Hazardous Wastes" (as defined by the Hazardous Waste Regulation pursuant to the <i>Environmental Management Act</i> ) at the site unless authorized by the Hazardous Waste Regulation and specified in the approved Operating Plan.	Very similar to 151 but references Operating Plan
164	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Free Liquid</u></b>  Wastes which are or contain "free liquid" are prohibited from disposal and must be determined by US EPA Method 9095A Paint Filter Liquids Test, Test Methods for Evaluating Solid Wastes-Physical/Chemical Methods (EPA Publication No. Sw-846).	The <<Permittee/Approval Holder>> must not dispose of wastes which are or contain "Free Liquid" at the site. The <<Permittee/Approval Holder>> must determine the composition of all "Free Liquids" pursuant to the US EPA Method 9095A Paint Filter Liquids Test, Test Methods for Evaluating Solid Wastes-Physical/Chemical Methods (EPA Publication No. Sw-846).	<b><u>GLOSSARY TERM</u></b> "Free Liquid" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.
165	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Metallic Wastes</u></b>  The type, quantity and source of large metallic wastes received at the site is to be recorded and reported in the Annual Report. The Director may specify requirements to promote recycling of metallic wastes.	The <<Permittee/Approval Holder>> must record the type, quantity and source of large metallic wastes received at the site and summarize such records in the Annual Report it submits to the Director pursuant to Section **number**. The Director require the <<Permittee/Approval Holder>> to implement specific procedures or other requirements to promote recycling of metallic wastes.	
166	Refuse	Approval, Operational Certificate, Permit	Standard	<b><u>Wood Residue</u></b>  The type, quantity and source of all woodwaste received at the site is to be recorded and reported in the Annual Report. The Director may specify requirements or restrict woodwaste from being received at the site to promote alternative uses.	The <<Permittee/Approval Holder>> must record the type, quantity and source of all woodwaste received at the site and summarize such records in the Annual Report it submits to the Director pursuant to Section **number**. The Director may require the <<Permittee/Approval Holder>> to implement specific procedures or other requirements, or restrict woodwaste from being received at the site, to promote woodwaste to be put to alternative uses.	
167	Refuse	Approval, Operational Certificate,	Standard	<b><u>Radioactive Waste</u></b>	a. The <<Permittee/Approval Holder>> must not receive "Radioactive waste" (as defined by the Hazardous Waste Regulation pursuant the Environmental Management Act) at	

Formatted: Highlight

Formatted: Font: Not Italic

		Permit		<p>a. "Radioactive waste" as defined by the Hazardous Waste Regulation pursuant the Environmental Management Act must not be received at the site.</p> <p>b. A background assessment of NORMs (Naturally Occurring Radioactive Materials) must be carried out within 30 days of commencement of operation of the landfill. The results of this assessment, screening and disposal procedures, and proposed maximum gamma radiation level of the waste must be submitted to the Director for approval within 90 days of commencing operations. The approved screening procedures must be incorporated into the Operating Plan.</p>	<p>the site.</p> <p>b. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must carry out a background assessment of NORMs (Naturally Occurring Radioactive Materials) within 30 days of commencement of operation of the landfill. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit the results of this assessment, screening and disposal procedures, and proposed maximum gamma radiation level of the waste must be to the satisfaction of the Director and submitted within 90 days of commencing operations. The screening procedures must be incorporated into the Operating Plan.</p>	
168	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Sulphur Waste</u></b></p> <p>Sulphur in pelletized, cake or powdered form, or materials contaminated with the same are prohibited from disposal.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must not dispose of Sulphur in pelletized, cake or powdered form, or materials contaminated with the same, at the site.</p>	
169	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Sulphur Waste</u></b></p> <p>Despite Section **number**, spilled materials, as authorized by an officer (where "officer" is as defined under the Environmental Management Act), may also be accepted for treatment and/or disposal. Wastes resulting from accidental spills of hazardous waste may be accepted at the facility only under authority of Section 52(1) of the Hazardous Waste Regulation.</p>	<p>Despite Section **number**, the &lt;&lt;Permittee/Approval Holder&gt;&gt; may accept spilled materials at the site for treatment and/or disposal in accordance with any authorization from an "officer" (as defined under the Environmental Management Act). The &lt;&lt;Permittee/Approval Holder&gt;&gt; may only accept wastes resulting from accidental spills of hazardous waste at the facility in accordance with Section 52(1) of the Hazardous Waste Regulation.</p>	
170	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Site Preparation and Restoration</u></b></p> <p>Provision of fencing, site access, vehicle safety barriers, surface water diversionary works, firebreaks and site restoration as required, must be carried out to the satisfaction of the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must provide fencing, site access, vehicle safety barriers, surface water diversionary works, firebreaks and site restoration to the satisfaction of the Director.</p>	
171	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Water Table Restriction</u></b></p> <p>Wastes must not be deposited or stored less than 1.2 metres above the highest groundwater level.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must not permit wastes to be deposited or stored at the site at less than 1.2 metres above the highest groundwater level at the site.</p>	
172	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Surface Water</u></b></p> <p>Surface water diversion works must be constructed and maintained to prevent surface water from entering or leaving active areas of the landfill. Water that has contacted the refuse must not be discharged without approval of the Director.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must construct and maintain surface water diversion works to prevent surface water from entering or leaving active areas of the landfill. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must not discharge water that has contacted the refuse without the prior approval of the Director.</p>	
173	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Operator Training and Development</u></b></p> <p>At a minimum, the Regional District will ensure that operating personnel are trained to industry standards and at least one</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that operating personnel are trained to current industry standards and at least one member of &lt;&lt;Permittee/Approval Holder&gt;&gt; personnel is trained and current in a SWANA recognized</p>	

				member of Regional District personnel are trained and current in a SWANA recognized landfill operator course or equivalent.	landfill operator course or equivalent.	
174	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Location - Putrescible/Non-putrescible Wastes</u></b></p> <p>The Operational Certificate Holder must identify an area for disposal of &lt;&lt;putrescible/non-putrescible&gt;&gt; refuse (herein referred to as the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area) that is within the authorized municipal solid waste disposal footprint (see section **number**). Disposal of any solid wastes consisting of or mixed with putrescibles must be restricted to the designated putrescible disposal area. Signs which identify the nature of the waste acceptable at the designated putrescible disposal area must be erected and maintained. The lettering on the sign must be such that it is clearly readable by the public when they approach the putrescible disposal area.</p>	The <<Permittee/Approval Holder>> must identify an area for disposal of <<putrescible/non-putrescible>> refuse (herein referred to as the <<putrescible/non-putrescible>> disposal area) that is within the authorized municipal solid waste disposal footprint at the site (see section **number**). The <<Permittee/Approval Holder>> must restrict the disposal of any solid wastes consisting of or mixed with putrescibles to the designated putrescible disposal area. The <<Permittee/Approval Holder>> must erect and maintain signs which identify the nature of the waste acceptable at the designated putrescible disposal area. The lettering on such signs must be such that it is clearly readable by the public when they approach the putrescible disposal area.	
175	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Location - Solid Waste Disposal</u></b></p> <p>Solid wastes from the operation are to be disposed at a location and in a manner authorized by the Director, or as authorized by regulation under the Environmental Management Act.</p>	The <<Permittee/Approval Holder>> must dispose of solid wastes from the operation of the facility are to be disposed at a location and in a manner authorized by the Director, or as authorized by regulation under the Environmental Management Act.	
176	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Nature of Wastes</u></b></p> <p>Wastes disposed at the active face of the &lt;&lt;putrescible/non-putrescible&gt;&gt; disposal area may include any municipal solid waste except **putrescible waste, liquid wastes and hot ashes** or as otherwise restricted by section **number**.</p>	The <<Permittee/Approval Holder>> may dispose of any municipal solid waste at the active face of the <<putrescible/non-putrescible>> disposal area, except **putrescible waste, liquid wastes and hot ashes** or as otherwise restricted by section **number**.	
177	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Dead Animal Disposal</u></b></p> <p>Dead animals and animal parts are authorized to be disposed in the putrescible disposal area. Cover must be applied as soon as practicable and must consist of a minimum of 60 centimetres of soil and/or refuse material such that flies and scavenging animals are prevented from accessing the carrion.</p>	The <<Permittee/Approval Holder>> may dispose of dead animals and animal parts in the putrescible disposal area. The <<Permittee/Approval Holder>> must, as soon as reasonably practicable after such material is placed in the putrescible disposal area, apply cover of at least 60 centimetres of soil and/or refuse material such that flies and scavenging animals are prevented from accessing the carrion.	
178	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Odour Control</u></b></p> <p>Odour created within the operation area must be suppressed. If the air quality becomes a concern, the Director may require additional control measures on emission sources.</p>	The <<Permittee/Approval Holder>> must suppress odour created within the <specify compost or landfill> area to the satisfaction of the Director. If the air quality becomes a concern to the Director, the Director may require the <<Permittee/Approval Holder>> to implement additional control measures on emission sources.	
179	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Buffer Zone</u></b></p> <p>Material must not be landfilled within 50 metres of the property boundary.</p>	The <<Permittee/Approval Holder>> must not landfill material within 50 metres of the boundary of the property on which the facility is located.	
180	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Litter Control</u></b></p> <p>The best practical means must be used to prevent the scatter of litter. Any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site</p>	The <<Permittee/Approval Holder>> must use the best practical means available to prevent the scatter of litter at the site. The <<Permittee/Approval Holder>> must clean up any litter scattered into the neighbouring property, along access roads, in drainage ditches, along litter control fences, into surrounding trees or elsewhere on the landfill site. The	

				must be cleaned up. The Director may determine the frequency of clean up and other additional requirements for refuse scatter control.	Director may require the <<Permittee/Approval Holder>> to implement a specified frequency of clean-up and other additional requirements for refuse scatter control.	
181	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Management of Recyclable and Compostable</u></b></p> <p>Areas must be set aside at the landfill site for the collection and storage of recyclable materials, and for on-site composting of selected materials. These facilities must be designed and operated in a manner acceptable to the Director to prevent the discharge of leachate and control vectors, and minimize nuisance conditions such as odours. Recyclable materials and compost must be removed from the landfill regularly, and the amounts accumulated must be limited to the maximum which can be properly managed at the site.</p>	The <<Permittee/Approval Holder>> must set aside areas at the landfill site for the collection and storage of recyclable materials, and for on-site composting. These recycling and composting facilities must be designed and operated in a manner acceptable to the Director to prevent the discharge of leachate and control vectors, and minimize nuisance conditions such as odours. The <<Permittee/Approval Holder>> must remove recyclable materials and compost from the landfill regularly, and dispose of these materials in a manner to the satisfaction of the Director.	
182	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Landfill Monitoring</u></b></p> <p>A monitoring program must be developed by a qualified professional and identify potential environmental impacts of the authorized facility. The monitoring program must be submitted to the satisfaction of the Director. Monitoring must be conducted in accordance with the monitoring program.</p>	The <<Permittee/Approval Holder>> must ensure that a monitoring program to identify potential environmental impacts of the authorized facility is developed by a qualified professional and to the Director for approval. The monitoring program must be submitted to the Director prior to discharging under this authorization. The <<Permittee/Approval Holder>> must conduct monitoring in accordance with the approved monitoring program.	
183	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Format</u></b></p> <p>All reports and drawings must be submitted in electronic format acceptable to the Director.</p>	The <<Permittee/Approval Holder>> must ensure that all report, drawings and other documents that are required to be submitted to the Director under this authorization are submitted in an electronic format acceptable to the Director.	
184	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Drawings</u></b></p> <p>"As built" drawings certified correct and sealed by a qualified professional must be submitted to within **30 days/60 days** of completion of the work or as otherwise specified by the Director.</p>	The <<Permittee/Approval Holder>> must ensure that "as built" drawings for each of the authorized works are certified correct and sealed by a qualified professional and are submitted to the Director within **30 days/60 days** of completion of the works or as otherwise specified by the Director.	
185	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Waste Measurement</u></b></p> <p>The quantity of waste material landfilled at the site must be measured or estimated by means suitable to the Director. The results must be submitted once per year on or before January 31 for the previous year expressed in tonnes/yr **and/or** m3/yr.</p>	The <<Permittee/Approval Holder>> must measure or estimate the quantity of waste material landfilled at the site by means acceptable to the Director. The <<Permittee/Approval Holder>> must, by January 31 of each year, submit to the Director a summary of such measures or estimations for the previous calendar year expressed in tonnes/yr **and/or** m3/yr.	
186	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Landfill Inspection Reporting</u></b></p> <p>A record of inspections is to be maintained on site and must include notation on the voltage range of the fence, problems, corrective measures and evidence of bear activity (i.e. diggings, scat, etc.). Any penetration of the fence by bears is to be immediately reported to the Conservation Officer Service **insert phone number**.</p>	The <<Permittee/Approval Holder>> must maintain at the site a record of inspections of the site that includes, but is not limited to, notations on the voltage range of the fence, problems, corrective measures and evidence of bear activity (i.e. diggings, scat, etc.). The <<Permittee/Approval Holder>> must immediately report any penetrations of the fence by bears to the Conservation Officer Service **insert phone number**.	
187	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Wildlife Monitoring</u></b></p> <p>The &lt;&lt;permittee/approval holder&gt;&gt; is required to monitor wildlife (medium and large carnivores) activity at the facility and keep records of occurrences and observations of wildlife</p>	The <<Permittee/Approval Holder>> must carry out monitoring of wildlife (medium and large carnivores) at the facility to the satisfaction of the Director, and keep records of occurrences and observations of wildlife (medium and large carnivores).	

				(medium and large carnivores).		
188	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b><u>Annual Report</u></b></p> <p>The Operation Certificate Holder must submit an Annual Report to the Director on or before **March 31 or date** each year for the previous calendar year. The report must contain at least the following information:</p> <ul style="list-style-type: none"> <li>a. The type and tonnage of waste received, recycled and discharged for the proceeding 12-month period;</li> <li>b. A current topographic map of the active landfill area and soil stockpiles;</li> <li>c. Updated estimates for the remaining capacity, closure date for the current phase and closure date for the current landfill footprint;</li> <li>d. Any new information or proposed changes relating to the facilities and Design and Operation Plan;</li> <li>e. Open burning activity, if applicable, including amount of material received for burning, number of burns and updates from a wood waste audit;</li> <li>f. Occurrences or observations of wildlife (medium and large carnivores) at the facility;</li> <li>g. A statement regarding progress in reducing the waste stream, in accordance with the hierarchy of reduce, reuse and recycle principles; and,</li> <li>h. The results of all monitoring programs as specified in this Operational Certificate. Data interpretation and trend analysis, as well as an evaluation of the impacts of the discharges on the receiving environment in the previous year must be carried out by a qualified professional;</li> <li>i. The methods and amounts of leachate collection, treatment and disposal, if applicable.</li> <li>j. Amount in closure fund.</li> </ul>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, by **March 31 or date** each year, submit to the Director an Annual Report for the previous calendar year. The report must contain at least the following information:</p> <ul style="list-style-type: none"> <li>a. the type and tonnage of waste received, recycled and discharged for the proceeding such calendar year;</li> <li>b. a current/to date topographic map of the active landfill area and soil stockpiles;</li> <li>c. current/to date estimates for the remaining capacity, closure date for the current phase and closure date for the current landfill footprint;</li> <li>d. any new information or proposed changes relating to the facilities and Design and Operation Plan;</li> <li>e. open burning activity, if applicable, including amount of material received for burning, and number of burns;</li> <li>f. occurrences or observations of wildlife (medium and large carnivores) at the facility;</li> <li>g. a statement regarding progress in reducing the waste stream, in accordance with the hierarchy of reduce, reuse and recycle principles;</li> <li>h. the results of all monitoring programs as specified in this authorization. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must ensure that data interpretation and trend analysis, as well as an evaluation of the impacts of the discharges on the receiving environment in the previous year, is included in such results and carried out by a qualified professional;</li> <li>i. the methods and amounts of leachate collection, treatment and disposal, if applicable; and</li> <li>j. the amount in closure fund as of the date the report is submitted.</li> </ul>	
189	Refuse	Approval, Operational Certificate, Permit	Variable	<p><b><u>Closure Plan</u></b></p> <p>a. Specifications for the final cap must be submitted at least 60 days in advance of each area of the landfill reaching final elevations or as otherwise specified by the Director. Details must include the thickness and permeability of barrier and</p>	<p>a. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit to the Director proposed specifications for the final layer of cover that will be applied to an area of the landfill for the purposes of final closure at least 60 days in advance of such area of the landfill reaching final elevations or as otherwise specified by the Director. Such proposed specifications must include the</p>	

				<p>drainage layers, information on topsoil, vegetative cover and erosion prevention controls.</p> <p>b. At least one year in advance of decommissioning the landfill, or as otherwise specified by the Director, a Closure Plan must be submitted which includes at least the following information:</p> <p>(i) A topographic plan showing the final elevations contours of the landfill and surface water diversion and drainage controls;</p> <p>(ii) Proposed end use of the site;</p> <p>(iii) Provisions for monitoring groundwater, surface water, landfill gas, erosion and settlement for a minimum 25 year post-closure period; and,</p> <p>(iv) Provisions for maintenance and corrective measures for a minimum 25-year post-closure period.</p>	<p>thickness and permeability of barrier and drainage layers, information on topsoil, vegetative cover and erosion prevention controls.</p> <p>b. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must, at least one year in advance of decommissioning the landfill, or as otherwise specified by the Director, submit to the Director for approval a Closure Plan which includes at least the following information:</p> <p>(i) a topographic plan showing the final elevations contours of the landfill and surface water diversion and drainage controls;</p> <p>(ii) proposed end use of the landfill property after closure;</p> <p>(iii) provisions for monitoring groundwater, surface water, landfill gas, erosion and settlement for a minimum 25 year post-closure period; and,</p> <p>(iv) provisions for maintenance and corrective measures for a minimum 25-year post-closure period.</p>	
190	Refuse	Approval, Operational Certificate, Permit	Choose an item.	<p><b>Closure Plan and Updates</b></p> <p>An updated Closure Plan must be submitted to the Director upon request. The Closure Plan must, as a minimum, include the following:</p> <p>a. proposed end-use of the landfill property after closure;</p> <p>b. anticipated total waste volume and tonnage, and life of the landfill (i.e., closure date);</p> <p>c. a topographic plan showing the final elevation contours of the landfill and surface water diversion and drainage controls;</p> <p>d. design of the final cover suited to the intended end-use of the site, including the thickness and permeability of barrier layers and drainage layers, and information on topsoil, vegetative cover and erosion prevention controls;</p> <p>e. procedures for notifying the public about the closure and about alternative waste disposal facilities;</p> <p>f. rodent and nuisance wildlife control procedures;</p> <p>g. a comprehensive monitoring plan, including groundwater monitoring, surface water monitoring, landfill gas monitoring, leachate monitoring, final cover monitoring, and erosion and settlement monitoring, for a minimum post-closure period of 25 years;</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; must submit to the Director an updated Closure Plan in accordance with any request of the Director. The Closure Plan must, as a minimum, include the following:</p> <p>a. proposed end-use of the landfill property after closure;</p> <p>b. anticipated total volume and tonnes of waste received at the landfill during operations, and life of the landfill (i.e., closure date);</p> <p>c. a topographic plan showing the final elevation contours of the landfill and surface water diversion and drainage controls;</p> <p>d. design of the final cover suited to the intended end-use of the site, including the thickness and permeability of barrier layers and drainage layers, and information on topsoil, vegetative cover and erosion prevention controls;</p> <p>e. procedures for notifying the public about the closure and about alternative waste disposal facilities;</p> <p>f. rodent and nuisance wildlife control procedures;</p> <p>g. a comprehensive monitoring plan, including groundwater monitoring, surface water monitoring, landfill gas monitoring, leachate monitoring, final cover monitoring, and erosion and settlement monitoring, for a minimum post-closure period of 25 years;</p> <p>h. a plan for operation of any required pollution abatement</p>	



				<p>h. a plan for operation of any required pollution abatement engineering works such as leachate collection and treatment systems, for a minimum post-closure period of 25 years; and</p> <p>i. an estimated cost, updated annually, to carry out closure and post-closure activities for a minimum period of 25 years.</p>	<p>engineering works such as leachate collection and treatment systems, for a minimum post-closure period of 25 years; and</p> <p>i. an estimated cost, updated annually, to carry out closure and post-closure activities for a minimum period of 25 years.</p>	
191	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b>Location</b></p> <p>The Operational Certificate Holder may identify an area for the storage of selected wastes for salvage and recycling (herein referred to as the salvage/recycling area). Any salvage/recycling must be restricted to the designated salvage/recycling area. This area must be clearly identified at the landfill site. Signs which identify the nature of the materials acceptable at the designated salvage/recycling area must be erected and maintained. The lettering on the sign must be such that it is clearly readable by the public when they approach the salvage/recycling area.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may identify an area at the site for the storage of selected wastes for salvage and recycling (herein referred to as the salvage/recycling area). The &lt;&lt;Permittee/Approval Holder&gt;&gt; must restrict any salvage/recycling to the designated salvage/recycling area. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must clearly identify the salvage/recycling area at the landfill site. The &lt;&lt;Permittee/Approval Holder&gt;&gt; must erect and maintain signs which identify the nature of the materials acceptable at the designated salvage/recycling area. The lettering on the signs must be such that it is clearly readable by the public when they approach the salvage/recycling area.</p>	
192	Refuse	Approval, Operational Certificate, Permit	Standard	<p><b>Nature of Wastes</b></p> <p>Wastes to be salvaged/recycled may be any items with potential salvage or recycling value such as tires, lead-acid batteries, autohulks, white goods, furniture, used lumber, used goods and the like, but must not include any refuse consisting of or containing putrescibles, any liquid wastes, hot ashes or materials otherwise restricted by section **number**.</p>	<p>The &lt;&lt;Permittee/Approval Holder&gt;&gt; may salvage/recycle any wastes with potential salvage or recycling value such as tires, lead-acid batteries, autohulks, white goods, furniture, used lumber, used goods and the like, but must not accept for salvage or recycling any refuse consisting of or containing putrescibles, any liquid wastes, hot ashes or materials otherwise restricted by section **number**.</p>	
193	All	Approval, Operational Certificate, Permit	Standard	<p>n/a</p>	<p><b>Licence to Publish Documents</b></p> <p>a. Subject to paragraph b, the &lt;&lt;Permittee/Approval Holder&gt;&gt; authorizes the Province to publish on the Ministry of Environment website the entirety of any Regulatory Document. [OPTIONAL: The Province will provide written notice to the &lt;&lt;Permittee/Approval Holder&gt;&gt; of its intent to publish a Regulatory Document at least [14] days prior to publication.]</p> <p>b. The Province will not publish any information that could not, if it were subject to a request under section 5 of the Freedom of Information and Protection of Privacy Act, be disclosed under that Act. [OPTIONAL]</p> <p>c. The &lt;&lt;Permittee/Approval Holder&gt;&gt; will indemnify and save harmless the Province and the Province's employees and agents from any claim for infringement of copyright or other intellectual property rights that the Province or any of the Province's employees or agents may sustain, incur, suffer or be put to at any time that arise from the publication of a Regulatory Document.</p> <p><b>Publication of documents</b></p>	<p><b>GLOSSARY TERM:</b></p> <p>"Province" means Her Majesty the Queen in right of British Columbia;</p> <p>"Regulatory Document" means any document that the &lt;&lt;permittee/approval holder&gt;&gt; is required to provide to the Director or the Province pursuant to: (i) this authorization; (ii) any regulation made under the Environmental Management Act that regulates the facility described in this authorization or the discharge of waste from that facility; or (iii) any order issued under the</p>

					<p>The Ministry of Environment publishes Regulatory Documents on its website for the purpose of research, public education and to provide transparency in the administration of environmental laws. The &lt;&lt;Permittee/Approval Holder&gt;&gt; acknowledges that the Province may publish any Regulatory Document submitted by the &lt;&lt;Permittee/Approval Holder&gt;&gt;, excluding information that would be excepted from disclosure if the document was disclosed pursuant to a request under section 5 of the Freedom of Information and Protection of Privacy Act, and the &lt;&lt;Permittee/Approval Holder&gt;&gt; consents to such publication by the Province.</p> <p>(Updated March 22, 2018)</p>	Environmental Management Act directed against the <<permittee/approval holder>> that is related to the facility described in this authorization or the discharge of waste from that facility;
-	All	Approval, Operational Certificate, Permit	Standard	n/a	<p><b>GLOSSARY</b></p> <p>“Authorized Works” means [[Authorized Works]] as stated in Section 1.1.X;</p> <p>“Facility” means &lt;&lt;facility&gt;&gt; at &lt;&lt;facility location&gt;&gt; &lt;&lt;municipality&gt;&gt;, British Columbia;</p> <p>“Province” means Her Majesty the Queen in right of British Columbia; and</p> <p>“Regulatory Document” means any document that the &lt;&lt;Permittee/Approval Holder&gt;&gt; is required to provide to the Director or the Province pursuant to: (i) this authorization; (ii) any regulation made under the <i>Environmental Management Act</i> that regulates the facility described in this authorization or the discharge of waste from that facility; or (iii) any order issued under the <i>Environmental Management Act</i> directed against the &lt;&lt;Permittee/Approval Holder&gt;&gt; that is related to the facility described in this authorization or the discharge of waste from that facility.</p>	These 4 definitions seem to be standard throughout all permits. Additional glossary terms are to be added in alphabetical order.
194	Refuse			No open burning of waste shall take place either as a deliberate or accidental action by the permittee, or as a deliberate or accidental fires set by others. The permittee shall immediately extinguish fires of this nature and notify the Regional Waste Manager.	The <<Permittee/Approval Holder>> must not allow the open burning of waste at the site caused by any means, including a deliberate or accidental action by the <<Permittee/Approval Holder>> or others. The <<Permittee/Approval Holder>> must immediately extinguish all fires of this nature and notify the Director within 24 hours.	
195	Refuse			Upon closure, the Permittee must have the boundaries of the landfilled area legally surveyed by a Qualified Professional. The Permittee must register a waste disposal covenant against the land title as provided for under Section 219 of the BC Land Title Act.		REMOVED – unless needed for specific permits (abandonment and purchase of land).



ENVIRONMENTAL PROTECTION DIVISION

## SAP 2.0 GUIDANCE

# GLOSSARY AND ACRONYM INDEX

Revision 1.0

Effective December 1, 2016

**Policy & Procedure Reference Code:** EPD-SAP-GUI-01

- Purpose:** This index relates to the administration of the application process under the *Environmental Management Act (EMA)*. It provides definitions for key terms and acronyms.
- Scope:** All authorization applications under EMA that are classified as Routine and Express Transactions.
- Responsibility:** Staff in Business Services Branch and Regional Operations Branch.
- References:** EMA Application Process Overview  
*Environmental Management Act*

Approved by: **Jennifer McGuire**, Executive Director, Regional Operations Branch

Date approved:

Contacts: AJ Downie, Regional Director, Authorizations South  
Cassandra Counce, Regional Director, IPM & Branch Projects

## Glossary

Terms	Definition
<b>Application</b> <ul style="list-style-type: none"> <li><b>Preliminary Application</b></li> <li><b>Final Application</b></li> </ul>	<p>Preliminary and Final Applications pertain to the Routine Application process only (Express Transactions do not use Preliminary Applications).</p> <ul style="list-style-type: none"> <li><b>Preliminary Application:</b> A completed form that is used as the first initial contact with the Ministry by an applicant who wishes to seek authorization to discharge waste under the <i>Environmental Management Act</i>. This application initiates the Intake Phase of the Routine application process.</li> <li><b>Final Application:</b> application completed form that is submitted to the ministry by an applicant who feels they have provided sufficient information to render an authorization decision.</li> </ul>
<b>Application Instruction Document (AID)</b>	<p>The AID is a report-style letter used to summarize the information required for a Final Application. It includes the Information Requirements Table, requirements for public and First Nation engagement, and any additional project-specific application requirements.</p> <p>The AID is drafted by the Environmental Protection Officer for the SDM to consider and uses information that has been entered on the “Requirements Tab” in AMS as its platform.</p>
<b>Application Review Queue (ARQ)</b>	<p>In AMS, the ARQ refers to all applications that are moving through the ministry’s application process, including applications in the following statuses: Preliminary Application, Pending Final Application, Screening, In Review and Waiting for Decision.</p>
<b>BC Water Quality Guidelines (BC WQGs)</b>	<p>A maximum and/or minimum value for a physical, chemical or biological characteristic of water, sediment or biota, applicable province-wide, which should not be exceeded to prevent specified detrimental effects from occurring to a given water use (e.g., aquatic life), under specified environmental conditions.</p> <p>BC’s Approved and Working WQGs can be found at the following website:  <a href="http://www.env.gov.bc.ca/wat/wq/wq_guidelines.html">http://www.env.gov.bc.ca/wat/wq/wq_guidelines.html</a></p>

<b>Corporate Request Tracking System (CRTS)</b>	CRTS is an Oracle web based Freedom of Information (FOI) request tracking management system. It is a tool that permits ministries to track and manage all FOI requests received by Government under the <i>Freedom of Information and Protection of Privacy Act</i> .
<b>Designated Water Uses</b>	BC WQGs and Site Specific Water Quality Objectives protect specific designated water uses. These include source drinking water, aquatic life (and their consumers), wildlife, agriculture (livestock watering and irrigation), recreation, aesthetic, and industrial supplies.
<b>Environmental Impact Assessment Review (EIA)</b>	The purpose of an EIA review is to provide context and recommendations to a person making statutory decisions under EMA. In the context of applications, an EIA review is completed by the Subject Matter Expert (e.g. EIA Biologist or Meteorologist) that the Environmental Protection Officer relies upon to draft authorization requirements.
<b>Escalation procedure</b>	A procedure to resolve divergence(s) of opinion(s) between the applicant and ministry staff or between ministry staff working on the file. The outcome provided by the Escalation Procedure is a non-statutory decision or direction, in the form of a letter, from a statutory decision maker (SDM) regarding issues that an Environmental Protection Officer (EPO) or Environmental Impact Assessment Biologist (BIO) and sometimes other colleagues, have brought to the SDM's attention.
<b>Express Transaction Process</b>	The Express Transaction Process is for relatively low-risk waste discharge applications that involve simple registration or notification processes, or minor changes to existing authorizations (e.g. Name or address changes, transfers, and cancellations of air or effluent permits). Express Transactions will generally be processed within 2 to 4 weeks of acceptance of the application package.
<b>Information Requirement Table (IRT)</b>	The IRT is a sub-component of the Application Instruction Document (AID). It is a table that defines the technical content of the Technical Assessment Report (TAR) that must be provided by the applicant. The IRT also documents, if relevant, information on proposed methods for specific items in the TAR.
<b>Intake Phase</b>	The first phase in the EMA application process. During the Intake Phase, Vic Admin receives all applications and ensures that all requisite information is present and entered into AMS. Administratively complete applications receive an AMS tracking number and then proceed either within the Express Transaction Process or the Routine Application Process.

<b>Major amendment</b>	Ministry staff commonly use the term “major amendment”, however under the Public Notification Regulation, it is called a “significant amendment”. A significant amendment is an authorization amendment that does not meet the criteria for a minor amendment, as defined in the Public Notification Regulation.
<b>Method Review</b>	A method review is the review of the methods that the applicant will use in the TAR. The intent of this review is to reach an agreement between the applicant and the ministry regarding which methods will be employed in advance of conducting the actual assessments, to ensure that the methods are appropriate and acceptable to the ministry.
<b>Method Package</b>	May be required in instances where non-standard methods are used. The Method Package is included in the IRT and therefore forms part of the information required in the TAR to support the application.
<b>Minor Amendment</b>	<p>Minor amendment has the same meaning as in the Public Notification Regulation.</p> <p><i>"minor amendment" means an amendment to a permit or approval for any of the following purposes:</i></p> <ul style="list-style-type: none"> <li><i>(a) a change of ownership or name;</i></li> <li><i>(b) a change of legal address or mailing address;</i></li> <li><i>(c) a decrease in the authorized quantity of the discharge, emission or stored material;</i></li> <li><i>(d) an increase in the authorized quantity of the discharge, emission or stored material that does not exceed 10% of the authorized quantity;</i></li> <li><i>(e) a change in the authorized quality of the discharge, emission or stored material such that, in the opinion of a director, the change has or will have less impact on the environment;</i></li> <li><i>(f) a change in a monitoring program;</i></li> <li><i>(g) a change to the works, method of treatment or any other condition of a permit or approval such that, in the opinion of a director, the change has or will have less impact on the environment.</i></li> </ul>
<b>Preliminary Application</b>	A completed form that is used as the first initial contact with the Ministry by an applicant who wishes to seek authorization to discharge waste under the <i>Environmental Management Act</i> . This application initiates the Intake Phase of the application process.

<b>Preliminary Application Meeting</b>	A meeting between the applicant and the ministry during the Preliminary Application Phase. The purpose is to be introduced to and discuss the proposed project, and to discuss the application requirements that will be included in the Application Instruction Document (AID). The meeting(s) is initiated, scheduled and organized by the EPO, in collaboration with the applicant and the review team. A subject matter expert may be asked to attend along with the EPO.
<b>Preliminary Application Phase</b>	The Preliminary Application Phase the second of four phases in the Routine Application Process (i.e. the Intake Phase, Preliminary Application Phase, Screening Phase and Review & Decision Phase). Its objective is to determine the components and requirements for a complete Application Package (information requirements are specified in the AID).
<b>Preliminary Application Queue (PAQ)</b>	The queue of preliminary applications that have passed through the Intake Phase and are waiting to enter the Preliminary Application Phase. These are AMS jobs that are waiting for assignment to an EPO by a Section Head.
<b>Review and Decision Phase</b>	The Review and Decision Phase is of the last of the four phases in the Routine Application Process (i.e. the Intake Phase, Preliminary Application Phase, Screening Phase and Review & Decision Phase). It is the final step which entails a detailed final review of the Final Application Package, development of the terms and conditions associated with the application and the resulting authorization, and a decision on the application by an SDM which may take the form of an authorization or a refusal of the application.
<b>Routine Application Process</b>	The Routine Application Process is for waste discharge applications that require technical assessments and reviews by ministry staff to inform good authorization decisions that are protective of the environment. These are applications for activities described in the Waste Discharge Regulation under the <i>Environmental Management Act</i> (EMA) that require a permit, approval or operational certificate (new or amended). More complex regulatory registration processes under the Municipal Wastewater Regulation and Hazardous Waste Regulation are also managed according to the Routine Application Process. It is composed of four phases: the Intake Phase, Preliminary Application Phase, Screening Phase and Review & Decision Phase.
<b>Science Based Environmental Benchmarks (SBEs)</b>	Quantifiable receiving environment parameters or attributes developed by qualified professionals through a rigorous scientific process with the intent to guide management decisions and mitigative actions for a regulated activity at a specific location.

<b>Screening Phase</b>	The Screening Phase is third of four phases in the Routine Application Process (i.e. the Intake Phase, Preliminary Application Phase, Screening Phase and the Review & Decision Phase). It has two components: administrative screening and technical screening. It is the phase when Final Application Packages are reviewed first by Vic Admin (administrative screening) and then by a Technical Screener in ROB (technical screening) to confirm that requisite technical information and other supporting materials defined in the AID are provided in sufficient quantity and quality to support a decision on the application.
<b>Site Specific Water Quality Objectives</b>	See Water Quality Objectives
<b>Technical Assessment Report (TAR)</b>	<p>An assessment report created by the applicant that includes details about the pollution prevention alternatives assessed, the source, volumes and characteristics of the waste, how the treatment selected compares to Best Commercially Achievable Technology, and expected quality of the waste after treatment. Information about the receiving environment prior to the discharge should be provided, as well as predicted changes to the receiving environment within and beyond the initial dilution zone. Any objectives or other criteria applicable to the receiving environment should be considered, as well as the known and potential uses of the receiving environment.</p> <p>Additional information can be found in the following guidance documents: <a href="#">Guidance on Applications for Permits – Technical Assessment</a> and <a href="#">Technical Guidance 1: Environmental Impact Assessment and Technical Assessment Terms of Reference</a>.</p>
<b>Statutory Decision Maker (SDM)</b>	An individual, typically a Section Head or Regional Director, who has delegated authority under the Environmental Management Act as a Director who can make certain decisions. A delegation letter issued to the individual lists specifically what powers have been delegated.
<b>Subject Matter Expert (SME)</b>	Typically a biologist, meteorologist or hydrologist. A ministry staff person with specific scientific expertise.



**Water Quality  
Objectives (WQOs)**

WQOs, also known as Site Specific Water Quality Objectives (SSWGOs), are science-based tools that provide an effective basis for managing aquatic ecosystems. They are based on the BC WQGs and prepared on a site-specific basis, with due regard for the water quality, water uses (including aquatic life), water movement, and waste discharges at a given location. Once approved and signed off by the Assistant Deputy Ministers of the appropriate departments, the WQOs constitute official ministry policy and provide guidance for resource managers to use in protecting water uses in specific water bodies. Where objectives have not been developed, the BC approved WQGs or Working Water Quality Guidelines are used to protect water quality.

**Working Water  
Quality Guidelines**

The Working Water Quality Guidelines bring together guidelines that have not yet been approved by the Province. These guidelines are primarily sourced from the Canadian Council of the Ministers of the Environment (CCME). These working guidelines provide benchmarks for those substances that have not yet been fully assessed and formally endorsed by the Ministry. They will be reviewed by the Ministry on a priority basis for their formal approval and use in British Columbia. BC's Working WQGs can be found at the following website: <http://www.env.gov.bc.ca/wat/wq/BCguidelines/working.html>

## Acronym Index

AID – Application Instruction Document

ARQ – Application Review Queue

BC WQG – BC Water Quality Guidelines

COP – Code of Practice

CRTS – Corporate Request Tracking System

EIA – Environmental Impact Assessment

EMA – Environmental Management Act

ENV – Ministry of Environment

EPO – Environmental Protection Officer

HWR – Hazardous Waste Regulation

IRT – Information Requirement Table

MOE – Ministry of Environment

MWR – Municipal Wastewater Regulation

OMRR – Organic Matter Recycling Regulation

PAQ – Preliminary Application queue

RD – Regional Director

ROB – Regional Operations Branch

SBEB – Science Based Environmental Benchmarks

SDM – Statutory Decision Maker

SH – Section Head


SME – Subject Matter Expert

TAR – Technical Assessment Report

VicAdmin – Victoria Permit Administration, work unit within Business Services Branch

WDR – Waste Discharge Regulation

WQO – Water Quality Objectives

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	Section	Subsection
		2.0	2.01.08a

**Name of Policy:** **Statutory Decision Making in the area of the Elk Valley Area Based Management Plan**

**Replaces:** None

**Application:** This policy applies to all Environmental Protection Division staff.

**Purpose:** This policy provides guidance to division staff regarding who has delegated statutory authority to make decisions within the area of the Elk Valley Area Based Management Plan.

**Policy Statement:** November 18, 2014, Minister Mary Polak approved the Elk Valley Area Based Management Plan (ABMP) (Ministerial Order No. M113).

In accordance with section 90(2) of the *Environmental Management Act*, the Minister ordered that any decisions or classes of decisions undertaken by a Director under the *Environmental Management Act* take into consideration the ABMP for the area designated in the Plan.

Due to the complexities of the ABMP, the Directors under EMA have restricted the delegated authority for statutory decisions within the area of the ABMP. Individual delegation letters will identify those individuals which have delegated authority in the ABMP area.

Those that have delegated statutory authority must be mindful of the commitments of the ABMP. Specifically, the approved ABMP contemplates short-term, medium-term and long-term water quality concentration targets with the objectives and outcomes for the designated area including:

- a. The protection of aquatic ecosystem health;
- b. Management of bioaccumulation of contaminants in the receiving environment (including fish tissue);
- c. Protection of human health; and
- d. Protection of groundwater.

The ABMP addresses the requirements of the Order (M113) to:

- Immediately begin to stabilize water quality concentrations in the short-term;
- Reduce the rate of formation of calcite and set targets to demonstrate progressive reduction in water quality

- concentrations in the medium-term; and
- Further reduce concentrations of contaminants in the longer-term.

Long-term concentration targets and time-frames for selenium, cadmium, nitrate, and sulphate were developed considering:

- Current contaminant concentrations;
- Current and emerging economically achievable treatment technologies;
- Sustainable balancing of environmental, economic and social costs and benefits; and
- Current and emerging science regarding the fate and effects of contaminants.

**References and Relationships:**

- 2.01.08 Delegated Statutory Authority under Environmental Management Act
- 2.01.09 Statutory Decision Making Handbook

**Approval:**




**Date:** JUL 14 2015

Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Cindy Meays, A/Deputy Director, Regional Operations Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.0	2.01.12

**Name of Policy:** **Environmental Assessments and Permitting in the area of the Elk Valley Area Based Management Plan**

**Replaces:** None

**Application:** This policy applies to all Environmental Protection Division staff.


**Purpose:** On November 18, 2014, the Minister approved the Elk Valley Area Based Management Plan (ABMP) titled "Elk Valley Water Quality Plan" (Ministerial Order No. M113). This policy is intended to support MOE staff in dealing with Environmental Assessment (EA) reviews, Concurrent Permitting, and the implementation of the ABMP, the Valley Wide Permit (#107517), and new projects being considered in an EA process. It is also to provide clear guidance to MOE staff that the EA process is not the venue to amend/change any of the conditions in the ABMP or the Valley Wide Permit (#107517).

**Policy Statement:** Due to the complexities of the ABMP and the Valley Wide Permit (#107517), division staff must be mindful of the commitments made when undertaking activities associated with the administration of the *Environmental Management Act* (EMA), this includes commenting on EAs.

**References and Relationship:**

- Area Based Management Plan (also known as Elk Valley Water Quality Plan) (#211287).
- Valley Wide Permit (#107517)
- Ministerial Order (M113)
- 2.01.08a Statutory Decision Making in the area of the Elk Valley Area Based Management Plan
- Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators

**Approval:**

  
Assistant Deputy Minister,  
Environmental Protection Division

**Date:** June 29, 2016

**Contact Person:** Cindy Meays, A/Deputy Director, Regional Operations Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

## TABLE OF CONTENTS

1) ABMP.....	4
2) Valley Wide Permit (#107517).....	5
3) EA Processes.....	6
4) Concurrent Permitting.....	7

## 1) ABMP

The ABMP is a management plan that was created as a requirement of a Minister's Order (M113) to address a very unique set of circumstances. The approved plan is not considered an environmentally "protective" plan; it is a management plan to improve the existing environmental quality in the Elk Valley.

The designated area (Figure 1) is defined as per the Order as commencing at a point on the Canada-USA boundary and the present natural boundary of the west shore of Lake Koocanusa, thence running northerly along the west shore of Lake Koocanusa to where BC Highway 3 crosses the Kootenay River, thence following the south boundary of the BC Highway 3 Bridge to the present natural boundary of the east shore of Lake Koocanusa, thence running easterly to point on the height of land, thence running north-easterly along the height of land to a point on the west boundary of the Elk River watershed at UTM coordinate N 5485499m+/- E 629000m+/-, thence northerly along the west boundary of the Elk River watershed to the intersection of the Height of the Rockies Provincial Park boundary, thence continue along the eastern boundary of Height of the Rockies Provincial Park and thence the eastern boundary of Elk Lake Provincial Park to the Alberta-British Columbia provincial boundary, thence southerly along the Alberta-British Columbia provincial boundary to the north-east corner of the Flathead River watershed boundary, thence westerly and southerly along the west boundary of the Flathead River watershed to the Canada-USA boundary, thence westerly to the point of commencement.

The approved ABMP contemplates short-term, medium-term and long-term water quality concentration targets for selenium, cadmium, nitrate and sulphate (contaminants listed in Order M113) with the objectives and long-term outcomes for the designated area including:

- The protection of aquatic ecosystem health;
- Management of bioaccumulation of contaminants in the receiving environment (including fish tissue);
- Protection of human health; and
- Protection of groundwater.

The ABMP applies to all EMA-related activities in the designated area and addresses the requirements of Order M113 to:

- Immediately begin to stabilize water quality concentrations of selenium, cadmium, nitrate and sulphate in the short-term;
- Reduce the rate of formation of calcite and set targets to demonstrate progressive reduction in contaminant concentrations in the medium-term; and
- Further reduce water quality concentrations of contaminants in the longer-term.



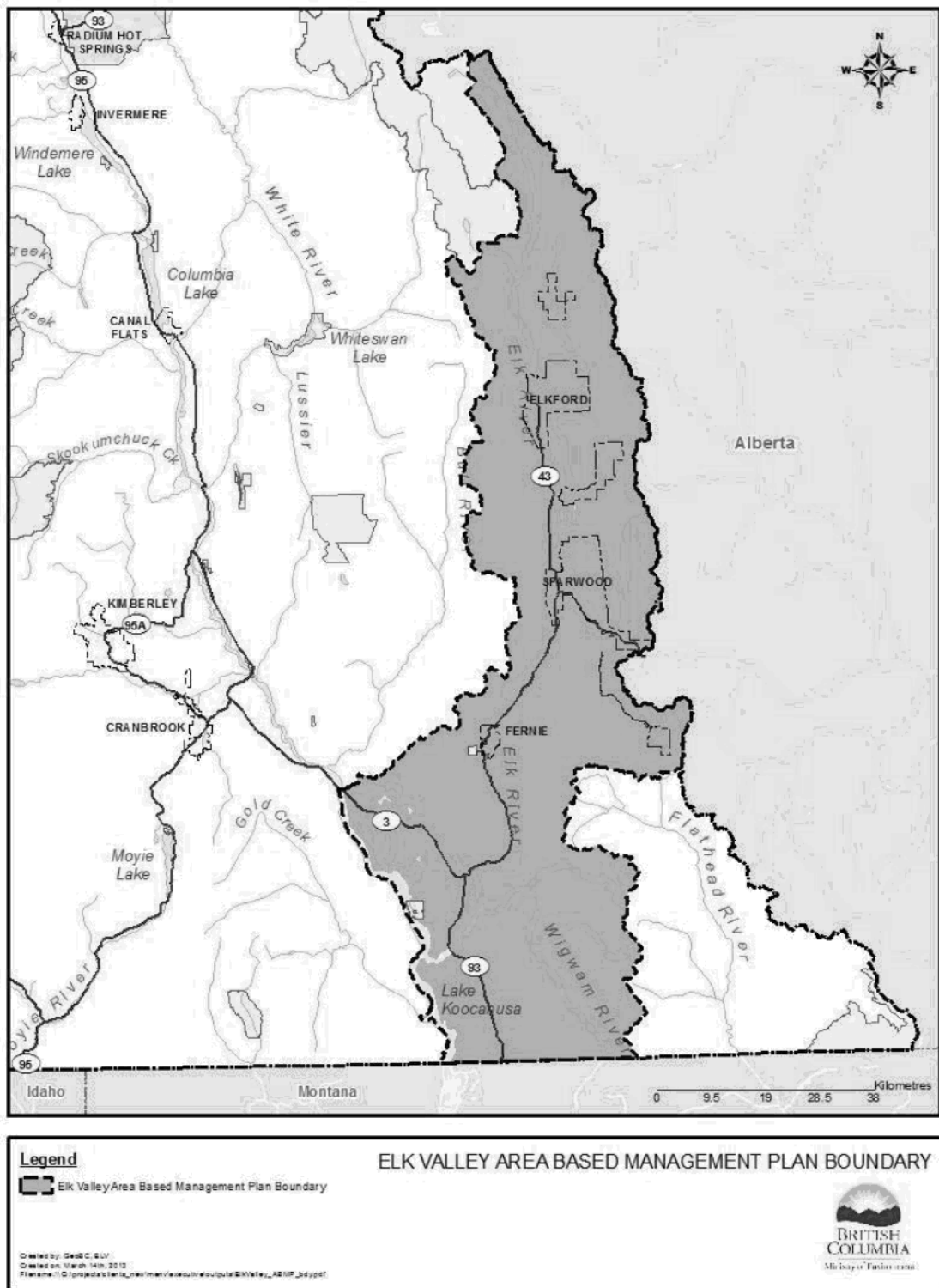


Figure 1. Map of the Elk Valley Area Based Management Plan Boundary

Water quality targets set in the ABMP were required to stabilize and improve water quality in the designated area, and were not intended to allow for elevated loadings in currently un-impacted watersheds.

Long-term concentration targets and timeframes for selenium, cadmium, nitrate, and sulphate were developed considering:

- Current contaminant concentrations;
- Current and emerging economically achievable treatment technologies;
- Sustainable balancing of environmental, economic and social costs and benefits; and
- Current and emerging science regarding the fate and effects of contaminants.

All new proposed projects, and amendments to existing projects, must consider and be in alignment with the ABMP.

## **2) Valley Wide Permit (#107517)**

The Valley Wide Permit is a unique permit, as it covers a group of mine projects within a designated area. The permit is for environmental management and does not ensure environmental protection levels are achieved at all locations within the designated area. Traditional EMA permits or approvals which regulate point source discharges ensure environmental protection is achieved. Due to the existing water quality concentrations in specific sections of streams in the designated area, the Valley Wide Permit requires actions to see overall watershed scale water quality improvements, eventually achieving water quality levels at some points in the watershed that are protective of environmental values.

Staff must be aware that the Valley Wide Permit (#107517):

- Is the regulatory tool for the ABMP commitments, and has a compliance plan in place;
- Applies to the five existing Teck Coal Operations (i.e., Fording River, Greenhills, Line Creek, Elkview, Coal Mountain, and West Line Creek Active Water Treatment Facility) (note: the ABMP modelling considered more than the five projects listed in the permit);
- Authorizes water quality concentrations from mine site properties at specific determined compliance points; it does not authorize all point source discharges, and the traditional initial dilution zone approach did not apply to the permit units;
- Does not apply to new proposed projects in the area, as future projects will have their own discharge permit requirements;
- Has its own review and amendment process and should not be included in other projects or EA discussions; and

- Should not be considered an allocation of “assimilative capacity” and further actions may be necessary by all dischargers to control and limit the impacts associated with contaminants of concern to provide appropriate protection of aquatic resources.

### **3) EA Processes**

EAs are conducted to assist in determining whether proposed major projects should proceed and, if so, under which terms and conditions. Proposed projects are reviewable if they meet or exceed certain thresholds defined in the Reviewable Projects Regulation of the *Environmental Assessment Act*.

EA provides an integrated process for identifying, mitigating and evaluating the potential significant adverse environmental, economic, social, heritage, and health effects that may occur during the life of a reviewable project. It also ensures that the issues and concerns of the public, First Nations, stakeholders, and government agencies are considered.

Environmental Assessment Office (EAO) leads the review of major projects and prepares an assessment report detailing the findings of each review. The report, along with recommendations and the project application, is referred to two government Ministers, one of which is the Minister of Environment. For a proposed mining project, the second Minister is the Minister of Energy and Mines. The Ministers decide whether to issue an EA certificate, subject to any identified legally binding conditions. Additional details of how a reviewable project may be undertaken are addressed through the permitting process. In general, EA certificate conditions should not contain detail that is more appropriately left to permitting decisions.

Staff participating in EAs should consider the following:

#### **Out of Scope for EA Processes**

- The Valley Wide Permit (#107517) is for existing operations and has its own review and revision process. The EA is not the venue to review the permit (e.g., changes to the permit levels or conditions must not be contemplated via the EA process).
- The EA is not the venue to review or propose changes to the ABMP.

#### **In Scope for EA Processes**

- The assessment of the potential adverse environmental, economic, social, heritage and health effects that may occur during the life cycle of a proposed project.
- The approval of the environmental and socio-economic concepts and viability of a proposed project (not the detailed regulatory requirements for a proposed project - that is for permitting/authorizations).

- Comments identifying where the EA application does not meet the expectations of the ABMP, the ABMP approval letter, and/or the requirements of the Valley Wide Permit (#107517).
- Comments on EA applications should consider how the project under review is supporting the implementation of the ABMP.
- Comments related to waste rock management should reflect the commitment to employ best science and technology for new development where feasible.
- Comments about mine planning and sequencing of operations to maximize opportunities to backfill should consider both the short-term operational needs as well as the preference to sequence mine operations to maximize opportunities to backfill waste, thus avoiding having to treat, and minimizing longer-term liability.
- Mining practices and design should attempt to minimize or prevent potential impacts. Treatment should be considered as a last option to manage discharges to acceptable levels.
- The need for additional treatment plants arising from proposed new reviewable projects may be determined based on the review process. The ABMP cites decreasing levels of contaminants and improving water quality, therefore all new projects or developments not included in the Valley Wide Permit must be based on the best technology with a long-term goal of restoring water quality to environmentally protective levels (i.e. water quality guidelines, water quality objectives, science-based environmental benchmarks).
- All EA projects in the designated area are expected to contribute to management of cumulative effects and the achievement of the goals in the approved ABMP.
- All comments provided should be consistent with the tributary management requirements of the ABMP. EA comments should focus on mitigations related to proposed developments that are necessary to achieve ABMP targets, especially focussing on the long-term goal of restoring water quality to environmentally protective levels. Where tributary management plans are not available, it is expected that comments reflect the need to protect remaining aquatic habitat, with an emphasis on high value habitat for fish and water quality.
- It is expected that the ABMP supporting documents provide much of the baseline information, particularly for the order constituents in the designated area.
- Requests for any additional information needs to be justified based on clear data gaps in the ABMP relative to project/site-specific conditions, as well as supporting rationale about how the information would assist MOE in advising EAO on the EA. It is possible that additional baseline information may be needed to fill gaps for new development areas or non-plan constituents to support permitting.

#### 4) Concurrent Permitting

Concurrent Permitting is a process that is enabled under the Concurrent Approval Regulation of the *Environmental Assessment Act*. If a proponent applies for concurrent permitting and meets the requirements under the Regulation, then within 60 days after the issuance of an EA certificate, the ministries responsible for the permit decisions must:

- a) issue the eligible approval;
- b) refuse to issue the eligible approval and provide reasons for the refusal; or
- c) specify a later date on which the proponent will be given a decision on the application for the eligible approval and provide reasons for the delay.

For mining projects, Concurrent Permitting is managed through a project specific Mine Development Review Committee which will be managed by the new Major Mine Project Office of MEM (MMPO).

There may also be Mine Development Review Committees to coordinate all permit reviews after EA's or during EA's that are not under the Concurrent Approval Regulation.

Concurrent permitting is the process for detailed discussion on permit conditions and levels for new permits/authorizations. This process will require more detailed information and modeling than the EA process.

Staff in concurrent permitting processes should consider the following guidance:

##### Out of Scope for Concurrent Permitting Processes


- The Valley Wide Permit (#107517) is for existing operations and has its own review and revision process. The EA is not the venue to review the permit (e.g., changes to the permit levels or conditions must not be contemplated via the Concurrent Permitting process).
- Concurrent Permitting processes are not the venue to review or propose changes to the ABMP.

##### In Scope for Concurrent Permitting Processes

- For permitting, project-specific information and modelling is needed for the project under consideration (See Standard Operating Procedures – Mining Operations Team: Expectations for Site Specific Water Quality Modelling to Support EMA Permitting in the Designated Area under the Area Based Management Plan).
- In the absence of a “tributary management plan” (see Section 5 in the Valley Wide Permit #107517), staff commenting on proposed projects in un-impacted tributaries should utilize current water quality tools (e.g. water quality guidelines, water quality objectives, and science-based environmental benchmarks).
- Staff should discuss with the relevant Statutory Decision Maker (SDM) whether consideration of a site performance objective (SPO) is warranted. This should

include direction on how to communicate the guidance clearly to the proponent early in the process. Staff should be aware that SPOs set in the ABMP were to stabilize and improve water quality in impacted areas and were not intended to allow for elevated loadings in currently un-impacted watersheds.

- Although the EA and Concurrent Permitting processes need to relate to each other, the level of detail and depth of technical issues and discussions needs to be separated. It is expected that information requirements for concurrent permitting would be sufficiently detailed to set permit limits, set required SPOs, and design monitoring programs.

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.01	2.01.13

**Name of Policy:** Guidelines for the authorization of incinerators in industrial camp locations.

**Replaces:** None

**Application:** Environmental Protection Division, Regional Operations Branch

**Purpose:** This policy applies to the incineration of Municipal Solid Waste (MSW), in industrial camps.


**Policy Statement:** This policy provides guidance to use when authorizing the discharge of emissions resulting from the incineration of MSW, and in particular, provide the regulatory approach for incinerators servicing camps capable of housing  $\geq 100$  persons and within an estimated MSW incineration rate of less than 400 kg/hr.

This policy applies to the incineration of MSW, including food waste and food contaminated packaging and materials. This policy does not apply to incineration of sewage sludge or biosolids.

This policy also provides guidance on promoting compliance with the Canadian Council of Ministers of the Environment (CCME) Canada-wide Standards for Dioxins and Furans and the Canada-wide Standards for Mercury Emissions. British Columbia is a signatory to both documents and obligated to ensure that their requirements are incorporated into the provincial regulatory system.

**References and Relationships:** Environmental Management Act.  
Environment Canada. 2010. Technical Document for Batch Waste Incineration  
Industrial Camps Fact Sheet  
Regional Solid Waste Management Plans  
Municipal Solid Waste Incineration Policy  
Combustion of Municipal Solid Waste Fact Sheet

**Approval:**

  
Assistant Deputy Minister  
Environmental Protection Division

**Date:** July 19, 2016

**Contact Person:** Doug Hill, Regional Director Mining Operations  
Regional Operations Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):



### **Environmental Considerations:**

Industrial, recreational, exploration, or construction camps in remote areas historically disposed of their MSW by landfilling or incineration. In remote settings, landfilling has proven ineffective in stopping wildlife attraction, even at well operated sites that provide regular compaction and covering. As a result, landfills for waste at remote camps are not generally authorized.

The most effective means of reducing wildlife attraction to refuse at remote camps is by daily incineration of MSW. To date, the regulatory requirements/conditions relating to the proper operation of incinerators has been lacking and/or inconsistent in ensuring that air contaminants discharged are minimized.

There are some important potential environmental concerns associated with waste incineration that must be addressed through proper equipment selection, operation, maintenance and record keeping. These include potential releases of mercury, as well as dioxins and furans (PCDD/F), which are persistent organic pollutants (POPs). Mercury and POPs bio-accumulate in the environment and may cause adverse effects to human health and the environment. They can also be transported over long ranges; data from measurements in the North reveal concentrations far greater than what might be explained by local production. PCDD/F are generated through the combustion of MSW and production is exacerbated when inadequate incineration technology is used or when an incinerator is improperly operated. Mercury is not created in an incineration system; emissions are directly related to the presence of mercury in certain waste materials. Therefore, the best method to control mercury emissions is to limit the quantity of mercury in the waste fed to the incinerator through diligent waste segregation (EC 2010).

### **Ministry of Environment (MOE) Context:**

Incineration of MSW is a prescribed activity in the Waste Discharge Regulation (WDR) (see below) and thus require an authorization under the *Environmental Management Act (EMA)* unless there is a specific exemption in *EMA* or the WDR.

1. Burning of waste from an industry, trade, business is prescribed in Schedule 1 of the WDR under the *EMA*. As such, the discharges associated with this activity require an authorization to discharge unless there is a specific exemption provided.
2. Management, treatment or discharge of refuse that:
  - (a) originates from residential, **commercial**, institutional, demolition, land clearing or construction sources, or
  - (b) is included in a waste management plan;

is prescribed in Schedule 1 of the WDR under the *EMA*. As such, the discharges associated with this activity require an authorization to discharge unless there is a specific exemption provided.

### ***EMA* permitting and emission criteria classification**

Varying requirements exist with regard to permitting and emission criteria for MSW incineration, which are based on three classes, differentiating according to size of operation. Listed in increasing size of operation, these classes are:

**1) <100 person remote camp** - Section 3 (7) of the WDR states:

“The emissions and ash from a commercially available auxiliary fuel fired refuse incinerator that serves a remote industrial, recreational, exploration or construction camp designed to accommodate fewer than 100 persons are exempt from the application of section 6 (2) and 6 (3) of the *EMA*.” These operations do not require authorization to incinerate MSW and no provincial emission limits or guidelines apply provided that they use a commercially available, refractory-lined, auxiliary fuel fired refuse incinerator.

**2) ≥100 person camp** - Camps accommodating greater than 100 persons require an authorization (permit or approval to discharge air emissions) under the *EMA* to incinerate MSW. No provincial emission limits or guidelines are currently applied; however, a typical permit clause is “The characteristics of the emissions must be typical of those resulting from a well operated auxiliary fuel fired refuse incinerator”.

**3) >400 kg/hr of MSW combusted** – Facilities that combust more than 400kg/hr of MSW require an authorization under the *EMA*. The Guideline for Emissions from MSW Combustion (March 29, 2011) developed for mass burn facilities provides guidance on provisions that could be considered in the authorization process. .

Estimated per capita incineration weights vary according to operational requirements and waste segregation practices employed at each site (recycle, re-use, disposal of inert non-combustible waste by landfilling, and appropriate disposal of hazardous materials). When appropriate waste segregation methods are practiced, on average 1 to 2 kg/person/day of waste is typically generated at remote camps. Therefore, based on an incineration rate of 400kg/hr (class 3 above), typical incinerator burn cycle of 6-8 hrs/day, and an estimated waste generation rate of 1 to 2 kg/person/day, class 3 is estimated to roughly correspond to a 1200 to 2400 person camp or larger.

### **Federal Context:**

In 2010, Environment Canada developed the Technical Document for Batch Waste Incineration<sup>1</sup> (hereinafter Technical Document) with the intent of achieving the Canada-wide Standards for PCDD/F and mercury endorsed by the Canadian Council of Ministers of the Environment (CCME) in 2001 and 2000 respectively, identifying incineration for action to reduce emissions and adopting specific air emission standards. Both PCDD/F and mercury are on the List of Toxic Substances in Schedule 1 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999) (EC 2010). Additionally, the *Stockholm Convention on Persistent Organic Pollutants (POPs)*, which entered into force in May 2004 and to which Canada is a Party, identifies incineration as a potential source of POPs, and establishes a range of measures to reduce and, where feasible, eliminate their release. It also requires that the best available techniques (BAT) and best environmental practices (BEP) be applied for both new and substantially modified sources of POPs (EC 2010).

As stated in the Executive Summary, the Technical Document for Batch Waste Incineration was developed to provide guidance for incinerator owners and operators on proper system selection, operation, maintenance, and record keeping, with the goals of achieving the Canada-wide Standards for dioxins/furans and mercury, and reducing releases of other toxic substances. This document includes:

- A discussion of the importance of reducing, reusing and recycling to divert wastes from disposal;
- Methods for the selection of appropriate incineration technologies to meet specific waste management requirements;
- Operational requirements that should allow batch incinerators to meet the intent of the Canada-wide Standards for dioxins/furans and mercury, and to reduce the release of other toxic substances; and
- Recommendations on record keeping and reporting.

The Technical Document focuses on minimizing dioxins/furans and mercury emissions from batch waste incinerator systems ranging in size from 50 kg to 3000 kg of waste/batch, the latter representing the largest batch incinerator currently in use in Canada. Batch waste incinerators are those that operate in a non-continuous manner (i.e. they are charged with waste prior to the initiation of the burn cycle, and the door remains closed until the ash has cooled inside the primary chamber). Air emission testing completed by Environment Canada in 2002 using a modern Canadian-built batch waste incinerator demonstrated that, when properly operated and maintained, these systems are capable of meeting the Canada-wide Standards for dioxins/furans (80 pg I-TEQ/Rm<sup>3</sup> @ 11% O<sub>2</sub>) and mercury (20 µg/Rm<sup>3</sup> @ 11% O<sub>2</sub>). Stack testing can be carried out as required by the regulatory authorities (e.g. federal, provincial/territorial) to verify that these standards are met.

---

<sup>1</sup> <http://www.ec.gc.ca/gdd-mw/F53EDE13-1D01-4D05-B97D-1F3818D28657/Technical%20Doc%20for%20Batch%20Waste%20Incineration.2010.pdf>

The Technical Document recommends and describes a six-step process for batch waste incineration:

- Step 1 – Understand Your Waste Stream
- Step 2 – Select the Appropriate Incinerator (or Evaluate the Existing System)
- Step 3 – Properly Equip and Install the Incinerator
- Step 4 – Operate the Incinerator for Optimum Combustion
- Step 5 – Safely Handle and Dispose of Incinerator Residues
- Step 6 – Maintain Records and Reports

In particular, Step 2 of the process above specifies recommended incinerator configurations based on quantity of waste incinerated per year, reflecting the thresholds specified in the Canada-wide Standards documents. These configurations are:

1) Facilities incinerating **more than 26 tonnes of waste per year**

Dual chambered controlled air incinerators are recommended. These systems are capable of incinerating a wide range of wastes and, when properly maintained and operated, will achieve emissions of PCDD/F and mercury below the level of the Canada-wide Standards. These systems should be equipped with a large secondary chamber sized to provide a residence time of at least one second at a temperature higher than 1000°C, to ensure complete combustion and minimize PCDD/F emissions.

2) Facilities incinerating **less than 26 tonnes of waste per year,**

*“Determined efforts”*, as defined in the Canada-wide Standards for dioxins and furans, should be undertaken to continuously review opportunities for reductions and the implementation of in-plant changes and/or emissions control upgrades that are technically and economically feasible and which confer on-going reductions in emissions. Should circumstances restrict the ability to use a dual-chamber incinerator with a large secondary chamber, a single chamber incinerator with an afterburner should be used. It should be noted that such systems are less likely to be able to meet the emission standards than dual chamber incinerators.

### **Suggested Approaches for Aligning EMA Regulatory Requirements with Environment Canada’s Technical Document for Batch Waste Incineration**

The development of this policy is being undertaken to help align ministry requirements in regard to MSW incineration with those of Environment Canada. The goal is to help achieve the intent of the Canada-wide Standards for dioxin/furans and mercury, and to reduce the release of other toxic substances.

The Canada-wide Standard which applies to the incineration of 26 tonnes/year of MSW corresponds to an incineration rate of 71 kg/day over 365 days/year. Based on a waste production rate of 1 to 2 kg/person/day for a camp operating 365 days/year, the 26 tonne/year incineration rate is approximately equivalent to the incineration rate expected at a 35 to 71 person camp. Incinerators in use at remote camps with  $\geq 100$  persons almost certainly combust more than 26 tonne per year.

To align ministry authorization approaches with the federal guidance above, and to fulfill BC's obligations as a signatory to the Canada-wide Standards documents, the following permitting considerations are recommended:

- Authorizations should only permit the use of incinerators that are dual chambered and capable of providing a residence time in the secondary chamber of at least one second at a temperature higher than 1000°C.
- Following the start-up period, the secondary chamber of the incinerator must achieve and maintain an operating temperature of  $\geq 1000^{\circ}\text{C}$  throughout for each batch incineration event.
- Proper training on the operation of the incinerator is highly desirable. Consideration should be given to requiring training when available from the manufacturer or a qualified professional. Specific conditions will vary depending on the circumstances. Regardless, only authorized employees designated by the employer should operate the incinerator.
- To ensure proper operation of the incinerator (meeting the Canada-wide Standards and *EMA* permit), the permittee should be required to develop, submit and implement an Operations Plan. The Operations Plan should, at a minimum, follow the six-step process recommended in the Technical Document.

Additionally, the Operations Plan should, at a minimum, include standard operating procedures, a monitoring plan, a maintenance schedule and training schedule (if appropriate).

To ensure an incinerator is operated in accordance with the Operations Plan consideration should be given to requiring the recording/monitoring of the following parameters: waste type and percentage by weight (on a daily or batch basis), and temperature of secondary burner. The frequency for checking and recording the incinerator operating parameters should be specified and should be based, in part, on the manufacturer's recommendations. This information should assist in ensuring proper feed rates, mixing rates for optimal combustion and may help with the identification of operational issues should they occur.

- All records should be kept on site for inspection and annually reported to the Director.
- Sites should incinerate MSW on a daily basis to minimize wildlife attraction. Day storage of MSW should be in bear-proof container/containment.
- All authorizations to incinerate MSW should include a condition requiring the development and implementation of a waste segregation and recycling plan. At a minimum, the waste segregation plan should describe the facilities/equipment used for waste segregation and storage, training delivered to staff, and recycling/disposal end points and estimated frequency of collection.
- If technologically feasible and deemed appropriate for the circumstances, the Director could require annual stack testing

For smaller operations that do not require authorization under *EMA* (< 100 person camp - (See section 3 (7) of the WDR), the MOE should recommend that in addition to the requirements for using a commercially available, auxiliary fuel fired incinerator, the six-step process outlined in the 2010, Environment Canada Technical Document for Batch Waste Incineration be followed and, whenever possible, that a dual chambered controlled air incinerator is employed. If circumstances restrict the use of a dual chambered incinerator, then a single chambered incinerator with an afterburner should be recommended. Additional considerations with respect to waste segregation and recycling should be promoted as well.

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	Section	Subsection
		2.0	2.01.14

**Name of Policy:** Policy for Permitting Air Emissions in Airsheds that Exceed the PM<sub>2.5</sub> Air Quality Objectives

**Replaces:** None

**Application:** This policy applies to Statutory Decision Makers and program staff that support decisions made pursuant to the *Environmental Management Act*

**Purpose:** To provide guidance to:

1. EPD statutory decision makers considering applications under the *Environmental Management Act*.
2. EPD staff conducting technical review of applications under the *Environmental Management Act*.

**Policy Statement:** Ensure protection of human health while allowing new or modified air emissions using science based evidence.

This policy guidance is expected to support decisions and technical reviews that involve a new or amended PM<sub>2.5</sub> (fine particulate matter with aerodynamic diameter  $\leq 2.5 \mu\text{m}$ ) source in an airshed that exceeds PM<sub>2.5</sub> objectives.

**References and Relationships:** This policy is to be used with other policies and procedures which includes but is not limited to:

- 1.01.03 Setting Standards, Policies and Guidelines
- 1.01.04 Determining Best Achievable Technology Standards
- 1.05.01 Science and Decision Making- A Framework
- 6.01.04 Ambient Air Quality Objectives for British Columbia and Canada
- 6.01.24 Provincial Framework for Developing Provincial Air Quality Objectives
- 6.01.26 British Columbia Air Quality Dispersion Modelling Guideline
- Statutory Decision Making Handbook

**Approval:**



Assistant Deputy Minister  
Environmental Protection Division

**Date:** June 9, 2016

**Contact Persons:** **Arvind Saraswat, P.Eng., PhD, Air Quality Section Head**  
**Regional Operations Branch**  
**Glen Okrainetz, Manager Clean Air Program,**  
**Environmental Standards Branch**

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):



## **Background**

Ambient air quality objectives are non-statutory limits used to assess air quality and guide air management decisions, including those related to environmental assessments, authorizations and the issuance of air quality advisories.

Ambient air quality objectives applied in B.C. include provincial and national objectives and Canadian Ambient Air Quality Standards (CAAQS). Criteria adopted for PM<sub>2.5</sub> (i.e. fine particulates ≤2.5 micrometres in diameter) are summarized in Table 1. The provincial objectives are the primary tool for day-to-day air management decisions for PM<sub>2.5</sub> in B.C., whereas the CAAQS are used for reporting and for longer-term air management planning.

Table 1. Summary of provincial and national ambient air quality criteria for PM<sub>2.5</sub> (expressed in µg/m<sup>3</sup>).

Averaging Period	B.C.	2015 CAAQS	2020 CAAQS
24 hours	25 <sup>a</sup>	28 <sup>b</sup>	27 <sup>b</sup>
Annual	8 <sup>c</sup>	10 <sup>d</sup>	8.8 <sup>d</sup>

<sup>a</sup> Achievement based on annual 98<sup>th</sup> percentile of daily averages

<sup>b</sup> Achievement based on annual 98<sup>th</sup> percentile of daily averages, averaged over three consecutive years

<sup>c</sup> Achievement based on annual average

<sup>d</sup> Achievement based on annual average, averaged over three consecutive years

Ambient air quality criteria for PM<sub>2.5</sub> were established to better protect human health and support continuous improvement, recognizing that no safe health threshold has been identified and that reductions to PM<sub>2.5</sub> levels will result in reduced human health risks, including those associated with early mortality.

In some areas of the province, these criteria have been difficult to achieve, particularly the provincial annual objective of 8 µg/m<sup>3</sup>. Contributing factors include multiple sources of PM<sub>2.5</sub> in an airshed; surrounding complex terrain and intermittent inversions that limit dispersion; the siting of new monitors in neighbourhoods known to be affected by local woodstoves; and the switch to new monitors that provide a more complete measure of PM<sub>2.5</sub>.<sup>1</sup>

To provide additional guidance to support air management decisions in areas approaching or exceeding the provincial air quality objectives, the following recommendations are made. Specific operational guidance on impact assessment methodology is provided in Appendix I.

## **Recommendations**

1. Achievement of the 24-hour provincial ambient air quality objective remains a short-term goal to limit acute effects due to PM<sub>2.5</sub>.

---

<sup>1</sup> Excessive heating of the airstream in old TEOM instruments resulted in the volatilization of part of the particulate sample. The TEOM instruments have largely been replaced by Federal Equivalent Method (FEM) monitors.

2. Achievement of the annual provincial ambient air quality objective of  $8 \mu\text{g}/\text{m}^3$  remains a target to support reductions in long-term exposures associated with premature mortality.

3. Where monitored  $\text{PM}_{2.5}$  levels are approaching or exceeding provincial ambient air quality objectives, the statutory decision maker may consider, among other things:

- More frequent air permit reviews and compliance inspections or reports;
- Best available technology on new and retrofitted emission sources;
- More stringent requirements for regulated sources; and
- Requiring the applicant to provide additional, detailed scientific studies prepared by a qualified professional to better characterize and quantify the impact of sources and other influences on air quality.

**Measured  $\text{PM}_{2.5}$  approaching or exceeding  $8 \mu\text{g}/\text{m}^3$  (annual average)** then take steps to identify sources and reduce airshed emissions over time.

4. Where ambient levels due to new emissions of  $\text{PM}_{2.5}$  are predicted to approach or exceed the provincial air quality objectives based on dispersion modelling assessments that include baseline concentrations, additional consideration should be given to:

- Conditions related to the exceedances (e.g. location of maxima relative to populated areas, timing, duration and magnitude of exceedances, and relative contribution/spatial variation of background).

Following this assessment, the director may require a proponent to develop strategies or options to further mitigate emissions at the facility (e.g. best available technology, limiting permitted emission periods) and/or within the affected airshed.

**Predicted  $\text{PM}_{2.5}$  approaching or exceeding  $8 \mu\text{g}/\text{m}^3$  (annual average)** then understand model uncertainties and reduce emissions at facility and/or within airshed, as warranted.

5. Where ambient levels (measured or predicted) are in excess of the CAAQS for  $\text{PM}_{2.5}$ , additional actions within the affected airshed (e.g. emission offsets) may be needed to accommodate future development and ensure long-term CAAQS achievement.

6. Where multiple industrial sources of  $\text{PM}_{2.5}$  are located or are expected to be located within an airshed, then affected industries should be expected to:

- Contribute to a robust monitoring network to ensure protection of the environment and human health, and
- Consider the potential for future requirements in facility design to further reduce emissions, so as to accommodate additional airshed development or more stringent ambient air quality objectives in the foreseeable future.

**Measured or predicted  $\text{PM}_{2.5}$  exceeding annual CAAQS ( $10 \mu\text{g}/\text{m}^3$ )** then consider additional actions to enable further development.

Note guidance provided in the above boxes is specific to annually averaged concentrations of  $\text{PM}_{2.5}$ ; however, a similar approach may be taken in responding to measured or predicted exceedances of 24-hour air quality objectives. In addition, the above does not preclude a director from considering the use of other ambient air quality objectives or standards to better address site-specific issues.

## Appendix 1 – Impact Assessment Methodology

Dispersion modeling is used as the primary tool to understand the impact of a new or existing source of emissions. The objective of modeling is to understand how emissions will impact the ambient air quality. While assessing a major source of PM<sub>2.5</sub>, consideration should be given to the modeled incremental impact due to the source and the existing PM<sub>2.5</sub> levels. In all cases, a determination of best achievable technology (BAT) should be made; this is generally led by the Authorizations Sections in collaboration with the Air Quality Section (Assessments).

The modeled incremental impact (MII) outside the facility boundary and the baseline concentration (BLC) should be added to obtain total modeled concentrations (TMC). Here BLC is the PM<sub>2.5</sub> concentration from all sources except the source modelled. All three variables are annual means at a given location. Generally, BLC can be determined from air quality monitoring data collected at a single site, and a single value is chosen as BLC, which is assumed to be constant for every location within the modelling domain. MII and TMC are available for the entire modeling domain.

The following scenarios are possible vis-à-vis the annual objective:

1.  $MII + BLC = TMC < 8 \mu\text{g}/\text{m}^3$  (for all locations in the modeling domain)

In such cases, the annual objective should not be considered a maximum limit up to which emissions can be permitted. If emission sources are not proposed to meet BAT standards, the reasons for this choice should be presented, as well as documentation that shows the effect of not using BAT on MII.

2.  $MII + BLC = TMC \geq 8 \mu\text{g}/\text{m}^3$  (for some locations in the modeling domain)

In such cases, the CAAQS of  $10 \mu\text{g}/\text{m}^3$  may be considered an appropriate benchmark to protect human health while accommodating a limited increase in emissions.

Consideration should be given to modeled spatial variability and location of sensitive receptors. MII at sensitive receptors is the most important consideration. The spatial pattern of MII should be reviewed carefully to understand the significance of MII with respect to human exposure. Within this scenario there are two possibilities:

- a.  $BLC < 8 \mu\text{g}/\text{m}^3$  (generally measured at a single monitoring site in the domain)

In this case, the spatial variability of MII and TMC should be carefully reviewed to understand its significance with respect to human exposure.


- b.  $BLC \geq 8 \mu\text{g}/\text{m}^3$  (generally measured at a single monitoring site in the domain)

In this case, reasonable effort should be made to understand the causes leading to high BLC, to understand the spatial variability of BLC, and to understand the significance of TMC and MII with respect to population exposure.

Consideration should be given to causes leading to BLC exceedance in both scenarios 2(a) and 2(b); in addition, further actions to minimize potential air quality impacts may be considered (e.g. emission offsets).

It is possible that baseline air quality data may not be available in certain cases. In such cases, reasonable effort shall be made by the proponent to collect baseline data. Alternatively, a model can be used to estimate BLC for sources where emissions can be quantified. If baseline data are unavailable, reasonable assumptions may be considered for the baseline values. MII should be carefully reviewed to understand the incremental impact due to the new/amended source.

**24-Hour Objective:** This policy focuses on annual objective due the importance of chronic exposure vis-à-vis adverse health effects. For clarity, if a new or a modified source causes exceedances of the 24-hour Provincial objective, the location of exceedance(s) and the incremental impact should be carefully reviewed. If the location of modeled exceedance coincides with sensitive receptors, suitable mitigation strategies should be considered.

 <b>BRITISH COLUMBIA</b> The Best Place on Earth	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b> 2.	<b>Subsection</b> 2.02.25
---	--	----------------------	------------------------------

**Name of Policy:** Guideline for Emissions from Biomass-Fired Electrical Power Generation

**Replaces:** Guideline for Emissions from Wood-Fired Electrical Power Generation – ADM approved, July 10, 2008

**Application:** This policy applies to ministry staff engaged in developing standards for the combustion of biomass for the generation of electricity.

**Purpose:** The purpose of this guideline is to give assistance to Directors issuing authorizations for emissions from combustion sources using biomass as a primary fuel to generate electricity.

**Policy Statement:** **New facilities**

All new facilities are required to install control technologies that will, at a minimum, achieve the emission limits in Table 1. If an impact assessment indicates a potential for continued adverse effects on the environment or human health, more stringent emission controls, beyond the limits listed here, may be deemed necessary by a Director.

#### **Existing facilities**

Existing permitted facilities that will be significantly modified may be required to upgrade control technologies to meet more stringent emission limits as required by a Director.  
Ministry policy for

- 1) Setting Standards, Policies and Guidelines (SSPG), and
- 2) Best Achievable Technology (BAT)

are to be applied when developing site specific emission limits. These facilities will also be required to meet the monitoring requirements in Table 1. (Monitoring frequency according to size).

### All facilities

If non-biomass fuels are also burned, authorizations may stipulate additional limits and monitoring requirements for sulphur dioxide, nitrogen oxides, and other contaminants as appropriate.

If salt laden wood is being used in the facility, the total particulate limit does not include salt (it is salt free).

The Director may expand the definition of "biomass" to include other biomass based fuels as they become available.

### References and Relationships:

This policy is specifically intended to cover an immediate need for guidance to ministry staff and proponents involved with the 2008 BC Hydro call for power projects in response to the BC Energy Plan.

**Table 1: Emission Limits for New Biomass-fired Electrical Power Generation**

Size <sup>a</sup> (megawatts of electrical output)	Parameter	Limit	Units <sup>b</sup>	Monitoring <sup>a</sup>
<25	Total particulate <sup>c</sup>	50	mg/m <sup>3</sup>	Annual
	Opacity <sup>f</sup>	-	%	Daily
	Dioxin/Furan Teq <sup>g</sup>	100	picograms/m <sup>3</sup>	Annual
≥25	Total particulate <sup>d</sup>	20	mg/m <sup>3</sup>	2 times/year
	Opacity <sup>f</sup>	-	%	Continuous
	Dioxin/Furan Teq <sup>g</sup>	100	picograms/m <sup>3</sup>	Annual

### Notes to Table 1:

- (a) Total cumulative output of all new biomass fired units at a facility.
- (b) Concentrations measured at standard conditions of 20°C, 101.3kPa, dry gas and 8% O<sub>2</sub>.
- (c) For new units, an operator would be required to undertake baseline monitoring (stack testing) within six months of start up and annually thereafter.
- (d) For new units, an operator would be required to undertake baseline monitoring (stack testing) within six months of start up and twice per year thereafter.
- (e) Monitoring for this guideline must be in accordance with the:  
**British Columbia Field Sampling Manual — For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples**  
January 2003.
- (f) Recommend that an opacity limit is not stated in the permit – industry should strive to maintain below 10%.
- (g) Monitoring is required only if salt-laden wood is burned.

### Glossary

**"biomass"** means

- (a) wood or wood products,
- (b) manufactured wood fuel, or
- (c) logging residue,

but does not include

- (d) any paper or paper product,
- (e) any wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, or
- (f) municipal solid waste.

**"logging residue"** means logs or log ends, branches and tree stumps.

**"manufactured wood fuel"** means wood pellets and wood pucks.

**"municipal solid waste"** means municipal refuse which originates from residential, commercial, institutional and industrial sources and includes semi-solid sludges, household hazardous waste and any other substances which are typically disposed of in municipal-type landfills.

**"new facility"** means a new biomass-fired electrical generation operation that is built from the ground up.

**"salt-laden wood"** means a wood product that that has originated from logs that have been in ocean water.

**"wood product"** includes manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust, wood bark and firewood.

**"significantly modified"** means a physical or operational change in a facility that results in an increase of 10% or more of the volume of discharge or the total amount of any contaminant released to the environment.

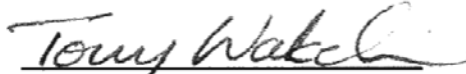
**Approval:**



Assistant Deputy Minister  
Environmental Protection Division

**Date:** AUG 4, 2009


**Contact Person:**



Tony Wakelin, Section Head  
Environmental Quality Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):



	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.0	2.02.26

**Name of Policy:** **Authorizing Wood-Fired Energy Systems And Wood Residue Incinerators**

**Replaces:** Policy is new.

**Application:** This policy applies to staff engaged in authorizing wood-fired energy systems and wood residue incinerators.

**Purpose:** The purpose of this guideline is to give assistance to Directors issuing authorizations for emissions from wood-fired energy systems and wood residue incinerators.

**Policy Statement:** The Wood Residue Burner and Incinerator Regulation is not intended to be the appropriate mechanism for authorizing emissions from or setting standards for wood-fired energy systems. Consistent with this and the Policy Intentions Paper posted for consultation on the Ministry of Environment website on September 11, 2009, ministry staff shall refrain from authorizing any new wood-fired energy systems or any new wood residue incinerators using the *Wood Residue Burner and Incinerator Regulation*.

Wood-fired energy systems and wood residue incinerators (regardless of how the energy created is utilized, e.g., heat, steam or electricity) are to be authorized by permit under the *Environmental Management Act* taking into consideration the ministry report entitled "Emissions from Wood-Fired Combustion Equipment", posted on the ministry website and the ministry's Guideline for Emissions from Biomass-Fired Electrical Power Generation (Policy 2.02.25).

Any existing authorizations should be reviewed for opportunities to incorporate emission standards from the referenced report and guideline.

This Policy is intended as an interim solution in anticipation of a Code of Practice or targeted regulation under the *Environmental Management Act* to regulate wood-fired energy systems and wood residue incinerators.

**References and Relationships:** This policy assists with the fulfilment of government's commitment to eliminate all beehive burners in the province of British Columbia.

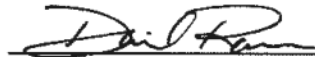
Cross reference EPD Operations Policy entitled Guideline for Emissions from Biomass-Fired Electrical Power Generation (Policy 2.02.25) and the ministry report entitled "Emissions from Wood-Fired Combustion Equipment" located on the ministry intranet at:  
[http://www.env.gov.bc.ca/epd/industrial/pulp\\_paper\\_lumber/pdf/emissions\\_report\\_08.pdf](http://www.env.gov.bc.ca/epd/industrial/pulp_paper_lumber/pdf/emissions_report_08.pdf)

**Approval:**



**Date:** Dec 15, 2009

Assistant Deputy Minister  
Environmental Protection Division



**Date:** 09/12/14

David Ranson  
Director, Environmental Quality Branch

**Contact Person:** Chris Jenkins, Manager, Air Emissions  
Environmental Quality Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.0	2.0.28

**Name of Policy:** **Guideline for Emissions from Wood Pellet Manufacturing Facilities.**

**Application:** This policy applies to Ministry staff engaged in developing standards for operations that manufacture wood pellets.

**Purpose:** The purpose of this guideline is to give assistance to Directors issuing authorizations for emissions from facilities engaged in the manufacture of wood pellets.

**Policy Statement:** **New facilities**

All new facilities are required to install control technologies that will at minimum, achieve the emissions limits in Table 1 and 2. If an impact assessment indicates a potential for continued adverse effects on the environment or human health, more stringent emissions limits than the limits listed here may be deemed necessary by a Director.

#### **Existing facilities**

Existing permitted facilities that will be significantly modified may be required to upgrade control technologies to meet more stringent emission limits as required by a Director.  
Ministry policy for

- 1) Setting Standards, Policies and Guidelines (SSPG), and
- 2) Determining Best Achievable Technology Standards (BAT)

are to be applied when developing site specific emissions limits. These facilities will also be required to meet the applicable monitoring and control requirements in Table 1 and 2.

**References and Relationships:**

This policy is new and is intended to cover an immediate need for guidance to Ministry staff and proponents involved in developing permits for new wood pellet manufacturing facilities.

**Approval:**                    original signed by Lynn Bailey    **Date:** March 30, 2010  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:**    David Ranson, Director  
Environmental Quality Branch

Effective Date if different than Approval Date:
Original Date of Policy: N/A
Date of Policy Amendment(s):

**Table 1: Total Particulate Matter Emission Limits for New Wood Pellet Manufacturing Facilities.**

Source	Limit in mg/m <sup>3</sup> <sup>a, b</sup>	Monitoring <sup>d, e, f</sup>
Dryer exhaust <sup>c</sup>	60	Quarterly
Pellet cooler exhaust	115	Annual
Other Plant Processes <sup>g</sup>	20	Annual

**Notes to Table 1:**

- (a) mg/m<sup>3</sup> is for total particulate matter (TPM) which includes both filterable and condensable particulate matter (CPM).
- (b) Concentrations measured at standard conditions of 20°C, 101.3kPa, dry gas.
- (c) Due to insufficient monitoring data for dryers in pellet plant operations, emission limit for the drying process will be interim for a period of two years. This will give operators that are developing new facilities time to characterize the emissions from dryers. As additional data on CPM and TPM emissions from controlled dryers (using wet scrubbers, wet electrostatic precipitators, and other control technology that may be applied) on BC pellet plant facilities becomes available, this limit may be adjusted. Additional process emission factors such as kilograms per tonne of pellets produced (kg/tonne) and/or kilograms per hour (kg/hr) may also be added.
- (d) For new units, an operator would be required to undertake baseline monitoring (stack testing) within six months of start up and according to the stated sampling frequency thereafter.
- (e) Monitoring for this guideline must be in accordance with the latest version of the:  
**British Columbia Field Sampling Manual – For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples.**
- (f) Recommend that an opacity limit is not stated in the permit – industry should strive to maintain below 10%.
- (g) Other process emissions sources include pelletizers, hammermills, storage, screening, and conveyors.

**Table 2: Fugitive Emissions from Raw Material Storage Piles and Road Dust**

Source	Limit	Monitoring and Control
Sawdust and Wet Material	No visible downwind carry over	Visual monitoring with controls as required including: limiting pile heights; limiting exposed pile faces to high winds (e.g. wind breaks; vegetative or screens). Include meteorological controls and planning.
Planer Shavings and Dry Material		As above plus three sided and covered containment. Prevent vehicle traffic from grinding material finer.
Onsite Haul Roads		Dust suppression in dry season or paving

#### **Effluent handling requirements**

If the applied emission control technology uses a solution (such as water), any resulting effluent should be delivered to an approved facility for treatment or disposed of in an approved manner.

## Glossary

**“filterable particulate matter”** or total suspended particulate matter of all sizes; includes emissions of  $PM_{10}$  and  $PM_{2.5}$ , described as follows:


- **$PM_{10}$**  – particulate matter with aerodynamic diameters less than or equal to 10 micrometers. This group can be considered inhalable particulate;
- **$PM_{2.5}$**  – particulate matter with aerodynamic diameters less than 2.5 micrometers. This group can be referred to as the fine fraction of  $PM_{10}$ , or inhalable particulate matter.

Filterable particulate matter is also the particulate matter that is caught when EPA Method 5 is used.

**“condensable particulate matter”** means a material that is not particulate matter (vapour phase) at stack conditions but which condenses and/or reacts (upon cooling and dilution in the ambient air) to form particulate matter immediately after discharge from the stack. Condensable particulate matter is caught in the back half of the sampling train when EPA Method 202 is applied.

**“significantly modified”** means a physical or operation change in a facility that results in an increase of 10% or more of the volume of discharge or the total amount of any contaminant released to the environment.

**“wood pellet”** means a type of wood fuel, generally made from compacted sawdust and shavings. Smaller amounts of processed bark, hog fuel, processed standing dead timber and processed landing debris can also be metered in with the sawdust and shavings. Wood pellets are usually produced as a byproduct of sawmilling and other wood transformation activities. Wood pellets are produced by compressing the wood material which has first passed through a hammer mill and dryer to provide uniformly sized wood particles at specified moisture content. The dry wood particles are then fed to a press where they are squeezed through a die having holes of the size required (normally 6 mm diameter, sometimes 8 mm or larger, although other configurations such as pucks and logs are manufactured to a lesser extent). The high pressure of the press causes the temperature of the wood to increase greatly, and the lignin plasticizes slightly forming a natural 'glue' that holds the pellet together as it cools.

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.0	2.02.31

**Name of Policy:** **Structured Application Process Under the *Environmental Management Act***

**Replaces:** **None.**

**Application:** This policy applies to Statutory Decision Makers and program staff that support decisions made pursuant to the *Environmental Management Act* (with the exception of applications under the Contaminated Sites Regulation, Recycling Regulation).

**Purpose:** This policy relates to the administration of the Waste Discharge Regulation under the *Environmental Management Act*.

**Policy Statement:** Ensure consistent and timely processing of applications for waste discharge under the *Environmental Management Act*. It is meant to provide direction to EPD directors and section heads receiving applications and EPD staff conducting technical review of applications.

**References and Relationships:** This policy is to be used with other policies and procedures which includes but is not limited to:

- 1.01.03 Setting Standards, Policies and Guidelines
- 1.01.04 Determining Best Achievable Technology Standards
- 1.05.01 Science and Decision Making- A Framework
- 6.01.04 Ambient Air Quality Objectives for British Columbia and Canada
- 6.01.24 Provincial Framework for Developing Provincial Air Quality Objectives
- 6.01.26 British Columbia Air Quality Dispersion Modelling Guideline
- Statutory Decision Making Handbook

**Approval:**

  
 Assistant Deputy Minister  
 Environmental Protection Division

**Date:** Nov 9, 2016



**Contact Person:** Cassandra Caunce, Regional Director, IPM & Branch Projects,  
Regional Operations Branch  
AJ Downie, Regional Director, Authorizations South, Regional  
Operations Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

## Table of Contents

1. Introduction.....	4
2. Express Transactions Process .....	4
Intake Phase .....	5
Screening Phase.....	7
Processing & Decision Phase .....	7
3. Routine Application Process.....	8
Principles .....	8
Overview of Process .....	8
Preliminary Application Phase.....	10
Screening Phase.....	10
4. Procedural Documents .....	15

# 1. Introduction

The receipt and processing of applications for various waste discharge authorizations under the *Environmental Management Act* (EMA) have been separated into two discreet processes: the *Express Transaction Process* and the *Routine Application Process*.

The Express Transactions Process is for lower risk applications which generally involve registration or notification, or simple administrative changes to permits and other authorization types (e.g. Name change, transfer or cancellation of air or effluent permits). Express Transactions will generally be processed within *2 to 4 weeks*.

The Routine Application Process involves a detailed review of applications of greater complexity, including authorizations such as permits, approvals, operational certificates and the more complex regulatory registration processes (e.g. Municipal Wastewater Regulation, Hazardous Waste Regulation, etc.). The timeline for Routine Applications can be broken down as follows:

Phases	Target to Complete
<i>Preliminary Application submission</i>	
Ministry Intake Phase	2 weeks
Ministry Preliminary Application Phase	2 months*
Applicant work window	Maximum of 36 months*
<i>Final Application submission</i>	
Ministry Screening Phase	2 months**
Ministry Review & Decision Phase	Medium complexity: 6 months** High complexity: 12 months**

\* Target to complete from the date the application tracking number is issued by the Ministry

\*\* Target to complete from the date the Final Application is received by the Ministry

## 2. Express Transactions Process

### Overview of Process

The Express Transaction Application Process is comprised of three phases:

Phase	Description
<b>Intake Phase</b>	This is the initial phase when all incoming applications are sorted by transaction type (Express or Routine) then checked for administrative completeness prior to being entered into the Ministry's Authorizations Management System (AMS) and assigned a tracking number.
<i>Same for all EMA transactions, both</i>	

<i>Express and Routine</i>	<p>Incomplete applications are returned to the applicant and will not be entered into AMS.</p> <p><i>Ministry target to complete: 2 weeks</i></p>
<b>Screening Phase</b>	<p>This phase confirms that the application request does not contain any unusual aspects which would require a more detailed review (e.g. a substitution request requires a more comprehensive technical review that cannot be completed according to the Express Transaction timelines). If the application requires further review it is deemed to be an exception and it is moved into the Routine Application Process where it will enter the Pre-application Phase in the appropriate section within Regional Operations Branch.</p>
<b>Processing (&amp; Decision) Phase</b>	<p>This is the phase when the technical information from the application is entered into AMS and a letter is created in AMS confirming acceptance of the registration or notification.</p> <p>If the application requires a statutory decision, the file is forwarded to a decision maker for decision. A decision letter is generated and sent to the applicant and the documents become publicly available on the Ministry of Environment website.</p> <p><i>Ministry target to complete: 2 to 4 weeks</i></p>

## Intake Phase

The Intake Phase is the same for both Express and Routine Applications. This phase is important for workflow tracking and management purposes. Victoria Permit Administration (Vic Admin, in Business Services Branch) receives all applications, registrations and notifications, and will ensure that all requisite administrative information is present. Incomplete applications, registrations and notifications are not accepted. They are returned to the applicant and are tracked in the AMS system. Applications, registrations and notifications that are complete will be assigned an AMS tracking number and will proceed either within the Express Transaction (simple) Process or the Routine Application (more complex) Process.

### *Receiving an Application Request*

It is expected that application requests will be sent to Vic Admin via [PermitAdministration.VictoriaEPD@gov.bc.ca](mailto:PermitAdministration.VictoriaEPD@gov.bc.ca). If a hard copy application request is received, Vic Admin will date stamp all of the documents received, including the payment form, and ask the applicant to also submit via email.

### ***Determining the Completeness of an Application***

All applications received during the Intake Phase, whether Express Transactions (simple) or Routine Applications (medium or high complexity), will follow the same rigorous administrative intake screening processes. Vic Admin will screen each application against specific application form criteria and/or checklists to determine completeness and appropriate routing in AMS.

Express Transaction applications must be complete before they can be accepted into AMS and assigned an AMS tracking number. Vic Admin is responsible for ensuring that all requisite administrative information is present and entered into AMS.

Incomplete applications should be returned to the applicant and not tracked in the AMS system. In situations where the application fee/annual fee due upon initial registration has not yet been paid, the application may be returned to the applicant. See the Intake Standard Operating Procedure (SOP) for complete details on this part of the process.



To facilitate the submission of complete applications, guidance on the ministry website will continually be improved. Staff are encouraged to document recurring issues so that new guidance can be created.

### ***Routing Complete Applications***

Complete applications that have been pre-determined to be "simple" in technical complexity will be routed to the Express Transaction Process.

Exceptions include requests for substitutions under any code or regulation which must be routed through the Routine Application Process for handling by the Regional Operations Branch.

<b>Pre-determined Express Transaction Jobs</b>	
✓	Agricultural Waste Control Regulation
✓	Asphalt Plant Regulation
✓	Code of Practice for Concrete and Concrete Products
✓	Code of Practice for Industrial Non-Hazardous Waste Landfills (Wood Processing)
✓	Code of Practice for Slaughter and Poultry Processing
✓	Code of Practice for Soil Amendments

✓	Land-Based Finfish Waste Control Regulation
✓	Petroleum Storage and Distribution Facilities Storm Water Regulation
✓	Mushroom Compost Facilities Regulation
✓	Vehicle Dismantling and Recycling Industry Environmental Planning Regulation
✓	Name and Address changes ONLY (no other changes to authorization)
✓	Transfers for Permit, Approvals and Operational Certificates
✓	De-registrations
✓	Permit cancellations for air and effluent. Landfill and other solid waste discharge authorization cancellations will follow the Routine process and be routed to Regional Operations Branch.

## Screening Phase

The Screening Phase is a very short phase in the Express Transaction Process. This phase confirms that the application is in fact a simple transaction (Express) and there are no unusual aspects to the application that would require a more detailed review. For example, a request for a substitution under a code or regulation requires a more comprehensive technical review that cannot be completed according to the Express Transaction timelines.

If the application requires further technical review it is deemed to be an exception and it is moved into the Routine Application Process by reassigning the job to the appropriate Section Head in the Regional Operations Branch. It would then enter into the Preliminary Application Phase.

## Processing & Decision Phase

Most Express Transactions do not require a statutory decision and can be processed relatively quickly by staff. After the Screening Phase confirms that the application is suitable to be processed as an Express Transaction, staff process the application by ensuring that all required information has been submitted with appropriate sign-offs as necessary (e.g. many authorizations require submissions of plans prepared by Qualified Professionals). Staff refer to checklists to help determine if the application package

includes all the required components. This phase also includes uploading the more technical and regulation-specific data into AMS.

Some Express Transactions may require approval of a Statutory Decision Maker and in these instances the application package is forwarded to a Statutory Decision Maker in Business Services Branch.

At the end of the Processing Phase the Business Services Branch will send a letter to the applicant to communicate the outcome of their application (e.g. accepted, rejected etc.). All application materials and decisions are to be made publicly viewable in AMS.

## 3. Routine Application Process

### Principles

The Routine Application Process relies on some key foundational principles to ensure timely movement of applications through the process. These principles include:

- Availability of information online to ensure applicants understand the application requirements for the various application types.
- Single point of entry into the process for all application types.
- Return of incomplete applications at key stages in the application process.
- Regular communication updates to the applicant during the process.
- Categorization of applications into two categories based on complexity, with shorter timeline targets for less complex applications.

### Overview of Process

The Routine Application Process is comprised of four phases:

Phase	Description
<b>Intake Phase</b>  <i>Same for all EMA transactions, both Express and Routine</i>	This is the initial phase when all incoming applications and preliminary applications are sorted by transaction type (Express or Routine) then checked for administrative completeness prior to being entered into the Ministry's Authorizations Management System (AMS) and assigned a tracking number.

	<p>Incomplete applications are returned to the applicant and will not be entered into AMS.</p> <p><i>Ministry target to complete: 2 weeks</i></p>
<b>Preliminary Application Phase</b>	<p>This phase confirms the minimum requirements of the Application Package which are necessary to inform a statutory decision. This phase results in a detailed Application Instruction Document (AID) which is provided to the applicant.</p> <p><i>Ministry target to complete this phase up to issuance of the AID: 2 months from the date the application receives a tracking number.</i></p> <p><i>Applicant Work Window</i> The period of time when the applicant completes the work required to produce a Final Application package for the ministry. Once the AID is issued, the amount of time required to generate the Final Application package is at the discretion of the applicant, but the work window <b>cannot exceed 36 months</b> from the date the tracking number is assigned.</p>
<b>Screening Phase</b>	<p>This phase confirms that the requisite technical information and other supporting materials defined in the AID are provided in sufficient quantity and quality.</p> <p><i>Ministry target to complete: 2 months from the date the final application package is received.</i></p>
<b>Review and Decision Phase</b>	<p>This phase includes a detailed review of the application including technical documents as well as the public consultation and First Nations engagement record. The development of requirements that will form the authorization for the Director's consideration is also completed.</p> <p><i>Ministry target to complete from the date the final application package passes the Screening Phase: For medium complexity applications: 4 months For high complexity applications: 10 months</i></p>



## **Intake Phase**

The Intake Phase is the same for both Express and Routine Applications. This phase is important for workflow tracking and management purposes. Vic Admin receives all preliminary applications (or final applications where applicable), registrations and notifications, and will ensure that all requisite administrative information is present and entered into AMS.

In the majority of cases, applicants applying for Routine Authorizations will submit a Preliminary Application Form with information and supporting documentation describing the project or activity they are proposing to conduct (or the amendment they are requesting, if they have an existing authorization). This information provides the necessary details to allow efficient engagement with ministry staff in the Preliminary Application Phase. In rare circumstances when applicants have extensive experience applying for EMA authorizations, they may choose to also conduct the necessary assessments and consultation prior to contacting the Ministry and they may submit a Final Application Package along with their Preliminary Application Form and they may request an exemption from the Preliminary Application Phase.

Incomplete applications, registrations and notifications are not accepted. Incomplete applications are returned to the applicant and not tracked in the AMS system. Applications (or preliminary applications), registrations and notifications that are complete will be assigned an AMS tracking number and will proceed either within the Express Transaction (simple) Process or the Routine Application (more complex) Process.

Applicants with Routine Applications will be notified of their tracking number at the end of the Intake Phase and they will be provided with information about what to expect in the Preliminary Application Phase.

## **Preliminary Application Phase**

The Preliminary Application Phase begins after the applicant receives a tracking number. The applicant will have received written notification from Vic Admin informing them of their pre-authorization number and tracking number, and the Section Head will have received a notice via AMS that a job is waiting for their attention.

The purpose of the Preliminary Application Phase is to determine the components and requirements needed for a complete Final Application Package. This involves ministry staff providing the applicant with clear guidance, direction and communication on the technical information requirements and the public and First Nation engagement activities

required in the Final Application Package (i.e. Technical Assessment Report (which includes Environmental Impact Assessment) and Consultation Report).

Tools that have been developed to assist with determining and communicating the requirements of a complete Application Package include:

- The Information Requirements Table (IRT); and,
- The Application Instruction Document (AID).

Detailed process steps for this phase are included in the Standard Operating Procedures document for Preliminary Application Phase. Key actions include the following:

### **Receive the Preliminary Application Package**

1. The ROB Section Head receives notice via AMS that an application is waiting to enter or bypass the Preliminary Application Phase.
2. If the applicant has requested an exemption from the Preliminary Application Phase, the Section Head reviews the package and makes a determination on whether to grant the request. If the request is denied, the applicant is notified and the process proceeds normally. If the request is accepted, the application is pushed through to the Screening Phase.
3. The Section Head assigns an Environmental Protection Officer (EPO) to the file.
4. The EPO reviews the Preliminary Application to determine if a Subject Matter Expert (SME) will be required to assist in setting application requirements. Additional resourcing needs are discussed with the Section Head before making any requests for SME involvement.
5. The EPO reviews the Preliminary Application and if the information in the Preliminary Application is sufficient, the EPO proceeds to arrange the Preliminary Application Meeting. If it is not, the EPO can request information from the applicant.

### **Arrange the Preliminary Application Meeting**

6. The EPO contacts the applicant to inform them that their Preliminary Application has the required information, and to schedule the Preliminary Application Meeting.
7. To prepare for the Preliminary Application Meeting, the EPO does the following:
  - a. Determines the date, purpose and agenda of the meeting taking into consideration the availability of other ministry staff that may be needed.
  - b. Invites the applicant and all necessary internal staff.

- c. Provides an agenda and guidance to the applicant about what they need to provide at the meeting. E.g. Provides the correct IRT tables, if needed.
  - d. Informs the applicant that the required documentation must be submitted for consideration 2 weeks prior to the meeting (at EPO discretion).
- 8. The EPO chairs the Preliminary Application Meeting. If required, Subject Matter Experts also attend.
- 9. The EPO and the applicant work toward compiling the information needed to develop an Application Instruction Document (AID) for SDM consideration. At this stage, the EPO's tasks include:
  - a. Documenting the required items for the Technical Assessment Report (TAR) using the proper Information Requirements Table (IRT). This may include documenting and determining acceptable methods for the specific items required in the TAR.
  - b. Documenting the required public and First Nation engagement information.
  - c. Making a preliminary determination of the application complexity and documenting this in the AID.

### **Issue the Application Instruction Document**

- 10. The EPO, with input from Subject Matter Experts as required, develops the draft Application Instruction Document (AID) for SDM consideration (template provided).
- 11. The EPO circulates the draft AID to the applicant and provides the opportunity to comment. If comments are received, the EPO can take them under advisement.
- 12. The EPO provides the draft AID, complete with IRT information and preliminary complexity categorization, to the SDM.
- 13. The SDM finalizes and signs the AID and the EPO issues the document to the applicant. The AID is uploaded to AMS by the EPO.
- 14. The AID is issued to the applicant. The applicant now has a maximum of 36 months from the date that tracking number was originally assigned in order to submit a Final Application Package. This is the Applicant Work Window portion of the Preliminary Application Phase.

The Preliminary Application Phase ends when the applicant has met the requirements as instructed in the AID and submits all of the required elements in a Final Application Package.

## Screening Phase

The Screening Phase begins when a Final Application Package is submitted to Vic Admin. The Screening Phase confirms if the Final Application Package contains the necessary information identified in the Preliminary Application Phase. During the Screening Phase, the Application Package is screened for administrative, as well as technical, completeness.

Vic Admin performs the first part of the screening to determine if the package is administratively complete, which includes a presence/absence check for the required information and supporting documentation. If the package meets the administrative requirements, a technical screener in ROB will verify that the Application Package contains information of sufficient quality and quantity reasonably necessary to inform a decision. **Screening is not intended to be a full detailed review of the Application Package.** Rather, it is focused on identifying inadequate applications that will be difficult to process in a timely manner during the Review and Decision Phase.

If it is determined that the application is incomplete, deficient, or unclear, the application will either be returned, in which case the applicant can reapply at any time, or missing information will be requested from the applicant within a specified limited time frame.

The Screening Phase ends once the technical screener determines that the application package is complete and ready to proceed for a detailed technical review, and it has been assigned a complexity category. The screener directs the application to the appropriate section head in AMS, for assignment to an EPO for the final Review and Decision Phase. Detailed process steps for this phase are included in the Standard Operating Procedures document for Screening Phase. Key actions include the following:

### Screening for Administrative Completeness

1. Vic Admin screens the Final Application Package for administrative completeness (e.g. all required documents have been submitted, the company has not changed its name since the Intake Phase, etc.). The job is then forwarded to ROB for technical screening.

### Screening for Technical Completeness

2. The Technical Screener (either a Section Head or EPO in ROB) receives a notice via AMS of their assignment to the job/application for screening. This is an initial review of the application to identify obvious application deficiencies and to confirm if the

application contains the information specified in the Information Requirements Table and the Application Instruction Document.

The Technical Screener may consider briefly involving a Subject Matter Expert if one was involved in providing direction during the Preliminary Application Phase or if the Technical Screener suspects deficiencies in the components of the application applicable to the Subject Matter Expert's area of expertise.

If the draft Final Application Package is NOT complete:

3. If the Technical Screener determines that the application is incomplete, deficient, or unclear, they should request the missing information from the applicant and specify the time frame for its submission (the default time is 30 days, but the Technical Screener may use discretion).
  - a. If the applicant fails to provide the information requested within the allotted time period, or if the applicant insists that the Review and Decision Phase proceed without the information, the Technical Screener then drafts a brief memo identifying the deficiencies and the rationale for requiring the missing information.
  - b. The Technical Screener then forwards their assessment to the Statutory Decision Maker for a decision. The Statutory Decision Maker may reject the application on grounds of insufficient information, or they may decide to continue the process. If a decision is made to reject the application, the Routine Application Process stops and the applicant is advised to submit a new application to the Intake Phase.

If the Final Application Package is fully complete:

4. If the Technical Screener determines that the Final Application Package is complete then it moves to the final Review and Decision Phase.
5. The Technical Screener confirms the categorization of the Final Application Package as medium or high complexity based on the established criteria (see Guidance on Categorization).
  - a. The Technical Screener updates AMS to reflect the application's complexity rating. At this point, the complexity can no longer be changed, and a target "due date" for Review and Decision is calculated by AMS.
6. Once the complexity is confirmed, the Technical Screener forwards the application in AMS to the appropriate Section Head for assignment to an EPO.

7. The Technical Screener notifies the applicant of the outcome of the Technical Screening Phase and confirms the target timeline for completing the Review and Decision Phase.

The Screening Phase is now complete.

## **Review and Decision Phase**

The Review and Decision Phase begins when a Final Application Package once an application package passes the Screening Phase. The purpose of the Review and Decision Phase is for technical staff (including Subject Matter Experts if needed) to conduct a detailed review of the Final Application Package in order to determine appropriate authorization conditions (if an authorization is to be issued).

On an ongoing basis, Section Heads prioritize and assign waiting applications to EPOs according to guidance in the Review and Decision Phase Standard Operating Procedure. The goal is to reach a decision on all applications within the target timelines. To achieve this, the guiding principle for prioritizing and assigning applications is “first in, first assigned”; however, it is acknowledged that there are instances where it is necessary and appropriate for the Section Head to assign priority to the review of applications that meet certain criteria (see Standard Operating Procedure for Review and Decision Phase).

Once assigned, Final Application Packages undergo detailed technical review by EPOs (and SMEs if necessary), and First Nation consultation activities are completed prior to the preparation of recommendations for the Statutory Decision Maker (SDM).

The Review and Decision Phase ends when the SDM issues his/her decision and documents are forwarded to the applicant and filed in the Ministry’s records management system.

Detailed process steps for this phase are included in the Standard Operating Procedures document for Review and Decision Phase. Key actions include the following:

### **Assign application for review**

1. The appropriate Section Head in ROB receives a notification from AMS that a Final Application Package is ready for assignment to an EPO.
2. When capacity is available to take on new work, the Section Head assigns the application to an EPO. While the section head will normally assign the oldest applications within any given complexity category first, other considerations include:
  - a. Applications that achieve increased protection of the environment or human health and safety

- b. Applications that need to be processed according to prescribed timelines from the Concurrent Approval Regulation or other formally-coordinated permitting processes;
- c. Applications to support specific commitments made to First Nations or other governments;
- d. Applications that support implementation of area-based management plans; or
- e. Applications where there is a significant imminent impact to the local or regional economy.

### **Conduct detailed review and consultation with First Nations**

- 3. The EPO contacts the applicant to advise them that the final detailed review has begun.
- 4. The EPO conducts a detailed technical review of the Final Application Package. The EPO may ask for the assistance of a Subject Matter Expert (SME). The SME would produce an Impact Assessment Memo for the EPO to use when drafting permit requirements.
- 5. The EPO may request additional information or clarification from the applicant who will have 30 days (or other timeline as specified by the EPO) to respond with the information.
- 6. If required, the EPO completes First Nation Consultation.

### **Draft authorization document and recommendation package**

- 7. The EPO prepares the draft authorization and provides it to the applicant for comment.
- 8. After receiving feedback from the applicant on the draft authorization, the EPO prepares and finalizes a recommendation package for the SDM using the Ministry Assessment Report template. The EPO uploads all information to AMS and the recommendation is sent through AMS to the SDM.

### Make a decision

9. The SDM reviews the EPO's recommendation and makes a decision (e.g. issues an authorization or refuses the application). Once a decision is made, the following tasks must be completed:
  - a. The SDM must sign the documents in AMS.
  - b. The SDM writes a Reasons for Decision Memo.
  - c. The SDM may need to notify First Nations of the decision on the Final Application Package and provide a copy of the authorization.
10. Vic Admin sends the authorization documents to the applicant.
11. The EPO confirms that all documents are filed electronically in the proper location according to the ministry's records management system.

The Review and Decision Phase is now complete.

## 4. Procedural Documents

### Application Forms

Form	Purpose	Code
Agricultural Waste Regulation	Boiler & Heater Registration	EPD-AWC-01.1
Asphalt Plant Regulation	Registration and relocation	EPD-APR-01.1
Cancellations		EPD-EMA-A3.1
Change of ownership, name or address		EPD-EMA-A2.1
Concrete Code of Practice	Registration	EPD-CCP-01.1
Industrial Non-hazardous Waste Landfills	Registration	EPD-INL-01.1
Land-based Finfish Regulation	Registration	EPD-LFW-01.1
Mushroom Composting	Registration	EPD-MCF-01.1
OMRR - Compost Facility Regulation <5000 t	Notification	EPD-OMR-03.1
OMRR - Land application	Notification	EPD-OMR-04.1
Payment of Application Fees form		EPD-EMA-A1.1
Petroleum Storage Regulation	Registration	EPD-PSD-01.1
Slaughter COP	Registration	EPD-SPP-01.1



Slaughter COP - Land application	Notification	EPD-SPP-02.1
Soil Amendments Regulation	Notification	EPD-SAC-01.1
Vehicle Dismantling Regulation	Registration	EPD-VDR-01.1
New Authorization - Permit, Approval or OC	Preliminary Application Form	EPD-EMA-01.1
	Final Application Form	EPD-EMA-02.1
	Discharge Factors Form	EPD-EMA-03.1
Amendment - Permit, Approval, OC	Preliminary Application Form	EPD-EMA-04.1
	Final Application Form	EPD-EMA-05.1
	Discharge Factors Form	EPD-EMA-06.1
	Clause Change Form	EPD-EMA-07.1
Location Map Form		EPD-EMA-08.1
Site Plan Form		EPD-EMA-09.1
Environmental Protection Notice		EPD-EMA-10.1
Municipal Wastewater Regulation	Preliminary Application Form	EPD-MWR-01.1
	Final Application Form	EPD-MWR-02.1
	Discharge Factors Form	EPD-MWR-03.1
Hazardous Waste Regulation	Registered Sites	EPD-HWR-01.1
	BCG Registration	EPD-HWR-02.1
	Change in requirements (s51)	EPD-HWR-03.1
OMRR Permits	Preliminary Application Form	EPD-OMR-01.1
	Final Application Form	EPD-OMR-02.1

### *Express Transactions*

Form	Purpose	Code/Version
Agricultural Waste Regulation	Boiler & Heater Registration	EPD-AWC-01.1
Asphalt Plant Regulation	Registration and relocation	EPD-APR-01.1
Cancellations		EPD-EMA-A3.1
Change of ownership, name or address		EPD-EMA-A2.1
Concrete Code of Practice	Registration	EPD-CCP-01.1
Industrial Non-hazardous Waste Landfills	Registration	EPD-INL-01.1
Land-based Finfish Regulation	Registration	EPD-LFW-01.1
Mushroom Composting	Registration	EPD-MCF-01.1
Payment of Application Fees form		EPD-EMA-A1.1

Petroleum Storage Regulation	Registration	EPD-PSD-01.1
Slaughter COP	Registration	EPD-SPP-01.1
Slaughter COP - Land application	Notification	EPD-SPP-02.1
Soil Amendments COP	Notification	EPD-SAC-01.1
Vehicle Dismantling Regulation	Registration	EPD-VDR-01.1

### *Routine Applications*

Form	Purpose	Code/Version
New Authorization - Permit, Approval or OC	Preliminary Application Form	EPD-EMA-01.1
	Final Application Form	EPD-EMA-02.1
	Discharge Factors Form	EPD-EMA-03.1
Amendment - Permit, Approval, OC	Preliminary Application Form	EPD-EMA-04.1
	Final Application Form	EPD-EMA-05.1
	Discharge Factors Form	EPD-EMA-06.1
	Clause Change Form	EPD-EMA-07.1
Location Map Form		EPD-EMA-08.1
Site Plan Form		EPD-EMA-09.1
Environmental Protection Notice		EPD-EMA-10.1
MWR	Preliminary Application Form	EPD-MWR-01.1
	Final Application Form	EPD-MWR-02.1
	Discharge Factors Form	EPD-MWR-03.1
HWR	Registered Sites	EPD-HWR-01.1
	BCG Registration	EPD-HWR-02.1
	Change in requirements (s51)	EPD-HWR-03.1
OMRR Permits	Preliminary Application Form	EPD-OMR-01.1
	Final Application Form	EPD-OMR-02.1
OMRR - Compost Facility <5000 t	Notification	EPD-OMR-03.1
OMRR - Land application	Notification	EPD-OMR-04.1

### *Standard Operating Procedures and Guidance*

Code	Title
EPD SAP GUI 01	Glossary and acronym index
EPD SAP GUI 02	Internal Process Description - Routine Transactions
EPD SAP GUI 03	Internal Process Description - Express Transactions
EPD SAP GUI 04	External Process Description - Routine Transactions
EPD SAP GUI 05	External Process Description - Express Transactions


EPD SAP GUI 06	External Process Summary by role - Routine Transactions
EPD SAP GUI 07	Guidance - Target timelines for Routine Transactions
EPD SAP GUI 08	Guidance - Categorization
EPD SAP GUI 09	Guidance - Do I need a SME
EPD SAP GUI 10	Guidance - Method Review
EPD SAP GUI 11	Guidance for SDMs on Prioritization
EPD SAP SOP 01	SOP Intake Phase
EPD SAP SOP 02	SOP Preliminary Application Phase
EPD SAP SOP 03-1	SOP Screening Phase - Administrative Component
EPD SAP SOP 03-1	SOP Screening Phase - Technical Component
EPD SAP SOP 04	SOP Review & Decision Phase
EPD SAP SOP 05	SOP Digitally Signing Letters
EPD SAP SOP 06	SOP Send Document
EPD SAP SOP 07	SOP How to see what's in the queue

### *Forms and Templates*

Code/Version	Purpose
<b>Information Requirement Tables</b>	
IRT-AIR-1.1	Air
IRT-AIR-2.1	Air
IRT-HWR-1.1	Hazardous Waste
IRT-HWR-2.1	Hazardous Waste
IRT-LW-1.1	Liquid Waste (effluent)
IRT-LW-2.1	Liquid Waste (effluent)
IRT-MIN-1.1	Mining
IRT-MIN-2.1	Mining
IRT-MWR-1.1	Municipal Wastewater Regulation
IRT-MWR-2.1	Municipal Wastewater Regulation
IRT-OMR-1.1	OMRR
IRT-OMR-2.1	OMRR
IRT-SW-1.1	Solid Waste
IRT-SW-2.1	Solid Waste
<b>Other Templates</b>	
SAP Form 01.1	Preliminary Application Meeting Agenda
SAP Form 02.1	SME Request
SAP Form 03.1	Ministry Assessment Report
SAP Form 04.1	SME Memo for Ministry Assessment
SAP Form 05.1	SDM Reasons for Decision

### *Letter Templates*

<b>Purpose</b>	<b>Code/Version</b>	<b>For use by</b>
<b>Intake Phase</b>		
INTAKE - Application Accepted (Receives tracking #)	EPD-INT-01.1	Vic Admin
INTAKE - Incomplete application	EPD-INT-02.1	Vic Admin
INTAKE - Application accepted, pending approval for Exemption	EPD-INT-03.1	Vic Admin
INTAKE - Exemption from Pre-App Denied	EPD-INT-04.1	SDM
<b>Preliminary Application Phase</b>		
PRE - Preliminary Application Meeting Invitation	EPD-PRE-01.1	EPO
PRE - More information required	EPD-PRE-02.1	EPO
PRE - More information required NO response	EPD-PRE-03.1	EPO
PRE - Confirmation of Application requirements letter (AID Document)	EPD-PRE-04.1	SDM
<b>Screening Phase</b>		
Technical Screening - Application accepted/passed	EPD-TEC-01.1	EPO
Technical Screening - Incomplete application/fail	EPD-TEC-02.1	EPO
<b>Review &amp; Decision Phase</b>		
REVIEW - Receives EPO name for review	EPD-REV-01.1	EPO
REVIEW - Clarification requested during review	EPD-REV-02.1	EPO
REVIEW - Clarification requested REMINDER	EPD-REV-03.1	EPO
REVIEW - Receives draft authorization for review	EPD-REV-04.1	EPO
REVIEW - FN Notice of Consultation Letter	EPD-FNC-01.1	EPO
REVIEW - FN Follow up on Consultation NO RESPONSE	EPD-FNC-02.1	EPO
REVIEW - FN Follow up on Consultation RESPONSE RECEIVED	EPD-FNC-03.1	EPO
REVIEW - FN Close consultation response recd	EPD-FNC-04.1	EPO
REVIEW - FN Close consultation NO response	EPD-FNC-05.1	EPO

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.04.15

**Name of Policy:** **Protocol for Management of Residues from Treatment of Hydrocarbon Contaminated Special Waste Drill Cuttings Treated by Using an Approved Biological Treatment Process**

**Replaces:** Procedure Manual  
Volume 8, Section 7, Subsection 5.05

**Application:** Environmental Management Branch

**Purpose:** This procedure provides a protocol for the management of residue from the treatment of hydrocarbon contaminated special waste drill cuttings, treated by using an approved biological treatment process, for use by a Waste Manager pursuant to sections 19.(2)(b), 19.(3), 21.(3)(b), and 21.(4) of the Hazardous Waste Regulation.

**Policy Statement:** **1.0 Procedure:**  
1. Sections 19.(2)(b), 19.(3), 21.(3)(b), and 21.(4) of the Hazardous Waste Regulation allow residue from treatment or incineration facilities to be disposed to a landfill or used for other specified purposes provided the residue is not a hazard to human health or the environment as determined by test protocols approved by the Director. In accordance with section 53.(1) of the Hazardous Waste Regulation, the following protocol is approved for evaluation of residue from the treatment of hydrocarbon contaminated drill cutting wastes.

### **Protocol**

1. This protocol applies only to the residue from treatment by an approved biological treatment process of hydrocarbon contaminated drill cuttings which were special waste due only to the presence of any of the following:

a) "waste oil" as defined in section 1. of the Regulation;

2.04.15 Protocol for Management of Residues from Treatment of Hydrocarbon Contaminated Special Waste Drill Cuttings Treated by Using an Approved Biological Treatment Process

Page 1 of 3

b) benzene, toluene, xylene, ethylbenzene or naphthalene in concentrations (leachable or total) that cause the wastes to qualify as special wastes; or

c) "polycyclic aromatic hydrocarbon TEQ" (PAH-TEQ) as defined in the

Regulation.

2. Residue from the treatment of hydrocarbon contaminated drill cuttings does not need to be analyzed for PAH-TEQ, total PAH, or individual PAHs (except naphthalene) unless the drilling fluid is suspected to contain these contaminants.

3. The sampling and analysis of residue must comply with the following:

a) all samples must be representative and the number of samples must be sufficient to characterize the volume of residue, given the variability of the results;

b) samples should in most cases be discrete; and

c) a quality assurance/quality control component, which includes appropriate analysis of duplicate samples, must be used and incorporated into the sampling and analysis program.

4. The requirements of the Hazardous Waste Regulation do not apply to the storage or any further treatment of a residue, if the residue:

a) is not a special waste, and

b) is stored or further treated in a way that, to the satisfaction of a manager, the residue does not present a hazard to human health or to the environment. Nevertheless, the requirements of the Contaminated Sites Regulation still apply. For example, if contaminated soil is to be moved from the site of treatment of the hydrocarbon contaminated drill cutting wastes, a Contaminated Soil Relocation Agreement under section 28.1 of the *Environmental Management Act* may be required.

5. For a discharge to the environment of the treatment residue described in point 4 above, the owner must demonstrate to the satisfaction of a manager that the residue:

a) no longer poses a hazard to human health or to the environment, and

b) has substance concentrations, determined with protocols approved pursuant to section 53 of the Contaminated Sites Regulation, less than the numerical standards set out in section 17 of the Contaminated Sites Regulation for the land use at the intended disposal site.

**References and Relationships:**

Waste Management Act (now Environmental Management Act), Special Waste Regulation (now Hazardous Waste Regulation), Contaminated Sites Regulation

**Approval:**

Jim Standen                      **Date:** August 19, 2008  
A/Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:**

Original on file (ROB)  
Del Reinheimer, Section Head  
Environmental Management (Prince George)

Effective Date if different than Approval Date:
Original Date of Policy: Aug 28, 2002
Date of Policy Amendment(s): Aug 19, 2008

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.07.01

**Name of Policy:** AOX Calculations for Permit Fees

**Replaces:** None

**Application:** Environmental Protection Division Staff

**Purpose:** To calculate the AOX component of the permit fees in the Environmental Management Act Permit Fees Regulation (former *Waste Management Permit Fees Regulation*). This method does not apply to any other calculations in the regulation or any permits.

**Policy Statement:** As per the formulae in the attached document, use the maximum authorized effluent flow and the bleached pulp reference production rate to determine the most restrictive AOX limit. Use the most restrictive AOX limit to determine the AOX fee.

**References and Relationships:**

- Environmental Management Act Permit Fees Regulation (former Waste Management Permit Fees Regulation)
- Pulp Mill and Pulp and Paper Mill Liquid Effluent Control Regulation

**Approval:** Original on File in ROB      **Date:** October 5, 2009  
Assistant Deputy Minister  
Environmental Protection Division

Original on File  
Jim Hofweber, Director  
Environmental Management Branch

**Contact Person:** Glyn Fox, Senior Science Officer  
Environmental Management Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

Policy in its current format:  
[http://www.env.gov.bc.ca/epd/industrial/pulp\\_paper\\_lumber/aox\\_permit\\_fees.htm](http://www.env.gov.bc.ca/epd/industrial/pulp_paper_lumber/aox_permit_fees.htm)



# Industrial Waste

## ***PULP, PAPER and LUMBER***

### **Method to Calculate AOX Component of Permit Fees** (relative to Section 3 of the *Waste Management Permit Fees Regulation* BC Reg 299/92 deposited on July 31, 1992)

This method only applies to the calculation of the AOX component of permit fees in the *Waste Management Permit Fees Regulation*. This method does not apply to any other calculations in the regulation or any permits.

#### ***A. Determine Flow and Production***

1. **Determine the maximum authorized effluent flow (Fmax) in cubic metres per day.**

See the permit limit and, if necessary, convert to units of cubic metres per day.

2. **Determine the bleached pulp reference production rate (P) in ADt/d.**

Using the methodology described in sections 12 and 13 of the federal Pulp and Paper Effluent Regulations SOR/92-269 and using the same 12-month time period that was used to determine the federal reference production rate, determine the bleached pulp reference rate\* in air-dried tonnes per day. (The federal regulation can be found at: <http://laws.justice.gc.ca/en/f-14/sor-92-269/121652.html>)

\*The federal reference production rate includes production from the kraft or sulphite pulp mill, thermo mechanical pulp mill, groundwood mill etc., but the bleached pulp reference rate only includes production from the Kraft or sulphite pulp mill's bleach plant.

#### ***B. Determine the Most Restrictive AOX Limit***

1. **For permits where AOX is expressed in mg/L (daily maximum) convert to kg/ADt (monthly average) and compare to 0.6 kg/ADt effluent limit In: Pulp Mill and Pulp and Paper Liquid Effluent Control Regulation).**

$$AOX_{\text{(monthly average kg/ADt)}} = AOX_{\text{(daily max mg/L)}} \times F_{\text{max(m3/d)}} \div P_{\text{(ADt/d)}} \div 1000_{\text{(mg/kg-m3/L)}} \div 1.52_{\text{(factor to convert daily max to monthly average)}}$$

Where  $F_{\text{max}}$  = the maximum daily flow of effluent authorized by permit

P = the bleached pulp reference production rate defined in A.2 above

2. **For permits where AOX is expressed in kg/ADt (daily maximum) convert to kg/ADt (monthly average) and compare to 0.6 kg/ADt (In: Pulp Mill and Pulp and Paper Liquid Effluent Control Regulation).**

$$AOX_{\text{(monthly average kg/ADt)}} = AOX_{\text{(daily max ADT kg/d)}} \div 1.52$$

3. For permits where AOX is expressed in kg/d (daily maximum) convert to kg/ADt (monthly average) and compare to 0.6 kg/ADt (In: Pulp Mill and Pulp and Paper Liquid Effluent Control Regulation).

$$AOX_{(\text{monthly average kg/ADt})} = AOX_{(\text{daily max kg/d})} \div P_{(\text{ADt/d})} \div 1.52$$


### ***C. Determine the AOX Fee***

Using the most restrictive of the AOX kg/ADt (monthly average) or the AOX 0.6 kg/ADt limit of the Pulp Mill and Pulp and Paper Liquid Effluent Control Regulation as determined in B, calculate the AOX total discharge per year.

$$AOX_{(\text{total tonnes/year})} = AOX_{(\text{monthly average kg/ADt})} \times P_{(\text{ADt/d})} \times 365_{(\text{d/year})} \div 1000_{(\text{kg/tonne})}$$

Using the contaminant fee for AOX found in Schedule C of the Permit Fees Regulation (B.C. Reg. 299/92) calculate the annual AOX fee.

$$AOX \text{ Fee}_{(\$/\text{year})} = AOX_{(\text{total tonnes/year})} \times \text{Rate}_{(\$/\text{tonne})}$$

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.07.01

**Name of Policy:** **Veneer Dryer Discharge Factors**

**Replaces:** *Discharge Fees: 4.2.1 : Discharge Factors for Forest Products (Miscellaneous discharges) found at:  
<http://www.env.gov.bc.ca/epd/epdpa/embi/forest/421.html>*

**Application:** *This policy applies to all Environmental Protection Staff involved in the issuance of permits and the collection of the associated permit fees.*

**Purpose:** ***This policy is to update the discharge factors for particulate and volatile organic compounds ("VOC") from plywood veneer dryers***

**Policy Statement:** *Discharge factors are substituted as typical concentrations so that permit fees can be calculated where a permit does not specify a contaminant concentration.*

*The former discharge factors were derived in the early 1990's by extrapolation using United States Environmental Protection Agency ("EPA") Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources ("AP-42") emission factors which were published February 1980. The new discharge factors are derived from EPA, AP-42 Emissions Factors for Plywood Manufacturing (Chapter 10.5), published January 2002.*

*The Ministry has updated the discharge factors to reflect current knowledge regarding emissions from veneer dryers and to ensure a level playing field among composite panel manufacturers in the assessment of permit fees under the Environmental Management Act, Permit Fees Regulation. The following table outlines the historical and new discharge factors to be applied in determining the appropriate permit fees associated with veneer dryers:*

	<u>VOC</u>	<u>Particulate</u>
indirect heated dryer (new)	0.93 kg/m <sup>3</sup>	0.68 kg/m <sup>3</sup>
direct natural gas heated dryer (new)	1.27 kg/m <sup>3</sup>	0.25 kg/m <sup>3</sup>
discharge factors (former)	0.07 kg/m <sup>3</sup>	0.19 kg/m <sup>3</sup>

**References  
and  
Relationships:**

*Authority for the establishment of this policy is derived from the  
Environmental Management Act, Permit Fees Regulation s.3(4)b*

**Approval:**

Lynn Bailey  
Lynn Bailey, Director  
Environmental Protection Division

**Date:** May 26, 2007

**Contact Person:**

Original on file (ROB)  
Jim Standen, Deputy Director  
Regional Operations Branch

Effective Date if different than Approval Date: on approval
Original Date of Policy: May 16, 2006
Date of Policy Amendment(s): n/a

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.09.05

**Name of Policy:** **Coal-fired Power Boiler Emission Guidelines**

**Replaces:** None

**Application:** Environmental Protection Division

**Purpose:** This policy defines the limits for gaseous and particulate emissions from new coal-fired power boilers.

**Policy Statement:** All new thermal power generation projects, as well as existing facilities that are undergoing significant modifications, are required to install control technologies that will, at a minimum, achieve these emission guidelines. Depending on the project and site, and if an adverse impact to the receiving environment is anticipated, more stringent control of emissions, beyond the guidelines listed here, may be deemed necessary by the Ministry of Environment.

**References and Relationships:** Environmental Management Act

**Approval:** Lynn Bailey **Date:** April 16, 2009  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Original on file (ROB)  
Christa Zacharias-Homer, Deputy Director  
Regional Operations Branch

Effective Date if different than Approval Date: June 5, 2007
Original Date of Policy: 2005
Date of Policy Amendment(s):

## Coal-fired Power Boiler Emission Guidelines 2005

---

### Introduction

All new thermal powered generation projects, as well as existing facilities that are undergoing significant modifications, are required to install control technologies that will, at a minimum, achieve these emission guidelines. Depending on the project and site, and if an adverse impact to the receiving environment is anticipated, more stringent control of emissions, beyond the guidelines listed here, may be deemed necessary by the Ministry of Environment.

### Coal-fired Power Boilers

The limits for gaseous and particulate emissions from new coal-fired power boilers are given in Table 1.

**Table 1. Limits for Gaseous and Particulate Emissions from New Coal-fired Boilers**

Parameter	Limit	Units (1)
Total Particulates	26.5	ng/J (output)
Nitrogen Oxides (2) as NO <sub>2</sub>	191.7	ng/J (output)
Sulphur Dioxide (2)	222.2	ng/J (output)
Opacity	20	% opacity
Mercury (3)		
Coal Type	Percent Capture in Coal Burned* (%)	Emission Rate* (kg/TWh)
Bituminous Coal	85	3
Sub-bituminous Coal	75	8
Lignite	75	15
Blends	85	3

## Notes Applicable to Table 1

1. A comparison with guidelines and standards in other jurisdictions may be found in the [tables](#). These tables provide comparisons in input based units as well as output based units.
2. The values for Total Particulates, Nitrogen Oxides and Sulphur Dioxide are on a 30-day rolling average basis.
3. Same as the Canadian Council of Ministers for the Environment's Canada-wide Standards for Mercury Emissions from Coal-fired Electric Power Generation Plants, which states: "A new coal-fired [electric power generation] (EPG) unit will achieve a capture of mercury from coal burned no less than specified or an average annual mercury emission rate no greater than specified [in the table]".

Continuous monitoring of sulphur dioxide, nitrogen oxides and oxygen or carbon dioxide contents in the flue gas will be required. Any additional monitoring and source testing requirements will be determined by the Ministry of Environment on a case-by-case basis.

No limits have been specified for polycyclic aromatic hydrocarbons or certain other reactive substances. Appropriate specifications will be established by the Ministry of Environment should such a need develop. The degree of control necessary for polycyclic aromatic hydrocarbons or certain other reactive substances may also require a further reduction of total particulate emissions.

## Coal-fired Power Boiler Emission Guidelines 2005 - Tables

**Table 1. Comparison of Current Guidelines for New Coal-fired Power Plants (Calculated on Heat Output Basis)**

Jurisdiction	Emission Limits (ng/J)			Opacity %	Mercury % Capture unless otherwise indicated
	Nitrogen Oxides	Sulphur Dioxide	Total Particulate		
BC 2003	368	530 to 854 <sup>1</sup>	29	20	-
BC 2005	192	222.2	26.5	20	75% to 85% <sup>2</sup>
Canada	192	147 to 1178 <sup>3</sup>	26.5	20	75% to 85% <sup>2</sup>
Alberta <sup>4</sup> 2005	192	222.2	26.5	-	75% to 85% <sup>2</sup>
Saskatchewan <sup>5</sup>	192	147 to 1178 <sup>3</sup>	26.5	20	85%
Ontario <sup>6</sup>	-	-	-	-	75% to 85% <sup>2</sup>
US EPA	618 to 766 <sup>7</sup>	253 to 1531 <sup>3</sup>	38.3		W = 0.00018 B = 0.0026 SB: wFGD = .0053 dFGD = 0.0098 L = 0.0183 (ng/J) <sup>8</sup>



Washington <sup>9</sup> est.	380	215	17.7	20	n/a
Montana <sup>9</sup> est.	112	138	30.3	-	0.0074 ng/J
Oregon <sup>9</sup> est.	613	1474	51.1	-	

1. Varies with amount of waste coal used. The 854 ng/J limit applies if waste coal is > 75%.
2. Canada, the provinces and territories have adopted the June 2005 Canada-wide Standard for mercury which specifies 75% capture of mercury in sub-bituminous and lignite coals and 85% capture in bituminous and blended coals.
3. Limit depends on sulphur content in coal. For most B.C. coals the limit would be 147 to 736 ng/J.
4. Emission guidelines for new plants or major upgrades announced March 2004 and effective 2006. Note: no guideline for opacity.
5. By policy, Saskatchewan has decided to follow the federal (Canada) guidelines for new plants.
6. Ontario controls coal-fired power plant emissions through permits and an emission trading system with caps on nitrogen oxides and sulphur dioxide. Permit limits are based on ambient air limits and therefore are not comparable to the jurisdictions in this table. Ontario originally indicated that all coal-fired power plants will be phased out by 2007; this has been amended to 2009.
7. Limit depends on type of coal: 618 ng/J for bituminous, 766 ng/J for all other coals. Note: NOx limit does not apply if waste coal is greater than 25% of the fuel.
8. Limit depends on type of coal being burned; W = waste coal, B = bituminous, SB = sub-bituminous, wFGD = wet flue gas desulphurization, dFGD = dry flue gas desulphurization, L = lignite.
9. US EPA New Source Pollution Standards (NSPS) limits apply as a minimum, however before any major facility can be constructed the operator must obtain a site-specific New Sources Review (NSR) permit which will often impose more restrictive standards. In this table: Washington limits from the Centralia facility built in 1971 (no new coal-fired plants proposed). Montana limits from the 116 MW Rocky Mountain Power facility started in 2004. Oregon limits from the Boardman facility built in 1979 (no new coal-fired power plants proposed).

**Table 2. Comparison of Current Guidelines for New Coal-fired Power Plants (Calculated on Heat Input Basis).**

Jurisdiction	Emission Limits (ng/J)			Opacity %	Mercury % Capture unless otherwise indicated
	Nitrogen Oxides	Sulphur Dioxide	Total Particulate		
BC 2003	125	180 to 290 <sup>1</sup>	10	20	-
BC 2005	65	75	9	20	75% to 85% <sup>2</sup>
Canada	65	50 to 400 <sup>3</sup>	9	20	75% to 85% <sup>2</sup>
Alberta <sup>4</sup> 2005	65	75	9	-	75% to 85% <sup>2</sup>
Saskatchewan <sup>5</sup>	65	50 to 400 <sup>3</sup>	9	20	85%
Ontario <sup>6</sup>	-	-	-	-	75% to 85% <sup>2</sup>
US EPA	210 to 260 <sup>7</sup>	86 to 520 <sup>3</sup>	13		W = 0.00006 B = 0.0008 SB: wFGD = .00018 dFGD = 0.0033 L = 0.006 (ng/J) <sup>8</sup>
Washington <sup>9</sup> est.	129	73	6	20	n/a
Montana <sup>9</sup> est.	38	47	10.3	-	0.0025 ng/J

Oregon <sup>9</sup> est.	208	500	17.4	n/a	n/a
--------------------------	-----	-----	------	-----	-----

10. Varies with amount of waste coal used. The 290 ng/J limit applies if waste coal is >75%.
11. Canada, the provinces and territories have adopted the June 2005 Canada-wide Standard for mercury which specifies 75% capture of mercury in sub-bituminous and lignite coals and 85% capture in bituminous and blended coals.
12. Limit depends on sulphur content in coal. For most B.C. coals the limit would be 50 to 250 ng/J.
13. Emission guidelines for new plants or major upgrades announced March 2004 and effective 2006. Note: no guideline for opacity.
14. By policy, Saskatchewan has decided to follow the federal (Canada) guidelines for new plants.
15. Ontario controls coal-fired power plant emissions through permits and an emission trading system with caps on nitrogen oxides and sulphur dioxide. Permit limits are based on ambient air limits and therefore are not comparable to the jurisdictions in this table. Ontario originally indicated that all coal-fired power plants will be phased out by 2007; this has been amended to 2009.
16. Limit depends on type of coal: 210 ng/J for bituminous, 260 ng/J for all other coals. Note: NO<sub>x</sub> limit does not apply if waste coal is greater than 25% of the fuel.
17. Limit depends on type of coal being burned; W = waste coal, B = bituminous, SB = sub-bituminous, wFGD = wet flue gas desulphurization, dFGD = dry flue gas desulphurization, L = lignite.
18. US EPA New Source Pollution Standards (NSPS) limits apply as a minimum, however before any major facility can be constructed the operator must obtain a site-specific New Sources Review (NSR) permit which will often impose more restrictive standards. In this table: Washington limits from the Centralia facility built in 1971 (no new coal-fired plants proposed). Montana limits from the 116 MW Rocky Mountain Power facility started in 2004. Oregon limits from the Boardman facility built in 1979 (no new coal-fired power plants proposed).

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.09.17

**Name of Policy:** **Provincial Medium Density Fibreboard (MDF) Emission Guidelines**

**Replaces:** None

**Application:** All Environmental Protection Division staff responsible for the administration of permits relating to MDF facilities.

**Purpose:** This policy establishes provincial emission guidelines for new MDF plants to be used as guidance for setting permit limits. Parameters for which emission guidelines have been developed are total particulates, formaldehyde and opacity.

**Policy Statement:** The Provincial Health Officer, the Ministry of Health Services, the Ministry of Healthy Living and Sport, and the Environmental Quality Branch of the Ministry of Environment have identified particulate matter and formaldehyde emissions from MDF facilities to be of considerable concern.

There are several options for controlling emissions from MDF plants. These options are classified as process modifications or add-on control technologies. The two primary areas for their application are the press vents and the dryers, the areas that generate most of the emissions. For formaldehyde control, the process modification for the press vents is to route emissions into the plant's energy system because it operates under high temperature, and will effectively eliminate the formaldehyde. Process modifications for dryers include reducing temperatures to prevent formaldehyde from being driven off, injecting formaldehyde scavengers, and applying resin after the dryers using mechanical techniques in place of air injection systems.

Two add-on control technology options that can be effective in reducing both particulate and formaldehyde emissions are biological gas cleaning and thermal oxidation.

Biological gas cleaning involves the use of microorganisms and is in the process of being implemented as a pilot study in the wood products industry. Thermal oxidation is a combustion process which has been installed at one MDF plant, and plans are underway for using it at other plants. Although thermal oxidation reduces particulate and formaldehyde emissions, it requires high temperatures and the use of additional fuel. This technique results in carbon dioxide and nitrogen oxide emissions being increased.

After reviewing the various emission control options and other regulatory requirements for MDF plants, and after consulting with industry, consultants and environmental groups, the Ministry developed the following emission guidelines for new MDF plants\*:

Contaminant	Guidelines	Averaging Period
Total Particulates	120 mg/m <sup>3</sup> (a), (b)	1 hour
Formaldehyde	300 g/tonne	(c)
Opacity	15%	6 minutes

(a) For combustion sources, reference conditions are 20°C, 101.325 kPa, and dry gas concentration corrected to 8% flue gas oxygen by volume.

(b) Monitoring is to include a breakdown of particulate emissions into size fractions of PM<sub>10</sub> and PM<sub>2.5</sub>

(c) Multiple manual source tests within a one day period until a continuous monitoring procedure acceptable to the ministry has been developed.

\* - current as of July 2008

#### References and Relationships:

*Environmental Management Act, Waste Discharge Regulation*

**Approval:** Lynn Bailey **Date:** July 8, 2008  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Original filed (ROB)  
Jim Standen, Deputy Director  
Regional Operations Branch

Effective Date if different than Approval Date:
Original Date of Policy: June 1995
Date of Policy Amendment(s): July 3, 2008

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.0	2.09.26

**Name of Policy:** **Guideline for Emissions from Biomass-Fired Boilers**

**Replaces:** None

**Application:** This policy applies to ministry staff engaged in developing standards for the combustion of biomass for the generation of thermal heat energy.

**Purpose:** The purpose of this guideline is to give assistance to Directors issuing authorizations for emissions from combustion sources using biomass as a primary fuel to generate thermal heat energy.

**Policy Statement:** This interim policy is specifically intended to cover an immediate need for guidance to ministry staff and proponents involved with energy projects in response to the BC Energy Plan.

**References and Relationships:**

- 1) Setting Standards, Policies and Guidelines (SSPG), and
- 2) Best Achievable Technology (BAT)

This guideline does not apply to:

- Combustion of wood used solely for comfort heating as exempted under 6(5)(k) of the Environmental Management Act, and/or
- Any appliance covered by the Solid Fuel Burning Domestic Appliance Regulation

**Approval:**

  
 Assistant Deputy Minister  
 Environmental Protection Division

**Date:** Jan 18 / 2013

**Contact Person:** Tony Wakelin, Unit Head, Environmental Standards Branch

Effective Date if different than Approval Date:

Original Date of Policy:

Date of Policy Amendment(s):

## A. GLOSSARY

**"biomass"** means

- (a) wood or wood products,
- (c) manufactured wood fuel, or
- (d) logging residue.

but does not include

- (e) any paper or paper product,
- (f) any wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, or
- (g) municipal solid waste.

**"logging residue"** means logs or log ends, branches and tree stumps.

**"manufactured wood fuel"** means wood pellets and wood pucks.

**"municipal solid waste"** means municipal refuse which originates from residential, commercial, institutional and industrial sources and includes semi-solid sludges, household hazardous waste and any other substances which are typically disposed of in municipal-type landfills.

**"salt-laden wood"** means a wood product that that has originated from logs that have been in ocean water.

**"wood product"** includes manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust, wood bark and firewood.

**"significantly modified"** means a physical or operational change in a facility that results in an increase of 10% or more of the volume of discharge or the total amount of any contaminant released to the environment.

## B. APPLICATION

### New facilities

All new facilities are required to install control technologies that will, at a minimum, achieve the emission limits in Table 1. If an impact assessment indicates a potential for continued adverse effects on the environment or human health, more stringent emission controls, beyond the limits listed here, may be deemed necessary by a Director.



### **Existing facilities**

Existing permitted facilities that will be significantly modified may be required to upgrade control technologies to meet more stringent emission limits as required by a Director. Ministry policy for:

- 1) Setting Standards, Policies and Guidelines (SSPG), and
- 2) Best Achievable Technology (BAT)

are to be applied when developing site specific emission limits. These facilities will also be required to meet the monitoring requirements in Table 1. (Monitoring frequency according to size).

### **All facilities**

If non-biomass fuels are also burned, authorizations may stipulate additional limits and monitoring requirements for sulphur dioxide, nitrogen oxides, and other contaminants as appropriate.

If salt laden wood is being used in the facility, the total particulate limit does not include salt (it is salt free).

The Director may expand the definition of "biomass" to include other biomass based fuels as they become available.

**Table 1: Emission Limits for Biomass-Fired Boilers**

Size <sup>a</sup>	<1MW <sub>th</sub> <sup>b</sup>		1 to 3 MW <sub>th</sub>		3 to 39 MW <sub>th</sub>		>40 MW <sub>th</sub>	
	Limit	Monitoring <sup>f</sup>	Limit	Monitoring <sup>f</sup>	Limit	Monitoring <sup>f</sup>	Limit	Monitoring <sup>f</sup>
Total Particulate <sup>c, d, e</sup>	120 mg/m <sup>3</sup>	Annual	50 mg/m <sup>3</sup>	Annual	35 mg/m <sup>3</sup>	Annual	20 mg/m <sup>3</sup>	2 times/year
Opacity	20 %	Daily	10 %	Daily	10 %	Daily	10 %	Continuous
Dioxin/Furan teq <sup>c</sup>	No burning of salt laden wood.	N/A	100 picograms/m <sup>3g</sup>	Annual	100 picograms/m <sup>3g</sup>	Annual	100 picograms/m <sup>3g</sup>	Annual


**Notes to Table 1:**

- (a) Total cumulative output of all new biomass fired units at a facility.
- (b) MW<sub>th</sub> = mega watts thermal output
- (c) Concentrations measured at standard conditions of 20°C, 101.3kPa, dry gas and 8% O<sub>2</sub>.
- (d) For new units, an operator would be required to undertake baseline monitoring (stack testing) within six months of start up and according to the frequency stated thereafter.
- (e) Total particulate concentrations are the filterable (front half catch) only
- (f) Monitoring for this guideline must be in accordance with the:

**British Columbia Field Sampling Manual — For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples**

January 2003.

- (g) Monitoring is required only if salt-laden wood is burned.

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	Section	Subsection
		2.0	2.11.01

**Name of Policy:** **Agricultural Waste Control Regulation – Implementation Policy and Procedures for Air Emissions Requirements**

**Replaces:** Policy is new.

**Application:** This policy applies to staff engaged in administering the *Agricultural Waste Control Regulation*.

**Purpose:** The purpose of this guideline is to give assistance to staff engaged in administering the *Agricultural Waste Control Regulation*.

**Policy Statement:** Amendments to the BC Government's *Agricultural Waste Control Regulation* (AWCR) came into force on December 8, 2008. The amendments replaced the existing AWCR emission limits for wood fired boilers with more stringent emission limits for biomass fired boilers and heaters. Registration, monitoring, reporting and record keeping requirements have been also added to enable compliance determination.

This document (attached) provides guidance to ministry staff for implementing the amendments to the AWCR. The more stringent limits will be phased-in over two years (May 1, 2008 – Sept 1, 2010). The AWCR exempts agricultural operations from the *Environmental Management Act* if they follow the requirements of the regulation.

**References and Relationships:** The Ministry of Environment, Metro Vancouver and the greenhouse industry have collaborated in developing a harmonized approach for emission limits, monitoring, reporting and record keeping activities. Industry associations support the harmonized standards and the approach being taken. The new Metro Vancouver Agricultural Boilers Emission Regulation Bylaw No. 1098 was adopted by their board on October 24, 2008. For further information on Metro Vancouver's bylaw please see their website : [www.metrovancouver.org/services/permits/Pages/airquality.aspx](http://www.metrovancouver.org/services/permits/Pages/airquality.aspx).

**Approval:** original signed by \_\_\_\_\_ **Date:** May 7, 2010  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Bob Konkin, Environmental Management Officer  
Environmental Quality Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

**IMPLEMENTATION POLICY AND PROCEDURES GUIDE  
FOR AMENDMENTS TO THE  
AGRICULTURAL WASTE CONTROL REGULATION  
(FOR BOILERS AND HEATERS)**

**JUNE 2009  
VERSION 1**

# AGRICULTURAL WASTE CONTROL REGULATION

## IMPLEMENTATION POLICY AND PROCEDURES

### Contents

Forward.....	1
Division Contacts for AWCR Boilers and Heaters Amendment .....	1
Contents.....	2
1. Summary of Regulatory Requirements ~ Policy and Procedures.....	2
2. Table: 1 Emissions from Boilers and Heaters Fuelled by Biomass.....	11
3. Questions and Answers from March 4th, 2009 Webinar Staff Training Session .....	12
4. Authorization Management.....	15
4.1 Requirement to register .....	15
4.2 Registration Form .....	15
4.3 Fees .....	15
4.4 Security .....	16
4.5 Relationship to Other Legislation.....	16
4.6 Implementation .....	16
5. Compliance Verification .....	16
5.1 Inspection Policy .....	18
5.2 Inspection Results ~ Information Management.....	19
5.3 Investigations .....	19
6. Enforcement.....	20
6.1 Advisories .....	20
6.2 Warnings.....	20
6.3 Orders - Description and Application to the AWCR .....	20
6.4 Violation Tickets.....	21
6.5 Prosecutions.....	22
Appendix 1 .....	24
Appendix 2 .....	25
Appendix 3 .....	29

## Forward

Amendments to the BC Government's Agricultural Waste Control Regulation (AWCR) came into force on December 8, 2008. The amendments replaced the existing AWCR emission limits for wood fired boilers with more stringent emission limits for biomass fired boilers and heaters. Registration, monitoring, reporting and record keeping requirements have been also added to enable compliance determination.

This document provides guidance to ministry staff for implementing the amendments to the Agricultural Waste Control Regulation (AWCR). The more stringent limits will be phased in over two years (May 1, 2008 – Sept 1, 2010). The AWCR exempts agricultural operations from the *Environmental Management Act* if they follow the requirements of the regulation.

The Ministry of Environment, Metro Vancouver and the greenhouse industry have collaborated in developing a harmonized approach for emission limits, monitoring, reporting and record keeping activities. Industry associations support the harmonized standards and the approach being taken. The new Metro Vancouver Agricultural Boilers Emission Regulation Bylaw No. 1098 was adopted by their board on October 24, 2008. For further information on Metro Vancouver's bylaw please see their website :

[www.metrovancouver.org/services/permits/Pages/airquality.aspx](http://www.metrovancouver.org/services/permits/Pages/airquality.aspx).

## Division Contacts for AWCR Boilers and Heaters Amendment

Bob Konkin  
Environmental Management Officer  
Telephone: (250) 387-9463  
Email: [Bob.Konkin@gov.bc.ca](mailto:Bob.Konkin@gov.bc.ca)

Tony Wakelin  
Section Head – Industrial Air Emissions  
Telephone: (250) 356-0634  
Email: [Tony.Wakelin@gov.bc.ca](mailto:Tony.Wakelin@gov.bc.ca)

The Ministry of Environment has also recently begun a review of this regulation in its entirety. This review is a separate initiative to the recent amendments of the emission limits section discussed in this document. Please contact Margaret Crowley, Environmental Management Officer (Telephone: (250) 387-6018 or Email [Margaret.Crowley@gov.bc.ca](mailto:Margaret.Crowley@gov.bc.ca)) for further information on the overall regulation review.

## Contents

This document includes a number of topics intended to aid staff with interpreting and implementing the AWCRC amendments. Key topics are:

1. Summary of Regulatory Requirements ~ Policy and Procedures. Listing of the new regulatory requirements and interpretation in plain English.
2. Table 1. This table summarizes the new emission standards according to boiler size and phase in date.
3. Questions and Answers from March 4<sup>th</sup>, 2009 Webinar Staff Training Session.
4. Authorization Management
5. Compliance Verification - Outline of the various compliance tools available to Directors, Conservation Officers and Environmental Protection Officers.

### 1. Summary of Regulatory Requirements ~ Policy and Procedures

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
1 Section 1 ~ Definitions	
"biogas" means a gas derived from the anaerobic decomposition of organic matter.	<i>Clarification/Guidance:</i> Biogas is one of the approved fuels that can be used in an agricultural boiler or heater (see Section 18).
"biomass" means (a) agricultural fuel products including agricultural pellets, manure pellets, corn kernels, corn stalks and seed hulls, or (b) wood or wood products, but does not include (c) any raw manure, (d) any paper or paper product, (e) any wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, or (f) any salt-laden wood or wood product with a chloride content exceeding 0.05% on a dry basis;	<i>Clarification/Guidance:</i> Biomass is one of the approved fuels that can be used in an agricultural boiler or heater (see Section 18). Boilers and heaters that are fired by biomass and have an output capacity of > 1MW have a mandatory requirement to undergo regular emissions testing whereas all of the other approved fuels do not unless required to do so by a director (Section 18.1).

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p><b>"capacity"</b>, in relation to a boiler or heater, means the maximum rate of energy output from the boiler or heater measured in megawatts of thermal energy;</p>	<p><b><i>Clarification/Guidance:</i></b></p> <p>Individual output capacity measured in megawatts (MW) is the parameter used to determine the 3 size classes (<math>\leq 1</math> MW, <math>&gt;1</math> to <math>\leq 3</math> MW and <math>&gt; 3</math> MW) of boilers or heaters and assign accompanying emission limits. The following notes are from the MetroVan website:</p> <p><b>What is Boiler Capacity?</b>  Boiler capacity information may be found on the boiler nameplate (metal tag attached to the boiler), or it may be obtained from the boiler manufacturer. Report only the boilers which are, or will be, in operating condition and required for use during the heating season.  Boiler capacity refers to the energy INPUT or OUTPUT of a boiler.  - NATURAL GAS and PROPANE boilers are rated by energy INPUT capacity to the boiler.  - BIOMASS boilers are rated by energy OUTPUT capacity from the boiler.</p> <p><b>How do I Determine Capacity?</b>  Capacity values need to be reported in megawatts (MW) to facilitate registration. If the capacity information which you have is not expressed in MW, you can convert the capacity to MW by inserting the capacity beside the corresponding units in the formulas below and multiplying by the indicated factor to obtain the capacity in MW.</p> <p>Conversion factors and an example are as follows:  ___ GJ/hr x 0.2778 = ___ MW</p>



REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p> <math>\text{___ MMBTU/hr} \times 0.2931 = \text{___ MW}</math>  <math>\text{___ Boiler BHP} \times 0.009803 = \text{___ MW}</math> </p> <p> <i>Example:</i>  <i>The boiler plate indicates energy input of 400 BHP, therefore <math>400 \text{ BHP} \times 0.009803 = 3.9212 \text{ MW}</math></i> </p>
<p>"heating season" means a period beginning on October 1 in one year and ending on April 30 in the next year;</p>	<p><b>Clarification/Guidance:</b>  <i>Heating season is the period during which boiler emission testing must take place (Section 18.2)</i></p>
<p>"landfill gas" means a mixture of gases generated by the decomposition of municipal solid waste;</p>	<p><b>Clarification/Guidance:</b>  Landfill gas is one of the approved fuels that can be used in an agricultural boiler or heater (see Section 18).</p>
<p>"low-sulphur fuel" means  (a) No. 2 heating oil, or  (b) diesel fuel for use in Canada in on-road vehicles;</p>	<p><b>Clarification/ Guidance:</b>  The standard for sulfur content in No. 2 heating oil is <math>\leq 500 \text{ mg/kg}</math> (CAN/CGSB-3.2-2007).  Diesel fuel used in Canada in on road vehicles has a sulfur content that is lower than 500 mg/kg.  Either of these two fuels can be used in an oil fired boiler or heater employed in an agricultural operation.</p>
<p>"manufactured wood fuel" means wood pellets and wood pucks;</p>	<p><b>Clarification/ Guidance:</b></p> <ul style="list-style-type: none"> <li>• There are no standards for manufactured wood fuel composition except for the Residential Pellet Fuel Specifications in the in the <i>Solid Fuel Burning Domestic Appliance Regulation</i>.</li> </ul>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p><b>"wood product"</b> includes manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust and firewood;</p>	<p><b>Clarification/ Guidance:</b></p> <p>For the purpose of this regulation, the term firewood was intended to refer to cord wood or wood pieces derived from raw logs.</p>
<p><b>Exemptions</b></p> <p>2 (1) Subject to subsections (2) and (3), a person who carries out an agricultural operation in accordance with the Code is, for the purposes of carrying out that agricultural operation, is exempt from section 6 (2) and (3) of the <i>Environmental Management Act</i>.</p> <p>(2) A person who, on the date this subsection came into force, was carrying out an agricultural operation in which a boiler or heater was used is, for the purposes of carrying out that agricultural operation, exempt from section 6 (2) and (3) of the <i>Environmental Management Act</i> only if, in addition to complying with the Code, that person registers in accordance with subsection (4) before May 1, 2009.</p> <p>(3) A person, other than one referred to in subsection (2), who carries out an agricultural operation in which a boiler or heater is used is, for the purposes of carrying out that agricultural operation, exempt from section 6 (2) and (3) of the <i>Environmental Management Act</i> only if, in addition to complying with the Code, that person has registered in accordance with subsection (4) before the boiler or heater is used.</p>	<p><b>Clarification / Guidance:</b></p> <p>The regulation states that any person operating any number of agricultural boilers must register with the MOE by May 1, 2009 on a form provided by the Ministry (see appendix).</p> <p>In practice all boilers will be registered. However, with heaters only biomass fired should be registered. There are many places where propane and natural gas infrared heaters are used – these do not require registration.</p> <p>The agricultural operation must also comply with the following:</p> <ul style="list-style-type: none"> <li>• <b>Section 18 – Restrictions relating to types of boiler and heater fuel - allowable boiler fuels;</b></li> <li>• <b>Section 18 (1) –Emission standards for boilers and heaters fuelled by biomass – two year phase in;</b></li> <li>• <b>Section 18 (2) Testing of certain boilers and heaters fuelled by biomass - testing of biomass fired boilers with an output capacity of &gt; 1 MW;</b></li> <li>• <b>Section 18 (3) Additional testing and monitoring of boilers and heaters – a director may require additional testing;</b></li> <li>• <b>Section 18 (4) Record keeping requirements for boilers and heaters</b></li> </ul>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p>(4) To register for the purposes of subsection (2) or (3), the person carrying out the agricultural operation must complete the form and comply with the procedures specified by a director.</p>	<p>fuelled by biomass;</p> <ul style="list-style-type: none"> <li>• <b>Section 18 (4)</b> Authority to require that other records be kept; and</li> <li>• <b>Section 18 (6)</b> Retention and submission of records.</li> </ul>
<p><b>Emission standards for boilers and heaters fuelled by biomass</b></p> <p><b>18.1</b> (1) This section applies to a boiler or heater that</p> <p style="padding-left: 40px;">(a) is fuelled by biomass, and</p> <p style="padding-left: 40px;">(b) is used in an agricultural operation.</p> <p>(2) Subject to subsections (3) and (4), emissions from a boiler or heater referred to in subsection (1) that has a capacity specified in any of items 1 to 3 of column 1 of Table 1 must not exceed the following standards:</p> <p style="padding-left: 40px;">(a) effective on the date this section comes into force, the particulate matter limit and the opacity limit specified in column 2 opposite that item;</p> <p style="padding-left: 40px;">(b) effective on May 1, 2009, the particulate matter limit and the opacity limit specified in column 3 opposite that item;</p> <p style="padding-left: 40px;">(c) effective on September 1, 2010, the particulate matter limit and the opacity limit specified in column 4 opposite that item.</p>	<p><b>Procedures / Guidance:</b></p> <p>See Table 1 – Emissions from Boilers and Heaters Fuelled by Biomass for a complete breakdown of boiler sizes and their accompanying emission standards, opacity limits and phase in dates</p> <p>Testing Methodology - <a href="http://www.env.gov.bc.ca/air/wamr/labsys/field_man_03.html">http://www.env.gov.bc.ca/air/wamr/labsys/field_man_03.html</a></p> <p><b>Minimum Stack Height</b></p> <ul style="list-style-type: none"> <li>• A minimum stack height may be set on a case by case basis in order to achieve better dispersion in an effected community.</li> <li>• This determination could involve a meteorologist and dispersion modeling results.</li> </ul>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p>(3) For the purpose of subsection (2), particulate matter must be determined under standard conditions of 20° Celsius, 101.3 kPa dry gas and 8% oxygen.</p> <p>(4) Subsection (2) does not apply to emissions from a boiler or heater during the 60 minutes after it is started.</p> <p>(5) The person carrying out the agricultural operation must comply with any minimum stack discharge height set under subsection (6).</p> <p>(6) A director may set a minimum stack discharge height for a boiler or heater referred to in subsection (1).</p>	
<p>Testing of certain boilers and heaters fuelled by biomass</p> <p><b>18.2 (1)</b> This section applies to a boiler or heater that</p> <p>(a) is fuelled by biomass,</p> <p>(b) is used in an agricultural operation, and</p> <p>(c) has a capacity exceeding one megawatt</p>	<p><i>Clarification/Guidance:</i></p> <p>See definition of capacity in this document for assistance on how to determine boiler or heater output capacity in megawatts.</p>
<p><b>Testing Schedule</b></p> <p>(2) For the purpose of ensuring compliance with section 18.1, the person carrying out the agricultural operation must have emissions from a boiler or heater referred to in subsection (1) tested in accordance with this section.</p> <p>(3) Emissions from the boiler or</p>	<p><b>Clarification / Guidance:</b></p> <p>Testing for biomass fired boilers (see Table 1)</p> <p><b>A) For biomass fired boiler already in existence, then starting September 1, 2009:</b></p> <ul style="list-style-type: none"> <li>• Test boilers &gt; 3 MW once every heating season.</li> <li>• Test boilers <math>\geq 1</math> to <math>\leq 3</math> MW once</li> </ul>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p>heater must be tested for particulate matter</p> <p>(a) within 6 months (i) after the installation of the boiler or heater, and (ii) after the modification of the boiler or heater to increase its capacity by 25% or more,</p> <p>(b) at the intervals specified in subsection (5) or (6), as applicable, and</p> <p>(c) at any time required by a director under section 18.3.</p> <p>(4) If the boiler or heater did not have a capacity exceeding one megawatt on the date of installation, emissions from the boiler or heater must be tested for particulate matter</p> <p>(a) within 6 months (i) after the modification of the boiler or heater to increase its capacity to exceeding one megawatt, and (ii) after any further modification of the boiler or heater to increase its capacity by 25% or more,</p> <p>(b) at the intervals specified in subsection (5) or (6), as applicable, and</p> <p>(c) at any time required by a director under section 18.3.</p> <p>(5) Subject to subsection (6), emissions from the boiler or heater must be tested for particulate matter not less than once during each heating season after September 1, 2009.</p>	<p>every heating season unless manufactured fuel is being used. If manufactured fuel is being used then test once during Oct 1, 2009 heating season then every second heating season thereafter.</p> <ul style="list-style-type: none"> <li>• No testing is required for boilers <math>\leq</math> 1 MW unless required by a director.</li> <li>• Boilers must be operating at not less than 75% of output capacity during testing.</li> <li>• A director may require additional testing.</li> </ul> <p><b>B) For new boiler installations or increases in output capacity of <math>\geq</math> 25%: after September 1, 2009.</b></p> <ul style="list-style-type: none"> <li>• Test within 6 months of modification or installation and then at intervals as described above in (A) above.</li> </ul> <p><b>C) For a boiler that is <math>\leq</math> 1 MW and has a modification that increases its output capacity to <math>&gt;</math> 1MW and after any further modifications that increase output capacity by <math>\geq</math> 25%</b></p> <ul style="list-style-type: none"> <li>• Test within 6 months of modification or installation and then at intervals as described above in (A) above.</li> </ul>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p>(6) If the boiler or heater has a capacity not exceeding 3 megawatts and is fuelled exclusively by manufactured wood fuel, emissions from the boiler or heater must be tested for particulate matter not less than</p> <p>(a) once during the heating season beginning on October 1, 2009, and</p> <p>(b) once during every second heating season after the heating season referred to in paragraph (a).</p> <p>(7) Emissions from the boiler or heater must be tested under normal operating conditions and when the boiler or heater is operating at not less than 75% of its capacity and is fuelled only by biomass.</p> <p>(8) All testing must be carried out using the methodology specified by a director.</p>	
<p><b>Failed Test</b></p> <p>(9) If the testing data indicate that emissions from the boiler or heater exceed the applicable particulate matter limit specified in Table 1, the person carrying out the agricultural operation must</p> <p>(a) immediately notify the manager for the region in which the agricultural operation is carried out,</p> <p>(b) take corrective action within 30 days after notifying that manager, and</p>	<p><i>Clarification/Guidance:</i></p> <p>For a failed test according to the emission limits in Table 1  Notify the Regional Manager and take correct corrective action within 30 days  Test with 6 months of the corrective action – then as described in section 18.2 (9) (c).</p>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p>(c) have emissions from the boiler or heater tested for particulate matter (i) within 6 months after corrective action has been taken, and (ii) not less than (A) once in the next heating season, or (B) if the boiler or heater has a capacity not exceeding 3 megawatts and is fuelled exclusively by manufactured wood fuel, once in the next heating season and then once in every second heating season.</p>	
<p><b>Authority to require that other records be kept</b></p> <p>18.5 A director may require the person carrying out an agricultural operation to keep any of the following:</p> <ul style="list-style-type: none"> <li>(a) in relation to a boiler or heater that is fuelled otherwise than by biomass and is used in the agricultural operation, accurate records and supporting documentation in respect of (i) all inspections and the maintenance of the boiler or heater, (ii) the type, source and quantity of fuel burned by the boiler or heater, and (iii) the results of testing or monitoring required under section 18.3 (b);</li> <li>(b) in relation to any boiler or heater used in the agricultural operation, accurate records and supporting documentation that are additional to those required under paragraph (a) or section 18.4.</li> </ul>	<p><b>Clarification / Guidance:</b></p> <p>A director may make this request if a non bio-mass fired boiler is causing concerns in the community.</p>

REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
<p><b>Retention and submission of records</b></p> <p><b>18.6</b> A person required under section 18.4 or 18.5 to keep a record and supporting documentation must</p> <p>(a) retain the record and supporting documentation for not less than 3 years after the date on which the record was made, and</p> <p>(b) submit the record and supporting documentation to a director or an officer within 5 business days of being requested by the director or officer to do</p>	

**2. Table: 1 Emissions from Boilers and Heaters Fuelled by Biomass**

	Column 1	Column 2		Column 3		Column 4	
Item	Capacity of Boiler or Heater	Emission Standards (effective on the date section 18.1 came into force)		Emission Standards (effective May 1, 2009)		Emission Standards (effective September 1, 2010)	
		Particulate Matter Limit	Opacity Limit	Particulate Matter Limit	Opacity Limit	Particulate Matter Limit	Opacity Limit
1	Exceeding 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	35 mg/m <sup>3</sup>	10%
2	Exceeding 1 MW but not exceeding 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	50 mg/m <sup>3</sup>	10%
3	Not exceeding 1 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%



### 3. Questions and Answers from March 4th, 2009 Webinar Staff Training Session

**Q. Are greenhouses from the forestry sector required to register under the AWCR?**

A. No, silviculture greenhouses do not fit the definition of agricultural operation and therefore are not required to register. This issue will be forwarded for amendment consideration during the AWCR review.

**Q. Is pulp mill sludge an acceptable fuel?**

A. No. Section 18 lists the 6 acceptable fuels that may be used in an agricultural operation's boiler or heater: biomass, natural gas, propane, low-sulfur fuel, biogas, and landfill gas.

**Q. What is the difference between manure pellets and aged manure?**

A. Manure pellets have undergone a preparation and pelletizing process whereas aged manure has not. Manure pellets are included in the definition of biomass and are an acceptable fuel. It is anticipated that manure pellets will be made from non-composted equine manure which is approximately 95% fiber (cellulose). The equine digestive process removes other compounds leaving almost pure fiber behind. Other types of manure (e.g., pig, chicken or turkey) do not have the fiber content to form intact pellets. Aged manure refers to all types manure in various stages of decomposition. Fiber in aged manure may or may not be intact and the concentration of other potentially harmful substances within the aged manure is unknown.

The definition of biomass explicitly excludes raw manure (which includes aged manure) as an acceptable fuel. It is anticipated that there will eventually be fuel quality standards for agriculture biomass and wood based pellets and pucks.

**Q. Is demolition waste acceptable?**

A. Only the clean wood component of demolition waste is an acceptable fuel e.g., biomass does not include any wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, or any salt-laden wood product with a chloride content exceeding 0.50% on a dry basis.

**Q. Is bark considered wood fuel?**

A. Yes bark is a fuel that can be combusted in agricultural boilers and heaters. Bark is considered a "wood product" which includes manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust and firewood. All of these forms of biomass can be combusted in an agricultural boiler or heater.

**Q. Is bark or slash material currently being used as a fuel and are there any standards?**

A. Bark and slash is currently being used in small amounts in some areas as a raw material for manufactured wood fuel (pellets and pucks). High quality sawdust and shavings still are the major components of manufactured wood fuels in BC. We currently do not have a standard for manufactured wood fuels, except for the Residual Pellet Fuel Specifications in the Solid Fuel Burning Domestic Appliance Regulation.

**Q. Does the regulation give consideration to the geographic location of the boiler/heater in terms of setting different emission limits for different locations throughout the province?**

A. No, the emission limits for agricultural biomass-fired boilers are the same across the province.

**Q. What is involved in particulate matter testing?**

A. EPA method #5. See BC Field Sampling Manual - Stationary Air Emissions Testing. [http://www.env.gov.bc.ca/air/wamr/labsys/field\\_man\\_03.html](http://www.env.gov.bc.ca/air/wamr/labsys/field_man_03.html)

**Q. Section 18.2 (4) indicates boilers that do not exceed one megawatt require testing, within 6 months if i) modification to increase capacity to exceed 1 MW and ii) after any further modification to increase the capacity by 25% or more, at the intervals specified in subsections (5) or (6).**

If a boiler had a capacity of 0.25 MW and increased its capacity 50% to 0.5 MW. Testing would not be required as its capacity does not exceed 1 MW. See 18.4 (a) (i) and (ii). There is an AND between (i) and (ii) making testing required after any increase in capacity of 25% or more, only after (i), modification to increase its capacity to exceeding 1 MW.

**Q. When a boiler fails a test, when is the next test required?**

A. From section 18.2 (9):

*If the testing data indicate that emissions from the boiler or heater exceed the applicable PM limit specified in Table 1, the person carrying out the agricultural operation must*

- (a) immediately notify the manager of the region in which the agricultural operation is carried out,*
- (b) take corrective action within 30 days after notifying that manager, and*
- (c) have emissions from the boiler or heater tested for PM*
  - i) within 6 months after corrective action has been taken, and*
  - ii) not less than*

*(A) once in the next heating season, or  
(B) if the boiler or heater has a capacity not exceeding 3 MW and is fuelled exclusively by manufactured wood fuel, once in the next heating season and then once in every second heating season.*

Scenario #1: Failed test Nov 15, 2009, over 5 MW biomass-fired boiler. Must notify MOE regional manager immediately and take corrective action within 30 days. Must test within 6 months of corrective action (test by Jun 15<sup>th</sup>) and then once every heating season. Keep in mind, that testing should be done during the heating season (Oct 1 – Apr 30) to avoid unnecessary boiler start up during the summer. So even though they have 6 months from when the corrective action was taken to conduct testing, the test should be done within the heating season (by Apr 30, 2010). All testing must be conducted under normal operating conditions. The boiler must be operating at not less than 75% of its capacity.

Scenario #2: Failed test Nov 15, 2009, 2 MW, boiler combusting manufactured wood fuel (pellets and pucks). Must notify MOE regional manager immediately and take corrective within 30 days. Must test within 6 months of corrective action. Testing should be within the heating season (test by Apr 30, 2010) and once in the next heating season (Oct 1 to Apr 30, 2011) and then once in every second heating season. The testing frequency is reduced since pellets and pucks are considered a high quality fuel with cleaner emissions when combusted.

**Q. When these registrations are put into AMS will they receive a permanent authorization number?**

A. Yes. Initially, these registrations will receive an interim authorization number starting with #500, 501, 502 etc. When AMS is able to accept AWCR registrations, a permanent authorization number will be assigned. A letter will initially be mailed to the registrant stating their interim authorization #. A second letter will be mailed notifying them of their permanent authorization number. All letters will be mailed from Victoria Permit Authorization with a cc to the regional office.

**Q. If an agricultural operation had 3 small biomass-fired boilers all under the 1 MW testing threshold, would their capacity be considered on a per boiler basis or cumulatively?**

A. The boiler capacity is determined on a per boiler basis and it is the thermal output capacity.

**Q. How much does the average stack test for PM cost?**

A. Approximately \$3000.

**Q. If an operator cannot meet the requirements in the AWCR can they get a permit?**

**A.** No, a permit cannot be issued if a regulation is in place unless the regulation requires that a permit be obtained (not in this case). See EMA 14 (3) (c).

**Q. Are small boilers and heaters in remote locations required to register?**

**A.** All agricultural boilers regardless of fuel type or size are required to register. In addition all biomass fired heaters are required to register regardless of size. However, propane and natural gas infrared heaters are used in many places. These types of heaters do not require registration.

**Q. What if they are using a fuel that is not listed in section 18 as one of the 6 acceptable fuels?**

**A.** They are not allowed to use fuels other than those listed in section 18. Use of other fuels would cause the operator to be out of compliance with the regulation.

#### **4. Authorization Management**

##### **4.1 Requirement to register**

The regulation states that any person operating any number of agricultural boilers or heaters must register with the MOE by May 1, 2009 on a form provided by the Ministry.

In practice all boilers will be registered. However, with heaters only biomass fired units should be registered. There are many places where propane and natural gas infrared heaters are used – these do not require registration.

The Ministry does not have a list of boilers and biomass fired heaters that are in use within the agricultural industry. Therefore the requirement to register was introduced to give the Ministry a clear picture of types, sizes and locations of boilers and biomass fired heaters. Conducting compliance and enforcement activities would be virtually impossible without this information.

##### **4.2 Registration Form**

The Registration Form and Registration Form Guideline are located on the Ministry's website at:

[http://www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm#1](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm#1).

##### **4.3 Fees**

There are fees associated with this regulation.

#### 4.4 Security

No securities are required.

#### 4.5 Relationship to Other Legislation

A person who carries out an agricultural operation in accordance with this regulation is exempt from section 6 (2) and (3) of the *Environmental Management Act* (EMA).

#### 4.6 Implementation

In order to bring industry and ministry staff up to date on the new requirements of the AWCR, the Ministry has undertaken the following activities:

1. Ad in Country Life in BC magazine (March to May 2009) notifying readers of the amendments to the AWCR and a link to the Ministry website (see appendix 1).
2. Staff training webinar held in the Surrey Regional Office, March 5 2009 (see appendix 2).
3. Registration Form and Registration Guideline placed on ministry website in May (see Ministry website)  
[http://www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm#1](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm#1).
4. Registration letter and handout outlining new AWCR requirements sent to members of the BC Greenhouse Grower's Association and the United Flower Growers Co-operative Association in April 2009 (see appendix 3).

### 5. Compliance Verification

Noncompliance with any of the requirements of the AWCR is an offence under the *Environmental Management Act*. The authority to introduce waste into the environment given in EMA S. 6(2/3) may only occur when it is done in accordance with the AWCR (See EMA S.6 (5) (a) (IV)). Failure to comply with the AWCR, including compliance with administrative, non-discharge requirements (e.g. undertaking a test; submitting a report), loses the exemption under EMA S.6 (2/3) and by EMA S.120 (3) (a) is an offence.

Type of Noncompliance Response		Who	Comments / Issues
Advisory		EPO / CO	Conservation Officers may only issue an advisory following consultation with EP staff.  All inspections and advisories are to

			be recorded on regional spreadsheets located on the K: drive at K:\WANSHARE\EPD\EPD_SHARED\ROB compliance tracking
Warning		EPO / CO	<p>Conservation Officers may only issue a warning following consultation with EP staff.</p> <p>All Inspections and warnings are to be recorded on regional spreadsheets located on the K: drive at K:\WANSHARE\EPD\EPD_SHARED\ROB compliance tracking</p>
Order	Pollution Prevention Order EMA S81	Director	<p>Used only in relation to waste discharge issues which have the potential to cause pollution.</p> <p>This power may not be exercised in relation to any part of the activity or operation that is in compliance with the AWCR.</p> <p>See below for policy and procedures for issuing orders.</p>
	Pollution Abatement Order EMA S83	Director	<p>Used only in relation to waste discharge issues that cause pollution.</p> <p>This power may be exercised even if the introduction of the substance is authorized under the AWCR.</p> <p>See below for policy and procedures for issuing orders.</p>
	Information Order EMA S77	Director	See below for policy and procedures for issuing orders.
Administrative Penalty		Director	Not currently available under EMA
Investigation		Conservation Officer	Used to gather evidence of noncompliance and thereby

			<p>determine the most appropriate response to the noncompliance. If prosecution is the response, the evidence may become the basis of the Crown's case.</p> <p>Investigations need to be approved by the Investigation Review Procedure (C&amp;E Policy).</p>
Violation Ticket		Conservation Officer	<p>The violation ticket is issued under EMA S6 (3) "<i>Introduce waste of prescribed activity</i>" (an operation or activity) or S6(2) "<i>Introduce business waste</i>" (industry, trade or business).</p> <p>Only Conservation Officers have the authority to issue a violation ticket. An EPO may be delegated auxiliary Conservation Officer status to issue violation tickets for the purpose of enforcing the AWCR.</p>
Prosecution		Conservation Officer	<p>COS, with EP support, prepare a "report to Crown Counsel" for the Crown Counsel's consideration of whether the case meets charge approval criteria.</p>

### 5.1 Inspection Policy

- Inspections will normally only be undertaken in response to a public complaint or other form of notification. Inspections under this regulation may include:
  1. Verification of registration for boilers or heaters
  2. Results of previous emissions testing
  3. Opacity testing
  4. Verification of record keeping
- While on site, an officer may also inspect for compliance with other EMA regulatory requirements;

## 5.2 Inspection Results ~ Information Management

- Inspection form
- Record Management
  - In the future, inspection results will be recorded in the EPD Verification Information Module. This section will be updated as this information system is developed and instructions to staff are available.

## 5.3 Investigations

### What is an Investigation?

Investigations involve a systematic process of collecting evidence and information relevant to a suspected non-compliance for the purposes of enforcement. The need for an investigation may arise as a result of:

- non-compliance detected through compliance verification activities (monitoring, auditing or inspecting)
- information gathered from sources or informants
- public reports of suspected offences
- referrals from other agencies

### Investigative activities include:

- gathering physical evidence and ensuring its continuity and integrity
- taking statements and interviewing witnesses
- conducting surveillance
- obtaining and executing search warrants
- preparing briefs for Crown Counsel or a Statutory Decision Maker authorized to impose administrative sanctions

### Staff Authorized to Conduct Investigations:

Designated Ministry staff, primarily Conservation Officers, are authorized to conduct investigations. While conducting investigations, these staff are authorized to conduct specific activities such as executing search warrants and performing search and seizures. Ministry program staff e.g. Environmental Protection Division staff) often contribute technical expertise in support of an investigation. The reasons for limiting the authority to Conservation Officers include:

- COs have the necessary delegated authorities for search and seizure
- COs have specific training and resources available to them to undertake investigations

As directed by the Compliance and Enforcement Policy, and the direction provided in the decision matrix, Environmental Protection Division staff may respond to non-compliance with advisories, warning and orders, and, unless



designated an Auxiliary Conservation Officer, engage the Conservation Officer Service to issue violation tickets and initiate formal prosecutions.

## 6. Enforcement

Direction for responding to non-compliance with the AWCR is contained with the Ministry's Compliance and Enforcement Policy and Procedures. Responses to non-compliance currently include advisories, warnings, orders, violation tickets and prosecutions. The above policy guides the appropriate enforcement response.

Non-compliance with this regulation is an offence under the AWCR and EMA. Non-compliance with the administrative aspects of the regulation is subject to the penalty set out in section 8 of the AWCR. An administrative penalty may also be issued under section 115 of EMA, however these instruments are mutually exclusive and therefore only one may be used.

Non compliance with other regulations may be considered an offence under the respective regulation and/or under EMA. Please refer to the applicable regulation to determine specific offences and penalties. Section 120 of EMA sets out offences and penalties that may be applicable to persons subject to the VDR. For instance, section 120 sets out penalties for failure to comply with section 6 (waste disposal) and section 79 (spill prevention and reporting).

### 6.1 Advisories

- Advisories should be issued in accordance with ADVISORIES AND WARNINGS ENFORCEMENT RESPONSES TO NON-COMPLIANCE GUIDELINES
- Advisory letter template

### 6.2 Warnings

- Warnings should be issued in accordance with ADVISORIES AND WARNINGS ENFORCEMENT RESPONSES TO NON-COMPLIANCE GUIDELINES
- Warning letter template

### 6.3 Orders - Description and Application to the AWCR

#### 1. Pollution Prevention Order (EMA S. 81)

Cannot be issued if in compliance with the regulation. May be issued if the facility is not compliant with EMA and applicable regulations and pollution is likely to occur.

2. **Pollution Abatement Order (EMA S. 83)**  
May be issued on reasonable grounds that pollution is occurring. Authorizes a broad range of requirements.
3. **Environmental Protection Order (EMA S. 85)**  
The Minister may declare an activity has a detrimental environmental impact. If a declaration has been made, the minister may make an interim order [S. 85(3)] restricting an action or requiring an action.
4. **Information Order (EMA S. 77 (1))**  
The director, for the purposes of determining whether to issue a Pollution Prevention Order or Pollution Abatement Order, may require additional information.
5. **Restraining Order [EMA S. 114]**  
If in contravention of EMA S. 6, the activity or operation may be restrained in a proceeding brought by the Minister in the Supreme Court. Would normally only be initiated as part of an investigation approved in accordance with the Compliance and Enforcement Policy and Procedures.

Failure to comply with any of the above orders is a violation of EMA S. 120 (10) and punishable by violation ticket or prosecution.

6. **Seizure and Prevention Orders (EMA S. 112 (1) (a))**  
An officer (includes all Conservation Officers; other EPD staff must be designated) may order a person to do anything necessary to stop a contravention of the Act or Regulation or prevent another contravention. Failure to comply with a seizure and prevention order can result in a fine not exceeding \$200,000 or 6 months in jail.

## 6.4 Violation Tickets

### What is Violation Ticket?

Prosecutions by way of a violation ticket are available for offences listed in the Violation Ticket Administration and Fines Regulation of the *Offence Act*. A violation ticket is a means of dealing effectively and quickly with an offence. Prosecution by way of a ticket may be initiated by designated ministry staff.

The same standard of proof is required for the issuance of violation tickets as is required for formal charges through the courts. If a ticket is disputed, the Crown (i.e. Ministry staff authorized to issue the violation ticket) is required to prove the offence at trial. The offender who chooses not to contest a ticket is

deemed to have pleaded guilty to the offence and is subject to the specified penalty.

Violation tickets exist for offences under other regulations, such as the Hazardous Waste Regulation and the Ozone Depleting Substances and Other Halocarbons Regulation. See the Violation Ticket Administration and Fines Regulation, Schedule 2 for a list of contraventions and ticket amounts.

It is important to properly distinguish between offences in order to track compliance and accurately identify compliance patterns and trends for ongoing management purposes.

Where EPOs would benefit by having the authority to issue violation tickets, they may be delegated that authority in accordance with Ministry policy (VIOLATION TICKET ISSUING AUTHORITY  
DELEGATION OF AUTHORITY TO PROGRAM STAFF)

All violation tickets must be entered into the Conservation Officer Online Reporting System (COORS) for program management and public reporting purposes.

## 6.5 Prosecutions

### What is a Formal Charge?

Formal charges are legal proceedings in court that are initiated by alleging that a person or business has committed an offence. The alleged offender is compelled to attend court to address the charges by way of an appearance notice or summons. Formal charges may be recommended by the Ministry, but are only initiated by Crown Counsel in the exercise of their discretion. Under EMA, charges must be laid within 3 years from the date the facts on which the information (to lay a charge) is based arose (See EMA Section 124).

### When are formal charges appropriate?

Recommendation to the Criminal Justice Branch of a formal charge is appropriate where in the opinion of the investigator there is sufficient evidence to prove the commission of the alleged offence (there is a substantial likelihood of a conviction), and one or more of the following apply:

- other methods of enforcement have in the past proven ineffective or there is reason to believe that other enforcement methods will not be effective;
- the person is a repeat offender;
- the action of the alleged offender was wilful, or fell significantly below the standard of due diligence;

- there is more than minimal damage to the environment or human health, or there was substantial potential for damage to the environment or human health;
- the lives or safety of persons were endangered, or there was substantial potential for the lives or safety of persons to be endangered;
- there is significant non-compliance with regulatory requirements; or
- the public interest in the maintenance of environmental values requires a prosecution.

Approval of a charge is at the discretion of the Criminal Justice Branch.

#### **Prosecutions Related to AWCR**

- For offences related to the discharge of waste, the discharger loses the exemption in EMA S. 6 (2) and a prosecution will proceed as an offence under s. 120(3). Actual charge recommendations will be made by the investigating Conservation Officer in consultation with the program staff but final charge approval authority rests with Crown Counsel.
- For offences to requirements that are not waste discharge related (e.g., administrative requirements), the prosecution is under the AWCR.
- It is important to properly distinguish between these offences in order to track compliance and accurately identify compliance patterns and trends for ongoing management purposes.

## Appendix 1

Ad placed in Country Life in BC magazine

### Did you know there are new standards in place and new registration requirements for agricultural biomass boilers?

The Ministry of Environment and Metro Vancouver have collaborated in developing more stringent emission standards on boilers and heaters that use biomass as a fuel. The Ministry of Environment has recently amended the Agricultural Waste Control Regulation and Metro Vancouver has adopted the new Agricultural Boiler Emission Regulation Bylaw No. 1098 to establish a harmonized approach for emission limits, monitoring, reporting and record keeping activities throughout the province.

If you operate an agricultural boiler in Metro Vancouver and your facility is in the Agricultural Land Reserve, please visit [www.metrovancouver.org](http://www.metrovancouver.org) (search Agricultural Boiler Registration) to register. Note that Metro Vancouver's Bylaw also applies to gas-fired agricultural boilers. The registration deadline for Metro Vancouver is March 31, 2009.

If you are located outside of Metro Vancouver's jurisdiction and operate an agricultural boiler or heater, please see the following website for further information and to register: [www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm). The registration deadline for the Ministry of Environment is May 1, 2009.

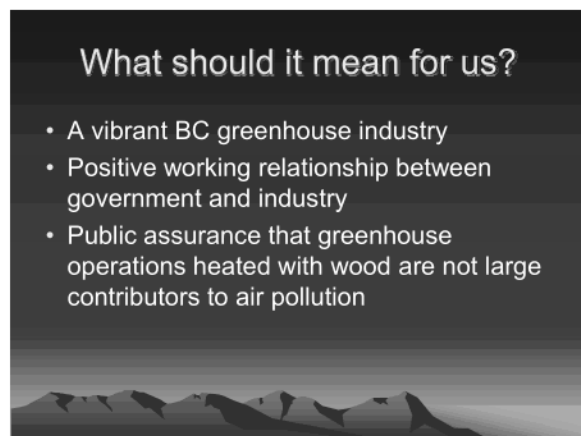
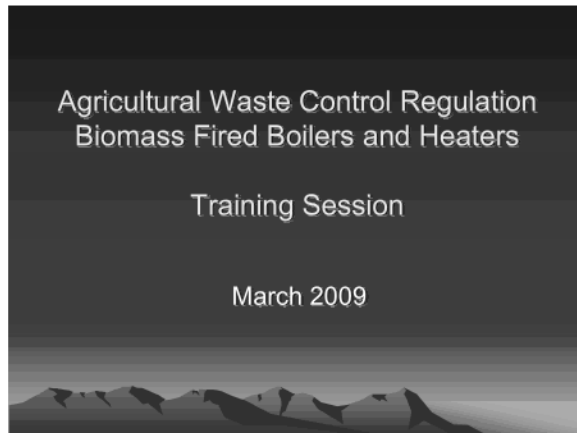


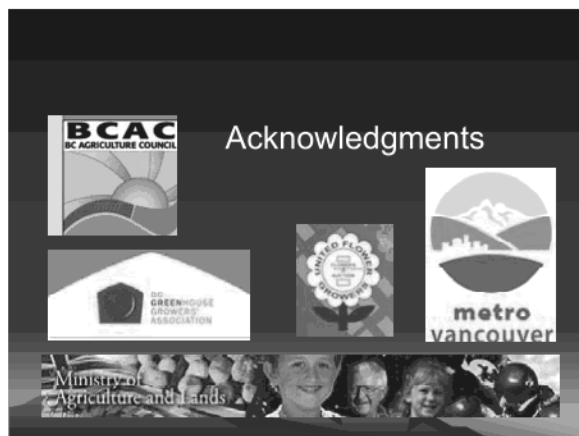
Ministry of  
Environment



## Appendix 2

### Staff Webinar



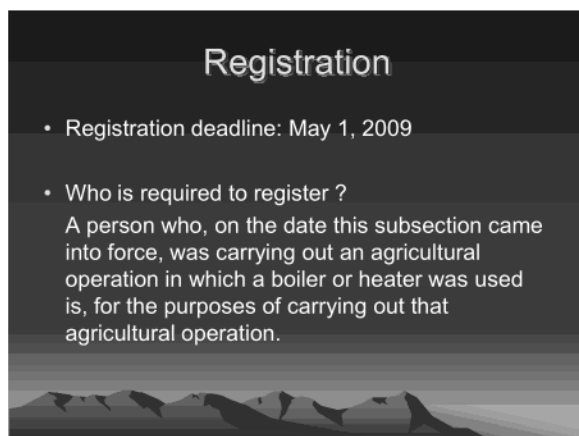


## Acknowledgments



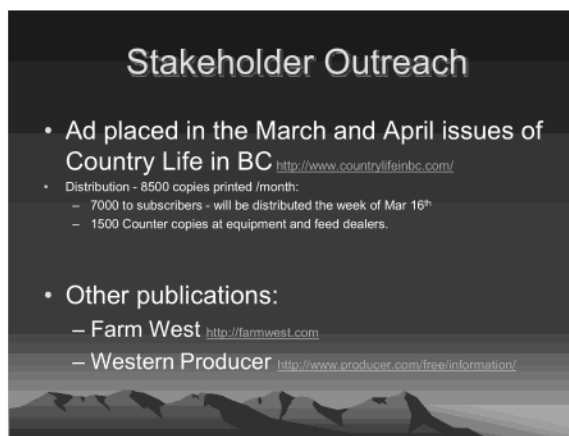
## Regulation Highlights What's this Reg all about?

- Registration
- Emission limits for biomass-fired boilers and heaters
- Emissions testing
- Record keeping



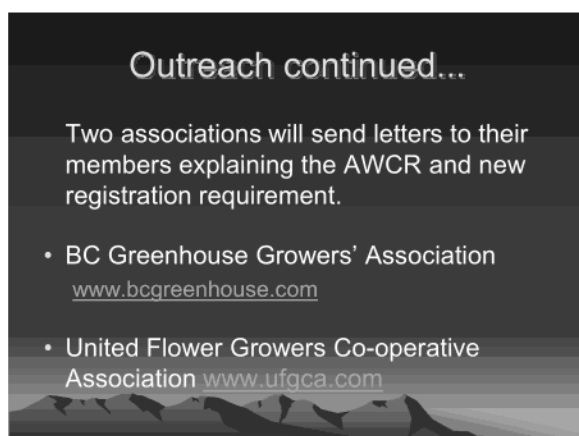
## Registration

- Registration deadline: May 1, 2009
- Who is required to register ?  
A person who, on the date this subsection came into force, was carrying out an agricultural operation in which a boiler or heater was used is, for the purposes of carrying out that agricultural operation.



## Stakeholder Outreach

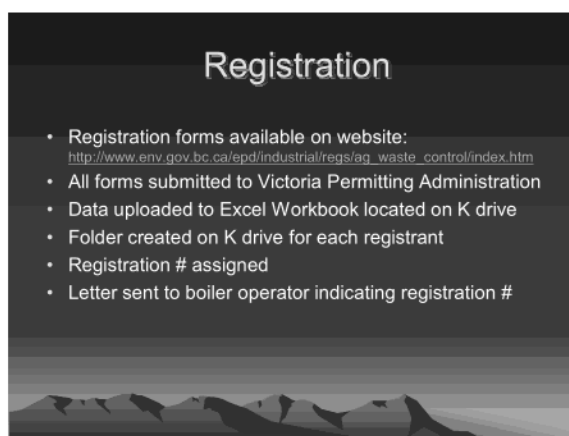
- Ad placed in the March and April issues of Country Life in BC <http://www.countrylifeinbc.com/>
- Distribution - 8500 copies printed /month:
  - 7000 to subscribers - will be distributed the week of Mar 16<sup>th</sup>
  - 1500 Counter copies at equipment and feed dealers.
- Other publications:
  - Farm West <http://farmwest.com>
  - Western Producer <http://www.producer.com/free/information/>



## Outreach continued...

Two associations will send letters to their members explaining the AWCR and new registration requirement.

- BC Greenhouse Growers' Association  
[www.bcgreenhouse.com](http://www.bcgreenhouse.com)
- United Flower Growers Co-operative Association [www.ufgca.com](http://www.ufgca.com)



## Registration

- Registration forms available on website:  
[http://www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm)
- All forms submitted to Victoria Permitting Administration
- Data uploaded to Excel Workbook located on K drive
- Folder created on K drive for each registrant
- Registration # assigned
- Letter sent to boiler operator indicating registration #

## Who's Covered

### NAICS Code

O	Food Crops Grown Under Cover	11141
O	Nursery and Tree Production	111421
O	Floriculture Production	111422
O	Oilseed and Grain Farming	1111
O	Vegetable and Melon Farming	1112
O	Fruit and Tree Nut Farming	1113
O	Other Crop Farming	1119
O	Cattle Ranching and Farming (including milk production)	1121
O	Hog and Pig Farming	1122
O	Poultry and Egg Production	1123
O	Sheep and Goat Farming	1124
O	Animal Aquaculture	1125
O	Other Animal Production	1129

## Restrictions on the types of boiler and heater fuel

- Only the following fuels may be used in an agricultural operation as fuel for a boiler or heater:

- (a) biomass;
- (b) natural gas;
- (c) propane;
- (d) low-sulphur fuel;
- (e) biogas;
- (f) landfill gas.

## Key Definitions

### "biomass" means

- (a) agricultural fuel products, including agricultural pellets, manure pellets, corn kernels, corn stalks and seed hulls, or
- (b) wood or wood products,

but does not include

- (c) any raw manure,
- (d) any paper or paper product,
- (e) any wood or wood product that has been treated with glue, paint or preservative or that contains a foreign substance harmful to humans, animals or plants when combusted, or
- (f) any salt-laden wood or wood product with a chloride content exceeding 0.05% on a dry basis;

## Key Definitions

### "wood product"

- manufactured wood fuel, hog fuel, mill ends, wood chips, bark, shavings, sawdust and firewood



## Key Definitions

### "low-sulphur fuel" means

- (a) No. 2 heating oil, or
- (b) On-road diesel fuel

## Key Definitions

### "manufactured wood fuel"

- wood pellets and wood pucks

#### Manufactured Wood Fuel





## Key Definitions

### "heating season"

- means a period beginning on October 1 and ending on April 30

## Emission Limits for Biomass Fired Boilers and Heaters

Capacity of Boiler or Heater	Current		May 1, 2009		Sept 1, 2010	
	PM	Opacity	PM	Opacity	PM	Opacity
Over 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	35 mg/m <sup>3</sup>	10%
1 MW to 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	50 mg/m <sup>3</sup>	10%
Under 1 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%

## Testing Requirements Biomass Fired

As of Sept 1, 2009 (during heating season) test:

- > 3 MW once every heating season
- $\geq 1$  MW to  $\leq 3$  MW:
  - Manufactured wood fuel – once every other heating season
  - Other fuels – once every heating season
- < 1 MW – none – could be required by director
- Operate at  $\geq 75\%$  of output capacity during testing

## Testing Requirements Biomass Fired

- Failed test
  - Notify Regional Manager and take corrective action within 30 days
  - Back to original schedule
  - A director may require additional testing

## Record Keeping Biomass Fired

- Record keeping requirements
  - Inspections and maintenance activities
  - Type, source and quantity of fuel burned
  - Results of emissions testing
- Authority to require that other records are kept
  - Director may require records for non-biomass fired boilers or heaters

## Record Keeping Biomass Fired

- Retention and Submission of Records
  - Retain records for 3 years
  - Submit records within 5 working days of a request from a director or an officer

### *Appendix 3*

Registration letter – sent out by the BC Greenhouse Growers Association and the United Flower Growers Association on April 17, 2009.

Attention: Owners and operators of boilers and heaters at agricultural operations.

Re: Registration Requirements under the Ministry of Environment's Agricultural Waste Control Regulation

On December 8, 2008, the Agricultural Waste Control Regulation (AWCR) was amended to include new requirements for agricultural boilers and heaters. The new requirements include more stringent emission standards for biomass use along with monitoring, reporting and record keeping requirements. The regulation amendment also includes a new requirement for facilities operating boilers and biomass fired heaters to register with the Ministry of Environment. See below for registration details. The deadline to register is May 1, 2009.

Registration under this regulation is required for a facility using:

1. Boilers fired by biomass, natural gas, propane, low sulphur fuel, bio-gas and landfill gas.
2. Heaters fired by biomass.

The following website provides information on how to register with the Ministry of Environment:

[www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm).

The regulation amendments require testing carried out as specified by the director. This means testing must be carried out using the method specified in the: British Columbia Field Sampling Manual: 2003 — For Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment and Biological Samples.

Note: If you operate an agricultural boiler in Metro Vancouver and your facility is in the Agricultural Land Reserve, please visit [www.metrovancouver.org](http://www.metrovancouver.org) (search Agricultural Boiler Registration) to register.

If you have any questions or require further information regarding the registration process, enquiries can be directed to the Ministry of Environment at: [PermitAdministration.VictoriaEPD@gov.bc.ca](mailto:PermitAdministration.VictoriaEPD@gov.bc.ca) or (250) 387-9953 or (250) 387-0839.

If you have questions regarding the regulation please contact your Regional Ministry of Environment Office. Regional contact information can be located at the following website: [www.env.gov.bc.ca/main/regions.html](http://www.env.gov.bc.ca/main/regions.html).

Thank you for your attention on this matter. Please submit your registration form to the Ministry of Environment as soon as possible.

## Handout

### Ministry of Environment - Agricultural Waste Control Regulation (AWCR) New Standards for Wood Fired Boilers

The B.C. Government amended the Agricultural Waste Control Regulation (AWCR) as of December 8, 2008, to place more stringent emission standards on boilers and heaters that use biomass as fuel. The AWCR exempts agricultural operations from the *Environmental Management Act* if they follow the requirements of the regulation. Pollution standards for wood-fired boilers – like the burners used by greenhouses – are set out in the AWCR.

The Ministry of Environment, Metro Vancouver and the greenhouse industry have collaborated in developing a harmonized approach for emission limits, monitoring, reporting and record keeping activities. The new Metro Vancouver Agricultural Boilers Emission Regulation Bylaw was adopted by their board on October 24, 2008.

The Ministry of Environment has historically exempted agricultural operations from registration and emission fees. There is no change to this approach with the AWCR amendments. The new AWCR amendments will apply to all parts of the province that are outside Metro Vancouver jurisdiction.

A summary of the AWCR amendments and what they mean to industry is provided below.

#### Registration Requirements:

Operators of agricultural boilers are required to register with the ministry by May 1, 2009. The registration form will be available on the ministry's website. The preferred method of submission will be to fill the form in and submit it online; however it will also be available to print off for faxing or mailing. The form will require operators to identify the number of boilers they have, the capacity of each (in megawatts) and the fuel type of each boiler. (See Section 2)

**Restrictions relating to types of boiler and heater fuel:**

Only the following fuels may be used in an agricultural operation as fuel for a boiler: biomass, natural gas, propane, low-sulphur fuel, biogas, and landfill gas. (Section 18)

**Emission standards for boilers and heaters fuelled by biomass:**

This section of the regulation sets out emission limits for biomass fired boilers.

Biomass as defined in the regulation includes wood and agricultural fuel products such as agricultural or manure pellets. (Section 18.1)

	Column 1	Column 2		Column 3		Column 4	
Item	Capacity of Boiler or Heater	Emission Standards (effective on the date section 18.1 came into force)		Emission Standards (effective May 1, 2009)		Emission Standards (effective September 1, 2010)	
		Particulate Matter Limit	Opacity Limit	Particulate Matter Limit	Opacity Limit	Particulate Matter Limit	Opacity Limit
1	Exceeding 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	35 mg/m <sup>3</sup>	10%
2	Exceeding 1 MW but not exceeding 3 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	50 mg/m <sup>3</sup>	10%
3	Not exceeding 1 MW	180 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%	120 mg/m <sup>3</sup>	20%

**Testing of certain boilers and heaters fuelled by biomass:**

As of Sept 1, 2009, operators will be required to have testing performed (during the heating season, from Oct 1 – Apr 30). (Section 18.2) Stack testing consultants will most likely be hired to conduct this testing. The following points summarize the required testing – further details are contained in the regulation:

- Greater than 3 MW - once every heating season
- Greater than or equal to 1 MW to less than or equal to 3 MW – once every heating season, unless manufactured fuel such as pellets or pucks are used – then once every *other* heating season
- Less than 1 MW – no scheduled testing but could be required by a director
- Boiler must be operating at greater than or equal to 75% of output capacity during test

Test methods are to be specified by the director. (Section 18.2(8)) Details on the methods to be used are contained in the British Columbia Field Sampling Manual.

If test results exceed emission limit(s), the person carrying out the operation must:

- Immediately notify the regional manager (contact your local Ministry of Environment office)
- Take corrective action within 30 days
- Retest for particulate matter within 6 months after taking corrective action

A director may require additional testing at anytime.

**Record keeping requirements for boilers and heaters fuelled by biomass:**

Record keeping is only required for boilers that are fuelled by biomass (Section 18.4), the person carrying out the operation is required to keep accurate records and supporting documentation of:

- All inspections and the maintenance of the boiler or heater
- The type, source and quantity of fuel burned
- The results of testing or monitoring

Records must be kept for 3 years and submitted within 5 business days upon request of a director or officer.

**Web links:**

**Agricultural Waste Control Regulation:**

[http://www.env.gov.bc.ca/epd/industrial/regs/ag\\_waste\\_control/index.htm](http://www.env.gov.bc.ca/epd/industrial/regs/ag_waste_control/index.htm).

**Envirochem Report: "Emissions from Wood-Fired Combustion Equipment" June 30, 2008:**

[http://www.env.gov.bc.ca/epd/industrial/pulp\\_paper\\_lumber/wood\\_fired.htm](http://www.env.gov.bc.ca/epd/industrial/pulp_paper_lumber/wood_fired.htm)

**British Columbia Field Sampling Manual, Stationary Air Emissions Testing chapter:**

[http://www.env.gov.bc.ca/air/wamr/labsys/field\\_man\\_pdfs/part\\_b.pdf](http://www.env.gov.bc.ca/air/wamr/labsys/field_man_pdfs/part_b.pdf)

*Note: This summary is solely for the convenience of the reader. The current legislation and regulations should be consulted for complete information.*

	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.12	2.12.01

**Name of Policy:** Landfill Gas Management Facilities Design Guidelines

**Replaces:** None

**Application:** Environmental Protection Division Staff

**Purpose:** To be used by regional districts, municipalities, landfill owners and their consultants to design and operate landfill gas management facilities in order to comply with the Landfill Gas Management Regulation.

To direct regional staff when reviewing and approving landfill gas management facilities design plans and annual reports submitted in accordance with the *Landfill Gas Management Regulation*.

To provide guidance for the design and ensure installation, and operation of efficient landfill gas management systems.

**Policy Statement:** Landfill Gas Management Facilities Design Guidelines are referenced in the *Landfill Gas Management Regulation*. They are to be used by regional staff in approving the documents submitted to the Ministry and ensuring compliance with the Regulation.

These Guidelines have been developed based on comprehensive review of worldwide practices and technical experience in the field of LFG management facilities design. They also provide information on best management practices for LFG management facilities operations.

Proper LFG management is highly site-specific and the intent of the document is not to prescribe all design details. However, the purpose of the LFG Management Regulation is to implement high-efficiency LFG management systems to address the overall concerns of greenhouse gas emissions, odours, health and safety issues. The guidelines provide direction and prescribe certain requirements and performance standards to the design and operation of LFG

management facilities to ensure that this goal will be met. Performance standards and requirements are set up with the expectation that such guidance is applicable to the vast majority of landfills in BC.

The Guidelines contain 13 sections covering all the aspects of LFG facilities design and management, temporary and permanent shut-down of landfill gas collection systems, and available utilization technologies. The document provides the estimated costs of installation of collection facilities.

**References and Relationships:**

*Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act;*  
  
*Environmental Management Act*

**Approval:**

original signed by Lynn Bailey  
Assistant Deputy Minister  
Environmental Protection Division

**Date:** September 10, 2010

**Contact Person:**

Jack Bryden, Unit Head  
Solid and Liquid Waste

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

[Link to Landfill Gas Management Facilities Design Guidelines](#)

	<p>Operational Policy Manual Environmental Protection Division</p>	Section	Subsection
		2.0	2.13.01

<b>Name of Policy:</b>	<b>Code of Practice for Soil Amendments – Policy and Procedures for Implementation</b>		
<b>Replaces:</b>	The policy is new.		
<b>Application:</b>	This policy applies to staff engaged in administering the Code of Practice for Soil Amendments (CoPSA).		
<b>Purpose:</b>	The purpose of the implementation policy and procedures is to assist staff in administering the CoPSA.		
<b>Policy Statement:</b>	<p>On September 1, 2007, the Ministry established the CoPSA for the beneficial use of specified industrial by-products on land. This code of practice provides consistent requirements across the province and protects the quality of soil as well as the surface and groundwater on sites where the by-products are applied. The CoPSA requires the discharger to complete and submit a notification form at least 30 days prior to a proposed soil amendment application greater than 5m<sup>3</sup>.</p> <p>The attached document provides guidance to ministry staff for administering the CoPSA by providing clarification of legal requirements and training information.</p>		
<b>References and Relationships:</b>	<p>In 2002, the Organic Matter Recycling Regulation (OMRR) set out requirements for composting operations and for the production, distribution, storage, sale and use of composted municipal wastewater treatment biosolids and other composted materials on land. Although the CoPSA applies to the use of non-composted selected industrial wastes not covered by OMRR, it draws heavily on OMRR for the structure and almost all technical and administrative requirements. In most cases the CoPSA is consistent and parallel to OMRR, while maintaining the clear distinction between acceptable uses of composted and non-composted materials.</p> <p>The <u>Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice: Best Management Practices</u> was developed to assist users in complying with the requirements of the OMRR and the CoPSA.</p>		
<b>Approval:</b>	<p><b>David Ranson</b> _____ <b>Date:</b> April 27, 2011 _____ A/Assistant Deputy Minister Environmental Protection Division</p>		
<b>Contact Person:</b>	Margaret Crowley, Environmental Management Officer Environmental Standards Branch		

Effective Date if different than Approval Date:
Original Date of Policy: October 2010
Date of Policy Amendment(s):



**OPERATIONAL POLICY MANUAL**

**FOR IMPLEMENTATION OF THE**

**CODE OF PRACTICE FOR SOIL AMENDMENTS**

**APRIL 2011**

**CODE OF PRACTICE FOR SOIL AMENDMENTS  
OPERATIONAL POLICY MANUAL**

**Contents**

<b>1. Purpose of this Document .....</b>	<b>4</b>
<b>2. Purpose of the Code .....</b>	<b>4</b>
<b>3. Division Contact .....</b>	<b>4</b>
<b>4. Background .....</b>	<b>4</b>
<b>5. Clarification of Code Requirements ~ Policy and Procedures .....</b>	<b>5</b>
Definitions .....	5
Storage methods.....	8
Storage facility.....	8
Storage site .....	9
Rainy season storage using a storage site .....	10
Application of soil amendments .....	11
If soil amendments contain domestic sewage.....	13
Requirement for a land application plan .....	15
Notice of application of soil amendments.....	19
Certification of qualified professional.....	21
Sampling and analysis .....	22
Record Keeping .....	22
<b>6. Waste Discharge Regulation Requirements ~ Substitutions.....</b>	<b>23</b>
<b>7. Authorization Management .....</b>	<b>24</b>
Notification Form .....	24
Fees .....	24
Security.....	24
<b>8. Other Related Legislation .....</b>	<b>24</b>
<b>9. Compliance Promotion .....</b>	<b>24</b>
Best Management Practices .....	24
Contacts & Resources .....	24
<b>10. Offence &amp; Enforcement Response Summary .....</b>	<b>25</b>
<b>Appendix I .....</b>	<b>29</b>
Staff Training PowerPoint Presentation – November 2007 .....	29

## 1. Purpose of this Document

This document is for guidance purposes only. The current legislation and regulations take precedence over any information provided.

## 2. Purpose of the Code

The intent of the CoPSA is to set requirements for individuals applying selected industrial wastes to land in an environmentally-responsible way to improve soil quality. This code defines acceptable soil amendments and applies to their storage and land application.

A person complying with the conditions in this code would be exempt from the prohibition against discharging waste to the environment found in section 6(3) of the *Environmental Management Act*.

## 3. Division Contact

Margaret Crowley  
Environmental Management Officer  
Telephone: (250) 387-6018  
Email: [Margaret.Crowley@gov.bc.ca](mailto:Margaret.Crowley@gov.bc.ca)

## 4. Background

Some industrial wastes contain nutrients and have other properties that can be used to improve soil quality and / or enhance crop production. Over the past 15 years, Ministry of Environment has issued more than 100 permits and approvals for a variety of wastes applied to land in various circumstances. This Code eliminates the administrative processes and costs associated with issuing permits and approvals.

In 2002, the Organic Matter Recycling Regulation (OMRR) set out requirements for composting operations and for the production, distribution, storage, sale and use of composted municipal wastewater treatment biosolids and other composted materials on land. Although the Code of Practice for Soil Amendments (CoPSA) applies to the use of non-composted selected industrial wastes not covered by OMRR, it draws heavily on OMRR for the structure and almost all technical and administrative requirements. In most cases the CoPSA is consistent and parallel to OMRR, while maintaining the clear distinction between acceptable uses of composted and non-composted materials.

The following is a summary overview of the OMRR and the CoPSA:

Issue:	OMRR	CoPSA
Wastes covered	Municipal biosolids and <u>all</u> composted wastes including municipal compost, industrial compost and mixtures of both.	Selected industrial wastes only (no compost)
Facilities	Applies to <ul style="list-style-type: none"><li>• storage facilities</li><li>• composting facilities</li></ul>	Applies to <ul style="list-style-type: none"><li>• storage facilities</li></ul>

## 5. Clarification of Code Requirements ~ Policy and Procedures

This code will not require registration. However, it will require notifications each time a soil amendment is applied to land.

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	Part 1 Definitions	
1	<b>Definitions</b>	
	<p><b>“application site”</b> means a parcel of land, or 2 or more contiguous parcels of land, to which soil amendments are, or are intended to be, applied under a land application plan;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• MoE not responsible for determining if application of soil amendment is an appropriate land use (i.e. consistent with zoning).</li> <li>• The CoP applies to both Crown and private land</li> <li>• “Parcel” includes any legally described unit of land.</li> <li>• A plan may apply to one or more application sites.</li> <li>• 22(1)(c) of <u>OMRR</u> refers to land application in forest reserve land. Forest reserve lands no longer exist. The <i>Forest Land Reserve Act</i> was repealed, effective August 3, 2004, and replaced with the <i>Private Managed Forest Land Act</i>. (<a href="http://www.qp.gov.bc.ca/statreg/stat/P/03080_01.htm">http://www.qp.gov.bc.ca/statreg/stat/P/03080_01.htm</a>)</li> <li>• If the soil amendment is being applied to <i>Private Managed Forest Land Act</i> the owner is required to submit a “management commitment” to the Private Managed Forest Land Council outlining how the intended uses comply with the Act and regulations.</li> <li>• The Agricultural Land Commission has authority to determine if this is an appropriate activity on ALR designated lands. See Section 9(2)(c) below re: notification requirements.</li> </ul>
	<p><b>“average precipitation”</b>, for an area, means the most recently available average monthly precipitation figures published for the area by Environment Canada;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• For the purpose of calculating the average precipitation for the period from October 1 to March 31 inclusive a person would sum the precipitation numbers on Environment Canada's "normal" page for each of those months <u>Canadian Climate Normals 1971-2000</u></li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<ul style="list-style-type: none"> <li>Use past five years to determine average for the period from October 1 to March 31.</li> </ul>
	<p><b>“Director”</b> (EMA) means a person employed by the government and designated in writing by the minister as a director of waste management or as an acting, deputy or assistant director of waste management.</p>	<p>Copies of delegation letters may be found in the K: drive at this location: <u>I:\EPD\Delegation Letters\EMA</u> . Staff are encouraged to check with their supervisor to confirm who is a Director in each office.</p>
	<p><b>“discharger”</b>, in relation to the application of soil amendments to an application site, means,</p> <p>(a) if the owner of the facility that produced the soil amendments applies the soil amendments under contract with the registered owner of the application site, the facility owner, and</p> <p>(b) otherwise, the registered owner of the application site;</p>	
	<p><b>“domestic sewage”</b> has the same meaning as in the Municipal Sewage Regulation;</p>	<p><u>Municipal Sewage Regulation</u></p> <p><b>"domestic sewage"</b> means human excrement, water borne human excretion or the water-carried wastes from liquid or non-liquid culinary purposes, washing, cleansing, laundering, food processing or ice production.</p>
	<p><b>“foreign matter”</b> means a contaminant that does not readily decompose, including, without limiting this, demolition waste, metal, glass, plastic, rubber, and leather, but does not include silt, sand, rocks, stones, or gravel, in pieces smaller than 2.5 centimetres in diameter, and other similar-sized minerals naturally occurring in soil;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Use professional judgment to determine whether material should be considered foreign matter. It is common to have the odd rock or piece of material that is greater than 2.5 cm. We are not expecting that material will be screened prior to use.</li> <li>Used in Section 6(1)(a) &amp; 6(1)(b).</li> </ul> <p><u>Organic Matter Recycling Regulation</u></p>
	<p><b>“land application plan”</b> means a plan that complies with section 8;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>See Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice for plan template and example plan.</li> </ul>
	<p><b>“MPN”</b> means an estimate of the most probable number of living organisms in a sample, determined using the applicable</p>	<p><b>Procedures / Guidance:</b></p> <p><u>British Columbia Environmental Laboratory</u></p>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	method described in the <i>British Columbia Environmental Laboratory Manual: 2005 – for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</i> , as amended from time to time (Victoria, 2005), published by the minister;	<u>Manual: 2005 – for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</u>
	<p><b>“qualified professional”</b>, in relation to a duty or function under this code, means an individual who</p> <p>(a) is registered in British Columbia with a professional organization, is acting under that organization’s code of ethics, and is subject to disciplinary action by that organization, and</p> <p>(b) through suitable education, experience, accreditation and knowledge, may reasonably be relied on to provide advice within his or her area of expertise, which area of expertise is applicable to the duty or function;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Both conditions (a) and (b) need to be met</li> <li>• Primary QPs are expected to be members of the <u>B.C. Institute of Agrologists</u></li> <li>• Other professionals may qualify; use professional judgment as to education and experience qualifications</li> <li>• <u>Association of Professional Engineers and Geoscientists of BC</u></li> <li>• <u>Association of Professional Biologists of B.C</u></li> <li>• <u>Association of BC Forest Professionals</u></li> </ul>
	<p><b>“soil amendment”</b> means</p> <p>(a) fly ash derived from the burning of wood, other than wood that has been immersed in marine waters,</p> <p>(b) residuals from the primary or secondary treatment of liquid waste produced after 1995 from a pulp or paper mill, including domestic sewage if it is mixed with those residual solids,</p> <p>(c) lime mud derived from pulp or paper mill processes or waste lime,</p> <p>(d) residuals from the treatment of water for domestic use or use in industrial processes, or</p> <p>(e) industrial residue of wood that has not been treated with glue, paint, a preservative or another substance harmful to humans, animals or plants;</p>	<p><b>Background Rationale:</b></p> <p>In regard to the definition of “soil amendment”:</p> <p>i) Wood that has been immersed in marine waters emits dioxins when it is burned as a result of chemical reactions involving the naturally occurring salts. Therefore, ash from this type of wood is excluded from land application.</p> <p>ii) The pulp and paper mill waste used as a soil amendment must be generated after 1995 because that is the year when the use of elemental chlorine in bleaching processes was prohibited. The waste produced before that year may have dioxin/furan TEQ levels that exceed 0.00001 micrograms per gram dry weight.</p> <p>iii) Residues from treatment of water for domestic or industrial purposes would rule out residues from the treatment of sewage,</p>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>storm water or any other wastes.</p> <p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Soil Amendments are not a hazardous waste.</li> </ul> <p>See the Technical Guideline: <u>Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice</u>; and</p> <ul style="list-style-type: none"> <li>• <u>Environmental Management Act -- Pulp Mill and Pulp Mill Liquid Effluent Control Regulation</u></li> </ul>
	<b>“storage facility”</b> means a storage facility described in section 3;	
	<b>“storage site”</b> means a site described in section 4;	
	<b>“vector”</b> means a carrier organism that is capable of transmitting a pathogen from one facility, waste source, product or organism to another facility, waste source, product or organism.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Used in Section 8 (4) (a)</li> </ul>
	Part 2 ~ Soil Amendment Storage	
2	<b>Storage methods</b>	
2(1)	<p>If soil amendments described in paragraph (a), (b) or (d) of the definition in section 1 are stored before being applied to land under a land application plan, they must be stored</p> <p>(a) in a storage facility in accordance with the requirements of section 3, or</p> <p>(b) at a storage site in accordance with the requirements of section 4.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Storage requirements do not apply to lime mud and wood residue due to a lower risk of possible adverse impact.</li> </ul>
2(2)	Soil amendments may be stored on a farm only if all of the soil amendments are scheduled to be used on that farm under a land application plan.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• This section prevents farms from being used as a distribution site for soil amendments.</li> </ul>
3	<b>Storage facility</b>	

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
3(1)	<p>Except for the period during which soil amendments may be stored at a storage site in accordance with section 4, soil amendments must be stored in a structure, including, without limiting this, a reservoir, lagoon, cistern, gutter, tank or bermed area, that</p> <p>(a) is located at least 15 metres from any watercourse and 30 metres from any source of water used for domestic purposes, and</p> <p>(b) has sufficient capacity to prevent, and is maintained in a manner that prevents, the escape of the soil amendments.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Adequacy of “structure” determined by professional judgment, particularly in relation to the “escape of soil amendments (b).</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>Inspection will normally only be undertaken in response to complaints or other forms of notification.</li> </ul>
3(2)	<p>For the purposes of subsection (1), “<b>structure</b>” does not include a vehicle or any mobile equipment used for the transportation of soil amendments.</p>	
4	<b>Storage site</b>	
4(1)	<p>Soil amendments may be stored temporarily at a storage site in order to be ready to be drawn upon for use as a fertilizer or soil conditioner, if the storage site is maintained in a manner that prevents the escape of the soil amendments.</p>	<p><b>Background:</b></p> <p>The short term storage of soil amendments may occur without being in a storage facility (Section 3) if it meets the time and distance specifications of Subsection 4(2). Storage longer than the specified time limits must be in a storage facility.</p> <p>The intention is to prevent the large scale storage of soil amendments. This responds to the concerns of the ALR Commission that agricultural land may be inadvertently used for industrial purposes.</p>
4(2)	<p>Soil amendments may be stored under subsection (1) only for the following periods:</p> <p>(a) if the storage site is at least 30 metres from any watercourse or any source of water used for domestic purposes, not more than 9 months, and</p> <p>(b) otherwise, not more than 2 weeks.</p>	<p><b>Policy:</b></p> <ul style="list-style-type: none"> <li>Soil Amendments may not be stored for more than 9 months unless in a storage facility and meet the requirements of Section 3.</li> <li>If within 30 metres from any watercourse or source of water used for domestic purposes, the temporary storage cannot exceed 2 weeks.</li> </ul> <p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Professional judgment is required to</li> </ul>



Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>determine if the 9 month limit is being exceeded on permanent storage sties and facilities.</p> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>An advisory or warning should be used to “start the clock” for determining the 9 month or 2 week periods. In most cases we would only react to flagrant non-compliance with the time limits.</li> </ul>
<b>5</b>	<b>Rainy season storage using a storage site</b>	
5(1)	<p>This section applies</p> <p>(a) on Vancouver Island,</p> <p>(b) in the Greater Vancouver Regional District,</p> <p>(c) in the Fraser Valley Regional District, and</p> <p>(d) in any other area of British Columbia for which the sum of the average precipitation for the months October to March inclusive exceeds 600 mm (24 inches).</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>For the purpose of calculating the average precipitation for the period from October 1 to March 31, inclusive, a person would sum the precipitation numbers on Environment Canada's "normal" page for each of those months <u>Canadian Climate Normals 1971-2000</u>. The onus is on the discharger (QP) to do this calculation and determine if there is a need for cover. The Ministry would only do this if we were suspecting that a violation did or could occur.</li> <li>Use nearest rain station to application site.</li> </ul>
5(2)	<p>Soil amendments described in paragraphs (a), (b) and (d) of the definition in section 1 that are stored at a storage site must be covered from October 1 to March 31 so that the rain is kept out.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Vancouver Island, Fraser Valley Regional District, and GVRD sites must be covered.</li> <li>Other areas, a calculation using Environment Canada’s climate data must be undertaken to determine if a cover is required.</li> <li>Coverage requirements apply to soil amendments described in paragraphs (a), (b), and (d) of the definition of soil amendment under section 1 (fly ash, residuals from the treatment of liquid waste from a pulp mill, and residuals from the treatment of water)</li> <li>EP staff should use their professional judgment to determine the adequacy of the cover.</li> <li>If cover is inadequate, response may be in relation to Section 3 (1) (b) that requires a</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION																								
		“structure” to prevent the escape of the soil amendment. If the cover is inadequate we would issue an advisory, warning or an order.																								
	Part 3 ~ Application of Soil Amendments to Land																									
6	<b>Application of soil amendments</b>																									
6(1)	<p>Soil amendments must not be applied to an application site if the soil amendments contain</p> <p>(a) more than 1% foreign matter by dry weight,</p> <p>(b) any sharp foreign matter, including glass or metal shards, in a size or shape that could cause injury,</p> <p>(c) a substance set out in Column 1 of the table below in a concentration, expressed in µg/g of dry weight, exceeding the concentration set out opposite in Column 2.</p> <table><tr><th>Column 1 Substance</th><th>Column 2 Concentration (µg/g dry weight)</th></tr><tr><td>arsenic</td><td>75</td></tr><tr><td>cadmium</td><td>20</td></tr><tr><td>chromium</td><td>1060</td></tr><tr><td>cobalt</td><td>150</td></tr><tr><td>copper</td><td>2200</td></tr><tr><td>lead</td><td>500</td></tr><tr><td>mercury</td><td>5</td></tr><tr><td>molybdenum</td><td>20</td></tr><tr><td>nickel</td><td>180</td></tr><tr><td>selenium</td><td>14</td></tr><tr><td>zinc</td><td>1850</td></tr></table>	Column 1 Substance	Column 2 Concentration (µg/g dry weight)	arsenic	75	cadmium	20	chromium	1060	cobalt	150	copper	2200	lead	500	mercury	5	molybdenum	20	nickel	180	selenium	14	zinc	1850	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"><li>Guidance on how to determine limits substances and concentrations</li><li><i>British Columbia Environmental Laboratory Manual: 2005 – for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</i></li><li>Sampling procedures, and the properties of soil amendments are described in Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice</li></ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"><li>If verification of soil amendment properties is required, an officer will be guided by Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice</li><li>Normally the QP will have the responsibility to sample the soil amendment prior to its application to land. If the soil amendment was tested and exceeded the limits, and was applied to land, this would be a clear violation.</li></ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"><li>If soil amendments are applied and are tested to exceed the prescribed limits, this is an offence under EMA S.120(13) and section 120(3).</li><li>A remedy of removing the soil amendment may not exist if it has been applied to land.</li></ul>
Column 1 Substance	Column 2 Concentration (µg/g dry weight)																									
arsenic	75																									
cadmium	20																									
chromium	1060																									
cobalt	150																									
copper	2200																									
lead	500																									
mercury	5																									
molybdenum	20																									
nickel	180																									
selenium	14																									
zinc	1850																									
6(2)	Soil amendments must not be applied to an application site if the application is likely to cause the site to become a contaminated site.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"><li>The purpose of this section is to prevent contamination from repeat applications of soil</li></ul>																								

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>amendments of a site.</p> <ul style="list-style-type: none"> <li>• Officers should consider the potential for these cumulative impacts on any proposed repeat application. Should be addressed at the notification stage.</li> <li>• High background levels of contaminants in the application site may mean it is not an appropriate sight for applying a soil amendment.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>• Because this section deals with a prediction of possible future contamination, it can only be determined through professional judgment. The technical evaluation by the QP will be an important consideration in this judgment.</li> </ul>
6(3)	<p>Soil amendments must not be applied to an application site if the application site is a contaminated site and the application is likely to exacerbate the contamination of the site.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• It is recognized that the application of soil amendments to some contaminated sites may be beneficial.</li> <li>• This section prohibits the application of soil amendments to contaminated sites if that application will exacerbate the existing contamination (exacerbate whatever made the site a contaminated site).</li> <li>• Determination of “exacerbate” will made using the professional judgment of the Ministry.</li> <li>• Such a determination will rely on the QP’s technical evaluation.</li> </ul>
6(4)	<p>Soil amendments must be applied to an application site in a manner that prevents leachate or runoff escaping from the application site.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• The Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice provides best management practices for the application of soil amendments and the control of leachate.</li> <li>• Consideration should be given to the timing of the application to avoid high precipitation periods.</li> <li>• Applications on snow or frozen ground</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>where run-off is likely to occur or be exacerbated should be discouraged.</p> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>Factors to consider in determining the likelihood of unacceptable leachate or runoff include slope, distance to a stream, and potential risk to human health (e.g. resident in the downstream watershed that relies on the ground water for their drinking water).</li> </ul>
7	<b>If soil amendments contain domestic sewage</b>	This section applies higher standards to soil amendments that contain domestic sewage due to the higher environmental and human health risks.
7(1)	Soil amendments that are described in paragraph (b) of the definition in section 1 and include domestic sewage must not be applied to land unless the groundwater table at the time of application is at least 1 metre below the surface of the land.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>This determination is the responsibility of the discharger / QP.</li> <li>Consideration should be given to the time of year for which the land application is proposed.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>Determination of the ground water table may require a qualified professional; the Water Stewardship Division staff may be consulted.</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>If a land application is made in a manner or at a time that results in the contamination of ground water, discharge would not be in compliance with the Code, and would be in violation of EMA Section 6 (3), Introduce Waste of a Prescribed Activity, which is an offence under EMA section 120(3).</li> </ul>
7(2)	<p>Soil amendments referred to in subsection (1) must not be applied within</p> <p>(a) 30 metres from a drinking water source, irrigation well, lake, river, stream, dwelling or boundary with land zoned for residential or recreation uses,</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>This section recognizes that airborne pathogen movement is a human health risk.</li> <li>Therefore the determination of whether a road is a major or minor road, and the distance within which the land application is restricted, should be made on the volume use on the road</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p>(b) 20 metres from a major public road, and</p> <p>(c) 10 metres from a minor public road, other than a logging road.</p>	<p>and the number of individuals that might be exposed to that risk.</p> <ul style="list-style-type: none"> <li>• The discharger / QP is responsible for making this determination.</li> <li>• Distances to lakes, rivers, etc. should be measured from the normal high water mark. Distances to roads should be measured from the edge of the road surface (not the center-line).</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>• Application of a soil amendment within the prescribed areas would result in the discharger being out of compliance with the Code, and thereby losing the exemption of WDR Section 4, and being then subject to EMA Section 6 (3).</li> </ul>
7(3)	<p>If soil amendments referred to in subsection (1) having a fecal coliform density greater than or equal to 1,000 MPN per gram by dry weight of total solids are applied to an application site,</p> <p>(a) the land owner must not allow planting on the application site of food crops of which only the parts growing above ground are harvested for human consumption for at least 18 months after the application,</p> <p>(b) the land owner must not allow planting on the application site of food crops of which parts growing below ground are harvested for human consumption for at least 38 months after the application, and</p> <p>(c) the discharger must ensure that a sign, at least one m<sup>2</sup> in size and legible to a person approaching the application site at each point of access, is posted for 38 months after the application of the soil amendments.</p>	<p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>• If there is a complaint and a need to determine dates of application, the land application plan, and the certification of the application in accordance with the plan, will provide those dates for determining compliance.</li> </ul>
7(4)	<p>A sign required under subsection (3) (c) must set out all the following:</p> <p>(a) a description of the application site;</p> <p>(b) that residuals from the primary or secondary treatment of pulp or paper mill</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• A sign should adequately inform users of the site; if site is potentially accessed from multiple locations, all such locations should have a sign.</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p>liquid waste with a fecal coliform density greater than or equal to 1 000 MPN per gram of total solids dry weight basis have been applied to the site and the date of that application;</p> <p>(c) that the public should avoid</p> <ol style="list-style-type: none"> <li>entering the application site for 38 months after the application,</li> <li>ingesting plant material grown on the application site within 18 months after the application if the part of the plant ingested grows above the surface of the land, and</li> <li>ingesting plant material grown on the application site within 38 months after the application if the part of the plant ingested grows below the surface of the land;</li> </ol> <p>(e) that domestic animals should not be permitted to graze on the application site for 60 days after the application;</p> <p>(f) the name and telephone number of a person who may be contacted for additional information.</p>	<p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>Inspections will normally only be done in response to public complaint or other form of notification.</li> <li>Inspections may be undertaken by planned audit and as identified as part of annual work planning processes.</li> </ul> <p>NOTE: the numbering on the approved Code indicates that Section 7(4) is missing (d). The numbering on this guide is consistent with approved Code (i.e., 7(4)(e) should really be 7(4)(d)).</p>
8	<b>Requirement for a land application plan</b>	Land application planning requirements are intended to be the same as for managed organic matter under <u>OMRR</u> .
8(1)	If more than 5 m <sup>3</sup> of soil amendments will be applied to an application site in a year, before applying the soil amendments the discharger must have a plan prepared in accordance with this section.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Requirement is for the plan to be prepared by a QP and have specified information.</li> <li>See Section 9 about required notice and authority of Director to request additional information, and Section 12 (2) requirement to provide plan and certification for inspection by an officer.</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>If more than 5 m<sup>3</sup> has been applied, and no plan has been prepared and submitted, or an inadequate or incomplete plan has been</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		submitted, the application will have been made in contravention with the CoP, losing the WDR Section 4 (1) exemption; enforcement may be to EMA Section 6 (3).
8(2)	<p>A plan required under subsection (1) must</p> <p>(a) be prepared and signed by a qualified professional, and</p> <p>(b) provide all the following information:</p> <ul style="list-style-type: none"> <li>i. the full name and address of the facility where the soil amendments are produced;</li> <li>ii. the name, address and telephone number of an individual who is located at or near the application site and is the local contact for the discharger;</li> <li>iii. the full name and address of the qualified professional preparing the plan;</li> <li>iv. the name of the registered owner of the application site and the written authorization of that registered owner, or the agent of that registered owner, for that application of the soil amendments;</li> <li>v. the street address and legal description of the application site;</li> <li>vi. the latitude and longitude, and a description of the boundaries, of the application site;</li> <li>vii. a map or plan showing the location of the application site;</li> <li>viii. the intended dates for each application of soil amendments to the application site in the year;</li> <li>ix. conditions, specific to the application site, that may adversely impact the effective application or storage of the soil amendments or the beneficial use of the soil amendments, including, without limiting this, the gradient, drainage issues and type of groundcover;</li> </ul>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• This subsection is intended to provide site specific information.</li> </ul> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>• Enforcement will be subject to the requirements of Section 8 (1).</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p>x. a physical description of the constituents, including foreign matter, of the soil amendments;</p> <p>xi. the street address and legal description of each storage facility and storage site where soil amendments intended to be applied to the application site will be stored;</p> <p>xii. a map or plan showing the location of those storage facilities and storage sites.</p>	
8(3)	<p>A plan required under subsection (1) must provide</p> <p>(a) the following information in relation to the soil amendments to be applied:</p> <p>i. moisture content expressed as a percentage of total weight;</p> <p>ii. the concentration of each substance set out in the table in section 6 expressed in µg/g of dry weight;</p> <p>iii. Total Kjeldahl Nitrogen (TKN) expressed in µg/g of dry weight;</p> <p>iv. ammonia plus ammonium and nitrate nitrogen expressed in µg/g of dry weight;</p> <p>v. plant-available phosphorus and potassium expressed in µg/g of dry weight;</p> <p>vi. if the soil amendments are those described in paragraph (b) of the definition in section 1 and include domestic sewage, the fecal coliform density expressed as MPN per gram by dry weight of total solids;</p> <p>vii. pH and electrical conductivity;</p> <p>viii. the application rate for the year, in dry tonnes per hectare, required to obtain the necessary fertilizer nutrient levels or soil conditioner levels to establish or sustain the intended crops or other vegetation on the land and <u>minimize the</u></p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• This subsection deals with the analysis of (a) the soil amendment, and (b) the receiving environment.</li> <li>• This subsection does not set standards or limits for the soil amendment, only required analysis and information required in the Plan.</li> <li>• Subsection 8 (3) (viii), requires the discharger to show how the application rate will minimize the potential for adverse environmental impacts.</li> <li>• The <u>Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice</u> provides advice on sampling methodology</li> <li>• Analysis must be done in accordance with the <u>British Columbia Environmental Laboratory Manual: 2005 – for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</u></li> </ul>



Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p><u>potential for adverse environmental impacts</u>, and</p> <p>(b) the following information about the soil at the application site:</p> <ul style="list-style-type: none"> <li>i. a calculation of soil conditioner or crop nutrient requirements;</li> <li>ii. the pH and electrical conductivity before the first application of soil amendments and the projected pH and electrical conductivity before each subsequent application of soil amendments;</li> <li>iii. the concentration of each substance set out in the table in section 6, expressed in µg/g of dry weight, before the first application of the soil amendments and the projected concentrations, expressed in µg/g of dry weight, of each of those substances before each subsequent application of soil amendments.</li> </ul>	
8(4)	<p>A plan required under subsection (1) must set out the following management methods or processes:</p> <p>(a) management methods or processes to reduce or prevent the transmission of pathogens by vectors;</p> <p>(b) the management methods that will be implemented at the storage facilities and storage sites at which the soil conditioners are stored to prevent the formation of leachate;</p> <p>(c) if the fecal coliform density reported under subsection (3) (a) (i) is greater than or equal to 1 000 MPN per gram by dry weight of total solids, the management processes that will be implemented to prevent the spread of disease;</p> <p>(d) the management methods or processes that will be implemented to address specific site conditions identified under subsection (2) (b) (ix);</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• <u>The Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice</u> provides advice on best management practice.</li> <li>• This subsection is intended to address the management methods that will be used to minimize adverse environmental and human health and safety impacts.</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p>(e) if the proposed application rates exceed the annual soil conditioning or crop nutrient requirements,</p> <ul style="list-style-type: none"> <li>i. a process for monitoring the composition of the soil on land to which soil amendments have been applied, and</li> <li>ii. a statement of the potential changes in the soil and vegetation quality the proposed application rates will cause.</li> </ul>	<ul style="list-style-type: none"> <li>• “the annual soil conditioning or crop nutrient requirements” is required information (Section 8 (3) (a) (viii))</li> </ul>
9	<b>Notice of application of soil amendments</b>	
9(1)	Definitions	
	<p>“<b>drinking water source</b>” has the same meaning as in section 1 of the <i>Drinking Water Protection Act</i>;</p>	<p><i>Drinking Water Protection Act</i></p>
	<p>“<b>medical health officer</b>”, in relation to land, means the medical health officer appointed under the <i>Health Act</i> for the area in which the land is located;</p>	<p><i>Health Act</i></p> <ul style="list-style-type: none"> <li>• EP staff should consider contacting local MHO staff to discuss roles and responsibilities, including their duties required by this Code.</li> </ul>
	<p>“<b>watershed</b>” means a watershed from which water flows into a drinking water source.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Used in Section 9 (2) (b)</li> <li>• With some exception for some remote coastal watersheds, watersheds cover most areas of the province. See Section 9 (2) for direction.</li> </ul>
9(2)	<p>At least 30 days before a proposed application to land of more than 5 m<sup>3</sup> of soil amendments, the discharger must give notice</p> <ul style="list-style-type: none"> <li>(a) to a director,</li> <li>(b) if the land has an agricultural land use as defined in the <u>Contaminated Sites Regulation</u>, or is in a watershed, to the medical health officer, and</li> <li>(c) if the land is within an agricultural land reserve as defined in the <u>Agricultural Land Commission Act</u>, to the Provincial Agricultural Land Commission.</li> </ul>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• “<b>agricultural land use</b>,” under the <u>Contaminated Sites Regulation</u>, means the use of land for the primary purpose of producing agricultural products for human or animal consumption including, without limitation, livestock raising operations, croplands, orchards, pastures, greenhouses, plant nurseries and farms</li> <li>• It is the discharger’s responsibility to determine if notice must be provided to the medical health officer or the Agricultural Land Commission.</li> <li>• Advice requested of Ministry officers to determine watershed requirements, if provided,</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>should be based on professional judgment.</p> <p><b>Enforcement:</b></p> <ul style="list-style-type: none"> <li>• Application of a soil amendment without proper notice would result in the discharger being out of compliance with the Code, and thereby losing the exemption under WDR Section 4 from the prohibition against the introduction of waste under EMA Section 6 (3). This is an offence under EMA section 120(3).</li> </ul>
9(3)	Notice under subsection (2) must be given in the form set out in Schedule 1 and contain all the information required by that form.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• See Appendix for notice template</li> <li>• See Authorization Management Section for specific procedures and guidance.</li> <li>• If the submitted information is considered to be inadequate, the Director may request additional information (See Section 9 (4) )</li> </ul>
9(4)	<p>If within 30 days of receiving notice under subsection (2) (a) the director requests from the discharger additional information, the discharger</p> <p>(a) must provide that additional information to the director and the medical health officer, and</p> <p>(b) must not apply the soil amendments to the application site for at least 30 days after providing that additional information.</p>	<p><b>Policy:</b></p> <ul style="list-style-type: none"> <li>• This section authorizes the Director to request more information in relation to the submitted notification.</li> <li>• See subsection 9 (5) for the action the Director may take in relation to the plan and the provided information.</li> </ul> <p><b>Procedure / Guidance:</b></p> <ul style="list-style-type: none"> <li>• If director doesn't respond within 30 days, the discharger is authorized to make the land application</li> <li>• On receipt of the requested information, the Director has 30 days to respond, otherwise the discharge is authorized to make the land application.</li> <li>• If the discharger fails to provide additional information, and the land application is made, the discharger is not compliant with this section.</li> </ul>
9(5)	If the information provided to the director under subsection (2) (a) or (4) satisfies the director that site-specific standards or management practices respecting the	<p><b>Policy:</b></p> <ul style="list-style-type: none"> <li>• This section has the effect of allowing the Director to modify the application plan if the Director is satisfied that site specific standards</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	application of the soil amendments to the application site are necessary to protect human health or the environment, within 30 days after the later of receiving notice under subsection (2) (a) and receiving information under subsection (4), the director may require the discharger to comply with site-specific standards or management practices specified by the director.	<p>or management practices are necessary to protect human health or the environment if there is insufficient information provided in the notification. Subsections 9(4) and 12(2) provide the authority to request the full plan for review.</p> <p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Requirements of the discharger to comply with site-specific standards or management practices specified by the director must be in writing.</li> <li>The specifications of the director are considered a decision and may be appealed.</li> </ul>
9(6)	Within 30 days after receiving a notice under subsection (2) (b) or additional information under subsection (4) (a), if applicable, the medical health officer may provide written directions to the discharger (a) prohibiting the application of the soil amendments to the application site, or (b) imposing conditions on the application of the soil amendments to the application site.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>This section gives to the medical health officer broader powers than those given to the director in subsection 9 (5). In addition to imposing conditions, the MHO may prohibit the land application.</li> <li>Where the medical health officer does impose conditions, those conditions need to be recorded and conveyed to the discharger and to the appropriate Ministry staff, and become part of Ministry records for subsequent compliance verification and potential enforcement activities.</li> </ul>
9(7)	The time limits in subsections (5) and (6) may be amended by agreement between the director and the discharger or the director, the discharger and the medical health officer, as applicable.	<p><b>Procedure / Guidance:</b></p> <ul style="list-style-type: none"> <li>Provides the Ministry with the authority to set mutually agreeable time lines; no compliance issue unless agreed upon timelines are not met.</li> <li>May be more restrictive or more permissive.</li> <li>Ongoing liaison with the medical health officer is required to ensure conformity with agreed timelines.</li> </ul>
10	<b>Certification of qualified professional</b>	
10	After each application of soil amendments to an application site, the discharger must obtain the certification of a qualified professional that the application was carried	<p><b>Procedure / Guidance:</b></p> <ul style="list-style-type: none"> <li>If the land application is not certified, the discharger is not in compliance with the Code.</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	out in accordance with the land application plan.	<ul style="list-style-type: none"> <li>• Certification by the QP must be in writing.</li> <li>• No documentation of how certification was determined is required.</li> </ul>
11	<b>Sampling and analysis</b>	
11(1)	<p>A discharger must ensure that sampling and analysis of soil amendments described in paragraphs (a) and (b) of the definition in section 1 are carried out by a qualified professional when the earlier of the following occurs:</p> <p>(a) 1 000 tonnes dry weight of soil amendments are produced at the facility, or</p> <p>(b) 1 year has passed since the facility started to produce the soil amendments or 1 year has passed since the last sampling and analysis, as applicable.</p>	<p><b>Procedures / guidelines:</b></p> <ul style="list-style-type: none"> <li>• There is no requirement to report the results of the sampling.</li> <li>• See Section 12 for the director's authority to request information.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>• If there was an issue as to the validity of the sampling, the Ministry would have to undertake its own sampling to verify compliance; done in accordance with the <u>British Columbia Environmental Laboratory Manual: 2005 – for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</u></li> </ul>
11(2)	A director may require more frequent sampling and analysis than is required under subsection (1) if the director considers this necessary or advisable in the circumstances.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Additional sampling may be required at the discretion of the director.</li> </ul>
11(3)	An analysis under this section must be made in accordance with the <i>British Columbia Environmental Laboratory Manual: 2005 — for the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</i> , as amended from time to time (Victoria, 2005), published by the minister, or by suitable alternative procedures authorized by a director.	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• <u>British Columbia Environmental Laboratory Manual: 2007 — For the Analysis of Water, Wastewater, Sediment, Biological Materials and Discrete Ambient Air Samples</u></li> </ul>
12	<b>Record Keeping</b>	
12(1)	<p>A discharger must</p> <p>(a) retain the results of the sampling and analysis required under section 11 for 36 months after production of the soil amendments,</p> <p>(b) make those results available for</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• Inspection of records normally done on receipt of a complaint or as part of a planned audit undertaken as part of an approved annual work plan activity.</li> </ul>

Section	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	inspection by an officer, and  (c) on request, provide a copy of those results to a director or an official under the <i>Agricultural Land Commission Act</i> .	
12(2)	A discharger must  (a) retain a land application plan, and each certification obtained under section 10 in relation to the application plan, for 36 months after the application of soil amendments under it,  (b) make the land application plan and certifications available for inspection by an officer, and  (c) on request, provide a copy of the plan and certifications to a director or an official under the <u>Agricultural Land Commission Act</u> .	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>12 (2) (c) provides the authority to get a copy of the plan for determining compliance with the specifications in that plan.</li> </ul> <b>Enforcement:</b> <ul style="list-style-type: none"> <li>If a request for a plan is refused, they would not be in compliance with this Code and therefore liable to consequence under WDR (S. 6 (1)).</li> </ul>
	Schedule	See appendix

## 6. Waste Discharge Regulation Requirements ~ Substitutions

	WASTE DISCHARGE REGULATION REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
7	Substituted Requirements Minister or Director may substitute a different requirement if specified conditions are met.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>Substitutions should be minimal and this provision used only if absolutely necessary.</li> <li>Site-specific requirements will normally be addressed in the notification (S. 9) and plan requirement (S.8) authorities</li> <li>A substitution application package may be found at:  <a href="http://www.env.gov.bc.ca/epd/industrial/regs/codes/soil_amend/index.htm">http://www.env.gov.bc.ca/epd/industrial/regs/codes/soil_amend/index.htm</a></li> </ul>

## **7. Authorization Management**

### Notification Form

Schedule 1 ~ Notification of Application of Soil Amendments to Land

### Fees

No fees are payable under this Code. This is consistent with the Organic Matter Recycling Regulation. The intent is to encourage rather than discourage the beneficial use of soil amendments.

### Security

No securities are required

## **8. Other Related Legislation**

### Environmental Management Act

Contaminated Sites Regulation

Hazardous Waste Regulation

Organic Matter Recycling Regulation

Pulp Mill And Pulp And Paper Mill Liquid Effluent Control Regulation

Drinking Water Protection Act

Health Act

## **9. Compliance Promotion**

### Best Management Practices

Land Application Guidelines for the Organic Matter Recycling Regulation and the Soil Amendment Code of Practice ~ Best Management Practices

### Contacts & Resources

See Qualified Professional Definition (Section 1) for links

## 10. Offence & Enforcement Response Summary

The following table summarizes the offences to the CoPSA and the potential enforcement responses.

Section	Requirement	Discharge Related	Advisory/ Warning	Order	Violation Ticket	Prosecution
<b>Code of Practice for Soil Amendments</b>						
<b>2</b>	<b>Storage Methods</b>					
2(1)	<ul style="list-style-type: none"> <li>Does not comply with Section 3 or Section 5</li> </ul>	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
<b>3(1)</b>	<b>Storage Facility</b>					
3(1)(a)	<ul style="list-style-type: none"> <li>Does not comply with distance requirements</li> </ul>	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
3(1)(b)	<ul style="list-style-type: none"> <li>Does not comply with capacity to prevent escapement requirement</li> </ul>	Yes	✓	Yes	EMA 6(3) or WDR 6(1)	✓
3(2)	<ul style="list-style-type: none"> <li>Does not comply with storage type restriction (S.3(2)) on vehicle or mobile equipment</li> </ul>	No	✓	No	WDR 6(1)	✓
<b>4</b>	<b>Storage site (for temporary storage)</b>					
4(2)(a)	<ul style="list-style-type: none"> <li>Does not comply with distance (&gt;30 metres) or time (, 9months) requirement</li> </ul>	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
4(2)(b)	<ul style="list-style-type: none"> <li>Does not comply with maximum time requirement (2 weeks) for storage within 30 metres of watercourse or domestic water source.</li> </ul>	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
<b>5</b>	<b>Rainy Season Storage using a storage site (for temporary storage)</b>					
5(2)	<ul style="list-style-type: none"> <li>Vancouver Island, FVRD, GVRD, and prescribed rainfall areas must be covered from October 1 to March 31</li> </ul>	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
<b>6</b>	<b>Application of Soil</b>					✓



Section	Requirement	Discharge Related	Advisory/ Warning	Order	Violation Ticket	Prosecution
	<b>Amendment</b>					
6(1)	• Application exceeds prescribed limits	Yes	✓	Yes	EMA 120 (13)	✓
6(2)	• Application causes contamination	Yes	✓	Yes	EMA 6(3)	✓
6(3)	• Application to contaminated site and contamination exacerbated	Yes	✓	Yes	EMA 6(3)	✓
6(4)	• Leachate and runoff escape from application site	Yes	✓	Yes	EMA 6(3)	✓
<b>7</b>	<b>If Soil Amendments contain domestic sewage</b>					
7(1)	• Land Application at a time when ground water table is <1 metre below the surface	Yes	✓	Yes	EMA 6(3)	✓
7(2)	• Soil Amendments with domestic sewage applied in non-compliance with:					
7(2)(a)	• <30 metres from a drinking water source	Yes	✓	Yes	EMA 6(3)	✓
7(2)(b)	• <20 metres from a major road	Yes	✓	Yes	EMA 6(3)	✓
7(2)(c)	• <10 metres from a minor road	Yes	✓	Yes	EMA 6(3)	✓
7 (3)	Where soil amendments have fecal coliform density >= 1,000 MPN per gram by dry weight of total solids					
7 (3)(a)	• Allows planting of above-ground food crops within 18 months of land application	No	✓	Yes	EMA 6(3)	✓
7 (3)(b)	• Allows planting of below-ground food crops within 38 months	No	✓	Yes	EMA 6(3)	✓
7 (3)(c)	• Does not post sign of prescribed type or for prescribed time	No	✓	No	WDR 6(1)	✓
7 (4)	• Sign does not meet prescribed requirements	No	✓	No	WDR 6(1)	✓
<b>8</b>	<b>Requirement for a land application plan</b>					
8(1)	• Land application in excess of 5m <sup>3</sup> without a plan that	Yes	✓	No	WDR 6(1)	✓

Section	Requirement	Discharge Related	Advisory/ Warning	Order	Violation Ticket	Prosecution
	meets the requirements of Subsections 8(2), 8(3) and 8(4)					
<b>9</b>	<b>Notice of application of soil amendments</b>					
9(2)	Does not provide adequate notice (at least 30 days) prior to making the land application to <ul style="list-style-type: none"> <li>Director</li> <li>Medical health officer</li> <li>Provincial Agricultural Land Commission</li> </ul>	No	✓	No	WDR 6(1)	✓
9 (3)	• Notice is not in the prescribed form.	No	✓	No	WDR 6(1)	✓
9(4)(a)	• Does not supply requested information	No	✓	No	WDR 6(1)	✓
9(4)(b)	• Applies soil amendment <30 days after providing that additional information	Yes	✓	Yes	EMA 6(3)	✓
9(5)	• Discharger does not comply with site-specific standards or management practices specified by the director	Yes	✓	Yes	EMA 6(3)	✓
9(6)	• Discharges does not comply with prohibition or conditions imposed by the medical health officer	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓
<b>10</b>	<b>Certification of qualified professional</b>					
10	• Discharger does not provide certification that application is in accordance with land application plan	No	✓	No	WDR 6(1)	✓
<b>11</b>	<b>Sampling and analysis</b>					
11(1)	• Sampling and analysis (for fly ash and pulp mill residuals) not done in accordance with prescribed method (including those prescribed in Subsection 11(3)) or time (including more frequent sampling and analysis prescribed by the director under subsection 11(2).	No	•	No	WDR 6(1)	✓
<b>12</b>	<b>Record Keeping</b>					

Section	Requirement	Discharge Related	Advisory/ Warning	Order	Violation Ticket	Prosecution
12(1)(a)	<ul style="list-style-type: none"> <li>Sampling and analysis records not retained for 36 months</li> </ul>	No	•	No	WDR 6(1)	✓
12(1)(b)	<ul style="list-style-type: none"> <li>Sampling and analysis records not made available for inspection by officer</li> </ul>	No	•	No	WDR 6(1)	✓
12(1)(c)	<ul style="list-style-type: none"> <li>Application plan not provided to a director or Agricultural Land Commission Act official</li> </ul>	No	•	No	WDR 6(1)	✓
<b>Waste Discharge Regulation</b>						
6 (1)	Other Code of Practice Requirements ~ fails to comply with Code of Practice	No	✓	Yes	\$575	\$200,000
5 (1)	Knowingly provides false information in a registration	No	✓	No	\$575	
<b>Environmental Management Act</b>						
6 (3), 120(3)	Waste Disposal ~ introduction of waste due to loss of exemption under EMA 6 (5)	Yes	✓		\$575	\$1,000,000 Or 6 months
120 (10)	Fails to comply with an Order	Determination Required	✓	No	\$575	\$300,000 Or 6 months
120 (13)	Contravene a waste quantity or characteristic	Yes	✓	Yes	\$575	\$1,000,000 Or 6 months
120(18)	Fail to comply with a substituted requirement	Determination Required	✓	Yes	EMA 6(3) or WDR 6(1)	✓

## Appendix I

### Staff Training PowerPoint Presentation – November 2007

# Soil Amendment Code of Practice Training

November - 2007

## What will we cover?

- A Short History
- Code Highlights
- Resources
- Options/Recommended Action

## History

- Over 100 authorizations for industrial residuals over the past 15 years
- Most active:
  - Zellstoff Celgar (Castlegar)
  - Quesnel River Pulp (Quesnel)
  - Abitibi (Mackenzie)
  - Fibreco (Taylor)
  - Howe Sound Pulp and Paper (Port Melon)
  - Scott Paper (New Westminster)
- OMRR issued 2002 (municipal and compost)

## Before Land Application



## Code Highlights What's this code all about?

- Environmental protection
- Beneficial use to improve soil (not disposal or dumping!)
- Does not include compost (covered in OMRR)
- No more site specific permits
- Greater reliance on qualified professionals
- Requirements modeled after OMRR

## After Land Application/Seeding



## Highlights

### Soil Amendments Allowed

- fly ash from wood-fired boilers (not from salt laden wood or coal, etc.)
- primary and secondary pulp wastewater treatment residuals generated after 1995
- water treatment plant residuals
- lime and lime mud
- wood waste

## Hydroseeding



## Woodwaste Exemptions

- Waste Discharge Reg 3(4,5&6)
- Construction foundation (if direction by PEng)
- Plant mulch or in residential gardens
- Animal bedding
- Sports arenas
- <100 m<sup>3</sup>/yr applied w/ good agronomic practices
- Soil conditioner on forest land - no limits

## Spreading



## Prohibitions

- Cannot cause pollution
- Must be <1% foreign matter
- Cannot cause a contaminated site or exacerbate a contaminate site
- Must prevent leachate and runoff

## Storage Requirements

- OMRR type storage requirements apply to pulp treatment plant residues and water treatment residues
- Storage on a farm only if SA is used on that farm
- Must be in a facility (pond, bermed area, etc)
- >15 m from watercourses
- >30 m from water for domestic use
- Must cover if in GVRD, FVRD, VI or >600 mm of precipitation/yr

## Contaminant Limits in SAs

Based on CFIA Limits for Fertilizers (as per OMRR)  
mg/kg dry wt

Arsenic	< 75
Cadmium	< 20
Chromium	< 1 060
Cobalt	< 150
Copper	< 2 200
Lead	< 500
Mercury	< 5
Molybdenum	< 20
Nickel	< 180
Selenium	< 14
Zinc	< 1 850

## Requirements

- Initial analysis of soil amendment
- QP to prepare land appl'n plan if > 5m<sup>3</sup>
- Notice to MoE manager, MHOs, AL Commission
- 30 day review (if no comment okay to go)
- Comply w/ Ag Land Commission Regs
- Ongoing monitoring
  - For pulp SA - start of each year and every 1 000 tonnes thereafter
  - Every 3 months for others

## More Spreading



## Pulp Treatment Residues Mixed w/ Sewage

- If pulp sludge is mixed with domestic sewage (co-treatment) application must be:
  - >1 m above groundwater level
  - >30 m to drinking water, irrigation wells, lakes, streams, dwellings or land zoned for recreation or dwellings
  - >20 m to major roads
  - >10 m to minor roads
  - If coliforms >1000 MPN, OMRR-type restrictions on crops and signage apply

## Monitoring, Reporting & Record Keeping

- No direct monitoring reporting to MoE
- Monitoring data retained for 3 yrs
- Land application plan to be kept on-site for 3 yrs
- Director may ask for data up to 3 yrs later

## Notification, Info & Fees

- Notification NOT registration (same as OMRR)
- Notice info to be entered in AMS
- No fees (same as OMRR)
- Director has 30 days to ask for more info before land application commences
- Director may require more monitoring at any time

## Truck Spreader



## Who does what?

The discharger\* must:

- Comply w/ storage requirements
- Send notice to MoE, MHO and ALC
- Have a QP do land appl'n plan w/ info on:
  - Discharger
  - Appl'n site
  - Soil amendment properties
  - Crop needs, site conditions and predicted conditions
  - Management methods
- Comply w/ LA Plan and Code

\* The owner of the facility producing the SA if they are applying the SA, otherwise its the land owner

## Who does what?

Victoria Admin staff:

- Check notice and company info
- Enter notice info into AMS\*
- Notify Region

\*Info goes direct to AMS once AMS is updated

## Who Does What?

As time permits within priorities Regional staff will:

- Check notice for technical completeness
- Decide if more info is needed and follow up w/ discharger
- Review compliance as necessary within regional priorities

## Resources


On the MoE Website\*:

- The Code
- Background Info (IP, Response to Comments, etc.)
- Land Application Guide (Technical guide for OMRR & SAC)
- Implementation Policy & Procedures (Admin and policy advice to staff)

\*[http://www.env.gov.bc.ca/epdiv/ema\\_codes\\_of\\_practice/soil\\_amend/index.htm](http://www.env.gov.bc.ca/epdiv/ema_codes_of_practice/soil_amend/index.htm)

## Case Studies

- Zellstoff Celgar notified for Fall/2007 application of lime waste
- Further applications planned for Spring/08

	<b>Operational Policy Manual</b> <b>Environmental Protection</b>	Section	Subsection
		2.14	2.14.01

**Name of Policy:** **Code of Practice for the Concrete and Concrete Products Industry – Policy and Procedures for Implementation**

**Replaces:** The policy is new.

**Application:** This policy applies to staff engaged in administering the Code of Practice for the Concrete and Concrete Products Industry.

**Purpose:** The purpose of the implementation policy and procedures is to assist staff in administering the Code of Practice for the Concrete and Concrete Products Industry.

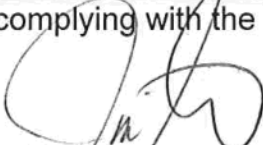
**Policy Statement:** On March 1, 2008, the Ministry established the Code of Practice for the Concrete and Concrete Products Industry to set requirements for discharges to the environment from the ready mix and concrete products industry. The Code replaces the need for permits for discharges to the atmosphere from the raw material storage silos and for effluent discharges to receiving water. Discharges of effluent to the ground via infiltration are allowed as long as pollution does not occur. Similarly, disposal of solids from the process are authorized as long as pollution does not occur. Recycling and reuse are encouraged.

The attached document provides guidance to ministry staff for administering the Code by providing clarification of legal requirements and training information.

**References and Relationships:** The Ministry established the Code of Practice for the Concrete and Concrete Products Industry under provisions of the *Environmental Management Act (EMA)* and the *Waste Discharge Regulation (WDR)*.

The Guide to the Code of Practice for the BC Concrete and Concrete Products Industry was developed to assist users in complying with the requirements of the Code.

**Approval:**




Assistant Deputy Minister  
Environmental Protection Division

**Date:** July 26/2011

**Contact Person:** Diane Beattie, Environmental Management Analyst  
Environmental Standards Branch



	Operational Policy Manual Environmental Protection	Section	Subsection
		2.14	2.14.01

**Name of Policy:** **Code of Practice for the Concrete and Concrete Products Industry – Policy and Procedures for Implementation**

**Replaces:** The policy is new.

**Application:** This policy applies to staff engaged in administering the Code of Practice for the Concrete and Concrete Products Industry.

**Purpose:** The purpose of the implementation policy and procedures is to assist staff in administering the Code of Practice for the Concrete and Concrete Products Industry.

**Policy Statement:** On March 1, 2008, the Ministry established the Code of Practice for the Concrete and Concrete Products Industry to set requirements for discharges to the environment from the ready mix and concrete products industry. The Code replaces the need for permits for discharges to the atmosphere from the raw material storage silos and for effluent discharges to receiving water. Discharges of effluent to the ground via infiltration are allowed as long as pollution does not occur. Similarly, disposal of solids from the process are authorized as long as pollution does not occur. Recycling and reuse are encouraged.

The attached document provides guidance to ministry staff for administering the Code by providing clarification of legal requirements and training information.

**References and Relationships:** The Ministry established the Code of Practice for the Concrete and Concrete Products Industry under provisions of the *Environmental Management Act* (EMA) and the *Waste Discharge Regulation* (WDR).

The Guide to the Code of Practice for the BC Concrete and Concrete Products Industry was developed to assist users in complying with the requirements of the Code.

**Approval:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Diane Beattie, Environmental Management Analyst  
Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

**IMPLEMENTATION POLICY AND PROCEDURES GUIDE  
FOR THE  
CODE OF PRACTICE FOR THE CONCRETE AND CONCRETE PRODUCTS  
INDUSTRY**

**JUNE 2011**

**CODE OF PRACTICE  
FOR THE  
CONCRETE AND CONCRETE PRODUCTS INDUSTRY  
IMPLEMENTATION POLICY AND PROCEDURES**

**Contents**

<b>1. Purpose of this Document .....</b>	<b>5</b>
<b>2. Purpose of the Code .....</b>	<b>5</b>
<b>3. Division Contact .....</b>	<b>5</b>
<b>4. Background .....</b>	<b>5</b>
<b>5. Summary of Code Requirements ~ Policy and Procedures .....</b>	<b>5</b>
Definitions .....	5
Registration required .....	7
Dust Control .....	8
Authorized discharge: silo emissions and air quality .....	8
Disposal of waste concrete .....	8
Authorized discharge: effluent and groundwater quality .....	9
Authorized discharge: effluent and surface and marine water quality .....	9
Monthly effluent sampling and analysis .....	10
System inspection records .....	11
System failures .....	11
Keeping and providing establishment records .....	11
<b>6. Waste Discharge Regulation Requirements ~ Substitutions .....</b>	<b>12</b>
<b>7. Authorization Management .....</b>	<b>12</b>
Registration Form .....	12
Fees .....	12
Security .....	12
<b>8. Other Related Legislation .....</b>	<b>12</b>
<b>9. Compliance Promotion .....</b>	<b>12</b>
Guide to the Code of Practice for the BC Concrete and Concrete Products Industry .....	12
Contacts & Resources .....	12
<b>10. Compliance and Enforcement .....</b>	<b>13</b>
<b>Appendix I .....</b>	<b>14</b>
Staff Training PowerPoint Presentation – 2008 .....	14

## 1. Purpose of this Document

This document is for guidance purposes only. The current legislation and regulations take precedence over any information provided.

## 2. Purpose of the Code

The purpose of this Code of Practice is to set requirements for discharges to the environment from the Ready Mix and Concrete Products industry. The Code replaces the need for permits for discharges to the atmosphere from the raw material storage silos and for effluent discharges to receiving water. Discharges of effluent to the ground via infiltration are allowed as long as pollution does not occur. Similarly, disposal of solids from the process are authorized as long as pollution does not occur. Recycling and reuse are encouraged.

A person complying with the conditions of this code would be exempt from the prohibition against discharging waste to the environment found in Section 6(2) and 6(3) of the Environmental Management Act.

## 3. Division Contact

Diane Beattie  
Environmental Management Analyst  
Telephone: (250) 387-6797  
Email: [Diance.Beattie@gov.bc.ca](mailto:Diance.Beattie@gov.bc.ca)

## 4. Background

The *Environmental Management Act* (EMA) was brought into force on July 8, 2004. The Act replaces the old *Waste Management Act* and the *Environment Management Act* and brings provisions from both of those acts into one statute. The Ministry of Environment has established a "code of practice" (Minister's regulation) that addresses discharges to the environment from the concrete and concrete products industry under provisions of the *Environmental Management Act* (EMA) and the Waste Discharge Regulation (WDR). The new Concrete Code of Practice eliminates the administrative processes and costs associated with issuing permits and approvals.

Operations that currently hold permits may retain these permits until a major amendment is initiated. Major amendments are considered to be greater than a 10% increase in discharges. An example of a major amendment could be the installation of an additional silo. Any new entrants to the industry will need to register and comply with this Code of Practice.

## 5. Summary of Code Requirements ~ Policy and Procedures

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
1	<b>Definitions</b>	
1(1)	<b>“Act”</b> means the <i>Environmental Management</i>	

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<i>Act;</i>	<u>Environmental Management Act</u>
	<b>“British Columbia Environmental Laboratory Manual: 2009”</b> means the manual by that title published by the minister;	<u>British Columbia Laboratory Methods Manual</u>
	<b>“British Columbia Field Sampling Manual: 2003”</b> means the manual by that title published by the minister;	<u>British Columbia Field Sampling Manual</u>
	<b>“concrete and concrete products industry”</b> has the same meaning as in Schedule 2 of the Waste Discharge Regulation;	<u>Environmental Management Act -- Waste Discharge Regulation</u>
	<b>“establishment”</b> means an establishment in the concrete and concrete products industry;	Does not include home based businesses, educational facilities, and establishments of hobbyists or artisans. Typical concrete products include, but are not limited to, concrete pipe, pre stressed concrete structural members, septic tanks, entrance stairs, and well rings.
	<b>“establishment premises”</b> means, in relation to a concrete products establishment, any land, building or premises in or on which the establishment engages in manufacturing ready-mix concrete or concrete products, including any areas in or on which activities related to that manufacturing, such as selling, displaying, storing or packaging, take place;	By exclusion, the sites where the ready-mix concrete or concrete products are applied are exempt from the requirements of this code.
	<b>“establishment runoff”</b> means runoff, whether from rainfall, snow or snowmelt, at or from establishment premises;	This Code also captures area runoff as a result of rain or snowmelt which most permits did not.
	<b>“groundwater”</b> has the same meaning as in the Municipal Sewage Regulation, B.C. Reg. 129/99;	<u>Environmental Management Act -- MUNICIPAL SEWAGE REGULATION</u>
	<b>“process water”</b> means, in relation to a concrete products establishment, any water-based discharge produced in the course of manufacturing concrete products or ready-mix concrete at establishment premises, including such discharge resulting from the use of water in  (a) dust suppression at establishment premises, or  (b) cleaning establishment premises or any vehicle or other facility of the establishment, but does not include domestic sewage, as defined in the Sewerage System Regulation;	This defines what is included as process water at the facility.

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<b>“publish”</b> includes posting on a publicly accessible website maintained by the minister;	
	<b>“Sewerage System Regulation”</b> means the Sewerage System Regulation, B.C. Reg. 326/2004;	<u>Health Act -- SEWERAGE SYSTEM REGULATION</u>
	<b>“sludge”</b> means sand, gravel or cement deposits that accumulate in a settling pond or settling basin;	
	<b>“surface water”</b> has the same meaning as in the Sewerage System Regulation;	Includes fresh and marine water
	<b>“waste concrete”</b> means, in relation to an establishment, any sludge or concrete or both, which are produced in the operations of the establishment but are not used, recycled or reused in the manufacture of concrete products or ready mix concrete or for any other purpose.	This means any solid concrete based material that is not reused or recycled for a beneficial use, is considered waste
	<b>“Waste Discharge Regulation”</b> means the Waste Discharge Regulation, B.C. Reg. 320/2004.	<u>Environmental Management Act -- Waste Discharge Regulation</u>
1(2)	The following are prescribed as waste for the purposes of paragraph (g) of the definition of “waste” in the Act: (a) process water; (b) silo emissions described in section 4 of this code;	The rationale behind including a section defining “waste” was to ensure that the calculation and collection of fees is clearly required for (a) and (b), as opposed to other things that might also be determined to be waste such as “dust” and “establishment runoff”. Even though establishment runoff and dust are not specifically prescribed as wastes in the Code, this does not exclude them as wastes as defined in EMA, and the requirements established in the Code for these must still be met.
2	<b>Registration required</b>	
	A person must register with a director under Section 4 of the Waste Discharge Regulation for the purposes of an exemption in relation to this code	<p>A form will be available that specifies information that must be provided in order to be registered. The form can be submitted in paper or electronically. There is a flat fee of \$200 per year, regardless of the size of the plant.</p> <p><u>Environmental Management Act -- Waste Discharge Regulation</u></p> <p>If a facility has a permit, they do not need to register, even if the permit does not include establishment runoff or other issues covered by the code. If regional staff feel establishment runoff or other wastes covered by the code are a problem with a permit holder, that permit could be amended to cover the other wastes or the discharger could register under the Code. (Note, however, that if the quantity of a waste discharge increases by more than 10%, the code applies and the permit can't be amended, as per sections 14(3) and (4) or EMA).</p>

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
3	<b>Dust Control</b>	
	<p>A person operating an establishment</p> <p>(a) must take measures to control dust produced in the operation of the establishment, including any dust produced at the establishment premises by traffic, storage activities or the handling of materials</p> <p>(b) must ensure that such dust does not cause pollution.</p>	<p>In the event that an inspector has reasonable grounds to believe that pollution is being caused by dust he or she may take appropriate steps to require control or reduction of the pollution. This can take the form of verbal or written instructions, order or referral to CO service as per current enforcement procedures.</p> <p>If process water is used as dust suppression water it must be considered a waste. If this occurs, a facility must ensure that the resulting effluent is not allowed to be discharged to ground or surface waters or it will be subject to the requirements of the Code. If a facility does not hold an existing permit for such a discharge and a discharge to ground or surface water occurs, the facility would be required to either amend its existing effluent permit to include the discharge or suppression/dust control effluent because it is not considered a waste (if it qualifies as a minor amendment &lt;10%) or to register all applicable discharges under the Code.</p>
4	<b>Authorized discharge: silo emissions and air quality</b>	
4(1)	<p>If there is a silo at or on establishment premises, a person operating the establishment</p> <p>(a) must implement a particulate control system for the collection, control and suppression of emissions to the air from the silo, and</p> <p>(b) ensure that those silo emissions do not cause pollution.</p>	<p>Requires that the plant have some form of particulate capture system on the silo(s). Baghouses are the most common type, but other types of equipment such as scrubbers may also be used.</p>
4(2)	<p>The opacity of silo emissions discharged to the air must not exceed 10% averaged over 6 consecutive minutes.</p>	<p>Opacity standard is used for defining emission quality since it is relatively easy to make observations during daylight hours. Inspector training is readily available in BC.</p> <p>There are no volume limits for the discharges. There is no requirement that the operators of the plants be trained in opacity observations. This decision is left to the plant owner.</p>
4(3)	<p>The operator under subsection (1) must ensure that the particulate control system is inspected at least once per month to verify that it is in good working order.</p>	<p>The operator has to inspect the system at least once per month.</p>
5	<b>Disposal of waste concrete</b>	
	<p>A person operating an establishment must ensure that waste concrete is not disposed of in a manner that causes pollution.</p>	<p>We are attempting to promote reuse and recycling of as much of the waste solids generated at these plants. Most of the returned concrete is used in a beneficial manner now by producing lock blocks, paving stones or other products for sale. Whenever possible returned concrete is incorporated into the</p>



SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		next load produced at the plant. In many cases the solids removed from the wash ponds can be used to produce concrete or as fill in the yard. The only caveat is that the use cannot cause pollution.
<b>6</b>	<b>Authorized discharge: effluent and groundwater quality</b>	
6(1)	Process water of an establishment must not be discharged to the ground except in accordance with subsection (2).	The current practice of using infiltration ponds or soak away pits for disposal of effluent including surface runoff is acceptable as long as pollution does not occur.
6(2)	A person operating an establishment must ensure that its process water and establishment runoff do not cause pollution of any ground water.	If the MOE inspector has reasonable grounds to believe that pollution is occurring, he/she should take appropriate steps. Information Orders may also be considered.
<b>7</b>	<b>Authorized discharge: effluent and surface and marine water quality</b>	
7(1)	Process water of an establishment must not be discharged into surface water or marine water except in accordance with this section.	This section specifies the effluent quality for discharges to surface fresh or marine water. All samples are based on grab samples.
7(2)	<p>A person operating an establishment</p> <p>(a) must implement an effluent treatment system for the treatment of process water and establishment runoff discharged or flowing into surface water or marine water, and</p> <p>(b) must ensure that process water or establishment runoff that flows or is discharged into surface water or marine water</p> <ol style="list-style-type: none"> <li>i. has a pH level of no less than 6.5 and no more than 9,</li> <li>ii. contains no more than 75 mg/L total suspended solids,</li> <li>iii. contains no more than 15 mg/L total extractable hydrocarbons, and</li> <li>iv. is not acutely lethal to fish.</li> </ol>	<p>Requires that some form of effluent treatment system be implemented to ensure compliance.</p> <p>Both process and establishment runoff water must meet these requirements in order to remain in compliance with the Code of Practice.</p> <p>Ph levels come from the Aquatic Life Guideline for BC</p>

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
7(3)	The operator under subsection (2) must ensure that the effluent treatment system is inspected at least once a month to verify that it is in good working order.	A minimum monthly inspection frequency is required.
7(4)	For the purposes of subsection (2) (b) (iv), “ <b>acutely lethal to fish</b> ”, in respect of any process water or establishment runoff, means that the process water or establishment runoff, at 100% concentration, kills more than 50% of the rainbow trout in a 96 hour LC50 rainbow trout bioassay.	Definition of fish toxicity.
8	<b>Monthly effluent sampling and analysis</b>	
8(1)	A person operating an establishment must ensure that its process water and establishment runoff is sampled and analyzed at least once a month and in accordance with this section.	Monthly sampling is required if there is a discharge to the environment. If there is no discharge i.e. during dry summer months when it is possible to recycle all the water back into the process or use it for dust control, no sampling is required.  Where monthly sampling is required, it applies to the sampling of <u>treated</u> process water and establishment runoff.
8(2)	The sampling must be performed using (a) the procedures described in the British Columbia Field Sampling Manual: as amended from time to time, or (b) alternate procedures approved by a director.	<u>British Columbia Field Sampling Manual</u>  Provides some flexibility for Director to vary the sampling methods if appropriate.
8(3)	The analysis must be performed using (a) the procedures described in the British Columbia Environmental Laboratory Manual: as amended from time to time, or (b) alternate procedures approved by a director.	<u>British Columbia Laboratory Methods Manual</u>  Provides some flexibility for Director to vary the analytical methods if appropriate.
8(4)	A record of the sampling and analysis must be made and it must include all of the following information: (a) the name of the person performing the sampling and analysis; (b) the name of the person making the record; (c) the date of the sampling and the analysis; (d) the date on which the record is made; (e) the procedures used in performing the	Record keeping requirements for sampling, monitoring and analysis for Total Suspended Solids, pH and Total Extractable Hydrocarbons  Note: Sample analysis for acute fish toxicity is not required however the plant may choose to do this sampling in order to confirm that they are in compliance with the regulation.

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	sampling or analysis, as the case may be; (f) the results of the analysis with reference to the standards described in section 7 (2) (b) (i) to (iii).	
<b>9</b>	<b>System inspection records</b>	
9(1)	A person operating an establishment must ensure that a record is made for every inspection under section 4 (3) or 7 (3).	Record keeping required for inspections of pollution control works such as baghouses and effluent treatment systems.
9(2)	The record of inspection must include all of the following information: (a) the name of the person performing the inspection; (b) the date of the inspection; (c) the date on which the record is made; (d) the procedures used in performing the inspection; (e) the results of that inspection.	Details the information that needs to be collected and recorded.
<b>10</b>	<b>System failures</b>	
	(1) If the particulate control system or effluent treatment system of an establishment become inoperative for any reason, a person operating the establishment must immediately (a) take remedial action to eliminate or, if that is not possible, minimize harm to the environment, (b) notify a director, whether in person or by phone, fax or other electronic means, (c) take and comply with remedial action that may be required by the director, and (d) take action to make the system operative again.	This section specifies that if there is a problem with the pollution control works that renders them inoperative for any reason, notification of the Director (Regional Office) is required.  The plant must also take remedial action.  This section is equivalent to Emergency and Bypass clauses that were in permits.
<b>11</b>	<b>Keeping and providing establishment records</b>	
11(1)	A person operating an establishment must ensure that a record made under section 8 [ <i>monthly effluent sampling and analysis</i> ] or 9 [ <i>system inspection records</i> ] is kept at the establishment premises for a period of not less than 5 years from the date the record is made.	Specifies the need to retain records on site for 5 years

SECTION	CODE REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
11(2)	The operator must immediately provide to a director or an officer, on request, a record required to be kept under subsection (1).	The operator is required to immediately provide any and all records and documents requested by the Inspector.

## 6. Waste Discharge Regulation Requirements ~ Substitutions

	WASTE DISCHARGE REGULATION REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
7	Substituted Requirements Minister or Director may substitute a different requirement if specified conditions are met.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>Substitutions should be minimal and this provision used only if absolutely necessary.</li> <li>Site-specific requirements will normally be addressed in the notification (S. 9) and plan requirement (S.8) authorities</li> <li>A substitution application package may be found at: <a href="http://www.env.gov.bc.ca/epd/industrial/regs/codes/concrete/pdf/sub_appl_pkg.pdf">http://www.env.gov.bc.ca/epd/industrial/regs/codes/concrete/pdf/sub_appl_pkg.pdf</a></li> </ul>

## 7. Authorization Management

### Registration Form

[Registration Form](#)

### Fees

The annual registration fee is \$100 per media. There are two types of media, effluent (liquid) and air emissions. The minimum annual fee is \$100 with a maximum of \$200. There are no variable fees or an initial registration fee. Fees must be submitted with the registration form for processing to commence.

### Security

No securities are required.

## 8. Other Related Legislation

[Environmental Management Act](#)

[Waste Discharge Regulation](#)

## 9. Compliance Promotion

[Guide to the Code of Practice for the BC Concrete and Concrete Products Industry](#)

### Contacts & Resources


[BC Ready-Mixed Concrete Association](#)

## **10. Compliance and Enforcement**

The Ministry's Compliance and Enforcement Policy and Procedure should be consulted for compliance and enforcement activities.

## Appendix I

### Staff Training PowerPoint Presentation – 2008




**CONCRETE AND CONCRETE  
PRODUCTS INDUSTRY  
CODE OF PRACTICE**

STAFF TRAINING 2008




**The Code**

- Is a Minister's Regulation
- Takes the place of new permits or approvals for authorization for discharge to environment
- Covers air, effluent and solid waste discharges
- Very low risk type of industry



**Permit Status**

- If operation already has a permit or permits, it may retain those permits until a major amendment is needed (10% increase in discharge), new silo is good example
- If a new facility is constructed, the Code of Practice applies



**What types of Facilities**

- Ready mix plants
- Operations that manufacture concrete products such as concrete beams and structural products, septic tanks,
- Does not include home based businesses, hobby, artisans educational facilities

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment

## REGISTRATION and FEE

- Instead of application for permits, the mechanism now is Registration
- Will be available either as paper version or online on Ministry website
- Simple form to provide basic information to government
- Flat fee of \$200 per year per facility

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment


## AIR EMISSIONS CODE REQUIREMENTS

- Discharge for silo is limited to opacity of 10%
- Operator must inspect particulate control equipment (baghouse) at least once per month
- Facility must control fugitive dust so that pollution does not occur

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment


### Example of 0% opacity



BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment

### Opacity greater than 10%



BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment


## SOLID WASTE CODE REQUIREMENTS

- Any solid waste must be disposed of in a manner that does not cause pollution
- Solid waste includes sludge from settling ponds as well as returned concrete
- Best practices indicate that much of the material can be recycled at the facility or made into alternate products such as lock blocks or patio pavers

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of Environment


### Example of recycle of returned concrete



BRITISH COLUMBIA  
The Best Place on Earth

Ministry of  
Environment

## USE OF POND CLEANOUT MATERIAL AT OFF SITE LOCATION



BRITISH COLUMBIA  
The Best Place on Earth

Ministry of  
Environment

## EFFLUENT CODE REQUIREMENTS

- Effluent means process water that cannot be reused at the facility and needs to be disposed of to the environment
- Includes water from ponds, truck washing, dust control and contaminated surface water resulting from precipitation
- Ground disposal systems (seepage ponds) are still accepted as long as there is no pollution of the groundwater

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of  
Environment

## EFFLUENT (continued)

- Discharge to surface water
- Includes both fresh and marine water
- Must comply with the following:
  - pH range 6.5 to 9
  - Max of 75 mg/l total suspended solids
  - Max of 15 mg/l total extractable hydrocarbons
- Not be acutely lethal to fish
- Operator must inspect treatment systems at least once per month

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of  
Environment

## MONITORING and RECORDS

- Sample effluent for pH, TSS and TEH once per month
- Fish toxicity sampling is not required
- Keep records of inspections and sampling
- No need for facility staff to be certified for opacity observations but should know the concepts
- Need to keep records available to MOE staff on request for at least 5 years

BRITISH COLUMBIA  
The Best Place on Earth

Ministry of  
Environment

## EMERGENCY REQUIREMENTS

- If treatment systems become inoperative for any reason
- Take remedial action
- Notify MOE –phone, FAX, email
- Do what the MOE instructs
- Fix the problem

BRITISH COLUMBIA  
The Best Place on Earth


Ministry of  
Environment

## Orders

- If during inspection of a site, either as part of regularly scheduled inspections or in response to complaints, the inspector has reasonable grounds to believe that pollution is or could occur, the remedy is the use of a pollution abatement or prevention order.
- If uncertain if pollution is occurring, an information order could be used to form basis for abatement or prevention order



Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	Section	Subsection
		2.15	2.15.01

**Name of Policy:** **Code of Practice for the Slaughter and Poultry Processing Industries – Policy and Procedures for Implementation**

**Replaces:** This Policy is new.

**Application:** This policy applies to staff engaged in administering the Code of Practice for the Slaughter and Poultry Processing Industries (Code).

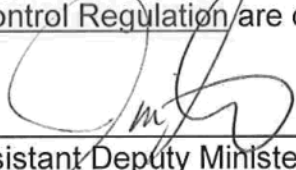
**Purpose:** The purpose of the implementation policy and procedures is to assist ministry staff in administering the Code.

**Policy Statement:** On July 4, 2007, the Ministry established the Code to set environmental requirements for waste discharges from the slaughter and poultry processing industries. The Code outlines requirements for wastewater discharges, solid or semi-solid waste disposal and air emissions and provides consistent requirements across the province to protect the environment and public health.

The attached document provides guidance to ministry staff for administering the Code by providing clarification of legal requirements and training information.

**References and Relationships:** A Technical Guideline and a number of Factsheets have been developed to assist users in understanding and complying with the requirements under the Code. The relationships to the Organic Matter Recycling Regulation and the Agricultural Waste Control Regulation are outlined in this manual.

**Approval:**

  
Assistant Deputy Minister  
Environmental Protection Division


**Date:** July 26/2011

**Contact Person:** Margaret Crowley, Environmental Management Officer  
Environmental Standards Branch

Effective Date if different than Approval Date:

Original Date of Policy:

Date of Policy Amendment(s):

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	Section	Subsection
		2.15	2.15.01

**Name of Policy:** **Code of Practice for the Slaughter and Poultry Processing Industries – Policy and Procedures for Implementation**

**Replaces:** This Policy is new.

**Application:** This policy applies to staff engaged in administering the Code of Practice for the Slaughter and Poultry Processing Industries (Code).

**Purpose:** The purpose of the implementation policy and procedures is to assist ministry staff in administering the Code.

**Policy Statement:** On July 4, 2007, the Ministry established the Code to set environmental requirements for waste discharges from the slaughter and poultry processing industries. The Code outlines requirements for wastewater discharges, solid or semi-solid waste disposal and air emissions and provides consistent requirements across the province to protect the environment and public health.

The attached document provides guidance to ministry staff for administering the Code by providing clarification of legal requirements and training information.

**References and Relationships:** A Technical Guideline and a number of Factsheets have been developed to assist users in understanding and complying with the requirements under the Code. The relationships to the Organic Matter Recycling Regulation and the Agricultural Waste Control Regulation are outlined in this manual.

**Approval:** \_\_\_\_\_ **Date:** \_\_\_\_\_  
Assistant Deputy Minister  
Environmental Protection Division

**Contact Person:** Margaret Crowley, Environmental Management Officer  
Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

# **IMPLEMENTATION POLICY AND PROCEDURES GUIDE**

**FOR THE**

**CODE OF PRACTICE FOR THE  
SLAUGHTER AND POULTRY PROCESSING INDUSTRIES**

**JUNE 2011**

**VERSION 4**

# CODE OF PRACTICE FOR THE SLAUGHTER AND POULTRY PROCESSING INDUSTRIES

## IMPLEMENTATION POLICY AND PROCEDURES GUIDE

### Contents

1.	Purpose of this Document .....	6
2.	Purpose of the Code .....	6
3.	Division Contact .....	6
4.	Background .....	6
5.	Code Requirements ~ Policy and Clarification .....	7
1	Definitions .....	7
2	Registration Information .....	12
3	Records and plans .....	14
4	Exception .....	14
5	Discharge by category A facilities .....	15
6	Discharge by category B facilities .....	15
7	Subsurface discharge of wastewater .....	15
8	Wastewater irrigation .....	17
9	Sampling and analysis .....	18
9.1	Discharge or disposal of solid waste or semi-solid waste .....	19
10	Landfill site .....	20
11	Landfill use .....	21
12	Vector Control Plan .....	21
13	Records of use .....	22
14	Landfill closure .....	22
15	Incinerator sites .....	23
16	Operation of incinerators .....	23
17	Loading Rates .....	23
18	Emissions limits .....	23
19	Stack monitoring and record keeping .....	24
20	Storage requirements of solid waste and semi-solid waste before composting .....	24
21	Amount and type of solid waste and semi-solid waste that may be composted .....	25
22	Composting requirements .....	26
23	Time and temperature requirements .....	27
24	Storage requirements for compost product .....	28
25	Land application .....	29
26	Land application – nutrient management plan .....	30
27	Land application – control measures .....	32
28	Notification of land application .....	33
29	Notification of change .....	35
6.	Waste Discharge Regulation Requirements ~ Substitutions .....	36

7.	Authorization Management.....	36
	Registration Form .....	36
	Notification Form.....	36
	Fees 36	
	Security .....	36
8.	Other Related Legislation .....	37
9.	Compliance Promotion .....	37
	Best Management Practices.....	37
	Contacts & Resources .....	37
10.	Compliance and Enforcement.....	37
	Appendix 1 - Staff Training PowerPoint Presentations .....	37

## 1. Purpose of this Document

This document is for guidance purposes only. The current legislation and regulations take precedence over any information provided.

## 2. Purpose of the Code

The intent of this code of practice is to set environmental requirements for waste discharges from the slaughter and poultry processing industries. The code outlines requirements for wastewater discharges, solid or semi-solid wastes disposal and air emissions.

A person registered and complying with the requirements in this code would be exempt from the prohibition against discharging waste to the environment from a prescribed industry as per Section 6(2) of the *Environmental Management Act* (EMA).

## 3. Division Contact

Margaret Crowley, Environmental Management Officer  
Agricultural Waste Specialist  
Environmental Standards Branch  
Third Floor, 2975 Jutland Road, Victoria, BC V8T 5J9  
[Margaret.Crowley@gov.bc.ca](mailto:Margaret.Crowley@gov.bc.ca) Phone: (250) 387-6018

## 4. Background

The slaughter and poultry processing industries produce liquid waste, e.g., wastewater and industrial cleaners, semi-solid waste, e.g., blood, fats, oil, grease if separated from the wastewater, and solid wastes, e.g., feces, feathers, hides, inedible materials, offal, bones and carcasses. These wastes can potentially be disposed of by various methods including subsurface wastewater discharges, or composting, landfilling, and incineration of semi-solid and solid wastes.

Over the past 20 years the Ministry of Environment (MOE) has issued numerous permits and approvals for the slaughter and poultry processing industries. This code eliminates the administrative processes and costs associated with issuing permits and approvals.

This code applies to operators that slaughter **and** sell poultry or red meat for human consumption **and** have a waste discharge to the environment that is not otherwise legally authorized (e.g., if the liquid waste is discharged to an approved municipal waste system, it does not require authorization under this Code).

## 5. Code Requirements ~ Policy and Clarification

	CODE REQUIREMENT	POLICY / CLARIFICATION
PART 1 ~ DEFINITIONS		
<b>1</b>	<b>Definitions</b>	
	<p><b>“200-year flood plain”</b> means land where the chance of a flood occurring in any given year is at least one in two hundred;</p>	<p>The 200-year flood plain means land where the chance of a flood occurring in any given year is at least one in two hundred.</p> <p>Information on floodplain mapping in British Columbia can be obtained from the Ministry of Environment Water Stewardship website:  <a href="http://www.env.gov.bc.ca/wsd/data_searches/fpm/">http://www.env.gov.bc.ca/wsd/data_searches/fpm/</a></p>
	<p><b>“Act”</b> means the <i>Environmental Management Act</i></p>	
	<p><b>"agricultural operations"</b> means operations or activities carried out on farms for purposes of agriculture, including, but not limited to</p> <p>(a) producing or keeping of livestock, poultry, farmed game, fur bearing animals, crops, grain, vegetables, milk, eggs, honey, mushrooms, horticultural products, trees, tree fruits or berries, and</p> <p>(b) operating machinery and equipment for agricultural waste management or for applying fertilizers and soil conditioners;</p>	<p>Definition same as in the Waste Discharge Regulation.</p>
	<p><b>“agronomically sound rate”</b> relative to nutrient application, means a rate of application that does not exceed crop nutrient requirements and avoids application of nutrients in a manner that penetrates into the groundwater or below the area where the nutrients are used by the crop;</p>	<p>This term is used in Section 8(5) of this Code.</p> <p>The agronomically sound rate is not required to be determined by a qualified professional.</p> <p>Refer to the <a href="#">Technical Guidance Document</a>.</p>
	<p><b>"average precipitation"</b>, for an area, means the most recently available average monthly precipitation figures published for the area by Environment Canada;</p>	<p>This information can be found at the following link:  <a href="http://www.climate.weatheroffice.gc.ca/climate_normals/stnselect_e.html">http://www.climate.weatheroffice.gc.ca/climate_normals/stnselect_e.html</a></p>



	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p><b>“category A facility”</b> means a facility that</p> <p>(a) discharges less than 5 cubic metres of wastewater per day, and</p> <p>(b) is either</p> <ol style="list-style-type: none"> <li>an establishment where slaughter industry processes are carried out, producing less than 60 tonnes live weight killed red meat per year, or</li> <li>an establishment where poultry processing industry processes are carried out, producing less than 40 tonnes live weight killed poultry meat per year;</li> </ol>	<p>Refer to the <a href="#">Technical Guidance Document</a> for further information on acceptable methods to determine amount of wastewater.</p> <p><u>Quick guidelines include:</u></p> <ul style="list-style-type: none"> <li>5 cubic meters equals 5,000 liters or approximately 1,100 Imp. gallons</li> <li>60 tonnes live weight killed (LWK) red meat is approximately 95 to 99 cows.</li> <li>40 tonnes live weight killed (LWK) poultry is approximately 18,000 to 20,000 birds.</li> </ul>
	<p><b>“Category B facility”</b> means a facility that</p> <p>(a) discharges 5 or more cubic meters of wastewater per day, or</p> <p>(b) is either</p> <ol style="list-style-type: none"> <li>an establishment where slaughter-industry processes are carried out, producing 60 tonnes or more live weight killed red meat per year, or</li> <li>an establishment where poultry-processing industry processes are carried out, producing 40 tonnes or more live weight killed poultry per year:</li> </ol>	As above.
	<b>"compost product"</b> means composted solid waste or semi-solid waste;	
	<b>"composting"</b> means the controlled biological oxidation and decomposition of organic matter in accordance with the time and temperature requirements specified in Division 3 of Part 4;	
	<b>“domestic sewage”</b> has the same meaning as in the Municipal Sewage Regulation, B.C. Reg. 4/2010;	Excerpt from <a href="#">Municipal Sewage Regulation</a> : <b>"domestic sewage"</b> includes (a) human excreta, and (b) waterborne waste from the preparation and consumption of food and drink, dishwashing, bathing, showering, and

	CODE REQUIREMENT	POLICY / CLARIFICATION
		general household cleaning and laundry, except waterborne waste from a self-service laundromat.
	<b>“farmer”</b> means a person who operates a farm on land classified as a farm under the <i>British Columbia Assessment Act</i> ;	See the definition under the <i>BC Assessment Act</i> at following link: <a href="http://www.qp.gov.bc.ca/statreg/stat/A/96020_01.htm">www.qp.gov.bc.ca/statreg/stat/A/96020_01.htm</a>
	<b>"foreign matter"</b> means a contaminant that is not readily decomposed during the composting process and includes demolition waste, metal, glass, plastic, rubber and leather, but does not include silt, sand or rocks, stones or gravel less than 2.5 centimetres in diameter, or other similar mineral materials naturally found in soil;	
	<b>“incinerator”</b> means an incinerator used to dispose of solid waste, semi-solid waste or compost product;	<u>Waste Discharge Regulation</u> (WDR) Schedule 1 definitions:  <b>"burning"</b> means the combustion of material without using a stack or chimney to vent the emitted products of combustion to the atmosphere;  <b>"incineration"</b> means the controlled combustion or thermal decomposition of material using a stack or chimney to vent the emitted products of the combustion or thermal decomposition to the atmosphere, and includes pyrolysis and gasification.
	<b>"land application"</b> means the application to land of compost product;	
	<b>“landfill”</b> means a landfill, burial site or trench for the final disposal of solid waste, semi-solid waste or compost product and does not include a landfill for the discharge of any waste that contains or is mixed with domestic or municipal refuse;	
	<b>"leachate"</b> means (a) effluent originating from solid waste or semi-solid waste being received,	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>processed, composted, cured or stored on a farm,</p> <p>(b) effluent originating from compost product being received, processed, stored or applied to land on a farm, or</p> <p>(c) precipitation, storm water, equipment wash water or other water which has come into contact with, or mixed with, solid waste, semi-solid waste or compost product being received, processed, composted, cured or stored;</p>	
	<b>“low-permeability soil”</b> means soil with hydraulic conductivity of $1 \times 10^{-6}$ cm/s;	An example of a low-permeability soil is clay.
	<b>“poultry processing industry”</b> has the same meaning as in Schedule 2 to the Waste Discharge Regulation;	<p>WDR Schedule 2 definitions:</p> <p><b>“poultry processing industry”</b> means establishments that are engaged in processing poultry for human consumption, but does not include establishments included in the definition of “meat by-product processing industry” in S. 2 of Schedule 1;</p> <p><b>“processing”</b> includes holding, killing, defeathering, deboning, eviscerating, chilling, cooking, packaging, curing, smoking and canning.</p> <p><b>“poultry”</b> includes domesticated chickens, turkeys, ducks, geese, guinea fowl, ratites, squab and pheasants. (Ratites include ostriches, emus, cassowaries, rheas, and kiwis.</p> <p><u>Note:</u> This <i>Code</i> only applies if the animal is processed for human consumption. If the animal is processed for other purposes (e.g., pet food) the <i>Code</i> does not apply. For those cases, the general EMA and WDR requirements for waste discharges apply (i.e., may need to apply for a permit).</p>
	<b>“processing waste”</b> means wastewater, solid waste and semi-solid waste;	
	<b>“proponent”</b> means a person who intends to	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	land apply compost product and provides notification under section 28 or a notification of change under section 29;	
	<p><b>“qualified professional”</b>, in relation to a duty or function under this code, means an individual who</p> <p>(a) is registered in British Columbia with a professional organization, is acting under that organization’s code of ethics, and is subject to disciplinary action by that organization, and</p> <p>(b) through suitable education, experience accreditation and knowledge, may reasonably be relied on to provide advice within his or her area of expertise, which area of expertise is applicable to the duty or function;</p>	<ul style="list-style-type: none"> <li>Both conditions (a) and (b) need to be met;</li> <li>Other professionals may qualify; use professional judgment as to education and experience qualifications;</li> <li>Qualified Professionals (QP’s) are expected to be members of a professional organization (e.g., the <u>B.C. Institute of Agrologists</u>, the <u>Association of Professional Engineers and Geoscientists of BC</u>, or the <u>Applied Science Technologists &amp; Technicians of British Columbia</u>)</li> </ul>
	<b>"semi-solid waste"</b> means blood, fat, oil and grease that is separated from processing water;	If separated during slaughtering process and allowed to gel;
	<b>“slaughter industry”</b> has the same meaning as in Schedule 2 to the Waste Discharge Regulation;	<p><b>"slaughter industry"</b> means establishments engaged in processing red-meat animals for human consumption, but does not include establishments included in the definition of "meat by-product processing industry" in S. 2 of WDR Schedule 1;</p> <p><b>“red-meat animal”</b> includes cattle, swine, sheep, fallow deer, farmed game and farmed bison. Also horses.</p>
	<b>“solid waste”</b> includes feathers, hides, bones, carcasses, manure and other non-liquid wastes produced by the slaughter industry or the poultry processing industry;	This definition includes non-animal waste (e.g., rags, plastics, etc.) that is used by the industry, but it is not the intention that these non-animal wastes be included in landfills.
	<p><b>“specified risk material”</b> means</p> <p>(a) The skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle aged 30 months or older, and</p> <p>(b) the distal ileum of cattle;</p>	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<b>“vector”</b> means an organism that is capable of transmitting a pathogen from one facility, waste source, product or organism to another facility, waste source, product or organism;	This includes flies, rodents, domestic pets, farm animals, birds and other wildlife, e.g., wolves, raccoons, bears;
	<b>“Waste Discharge Regulation”</b> means the Waste Discharge Regulation, B.C. Reg. 320/2004.	
	<b>“wastewater”</b> means processing water, which may contain blood, fat, oil, grease, industrial cleaners and other liquid wastes produced by the slaughter industry or the poultry processing industry;	
	<b>“watercourse”</b> means a place that perennially or intermittently contains surface water, including (a) a lake, river, creek, canal, spring, ravine, swamp, saltwater marsh or bog, and (b) a drainage ditch leading into anything referred to in paragraph (a).	For dischargers to marine waters, refer to the federal Meat and Poultry Products Plant Liquid Effluent Regulations at: <a href="http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._818/index.html">http://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 818/index.html</a>
PART 2 ~ GENERAL		
<b>2 Registration Information</b>		
2(1)	Subject to subsection (2), a person must register under section 4 of the Waste Discharge Regulation for the purpose of an exemption under that section in relation to this code, and must include, with the other information required under 4(2) of that regulation, the following information: (a) the annual production, in tonnes of live weight killed per calendar year, of red meat and of poultry products by the person’s facility; (b) the maximum amount of wastewater discharged from the person’s facility, in cubic meters per day; (c) Repealed. [B.C. Reg. 406/2007, s. 2.] (d) a list of the following information or plans	Registration forms are available on the web page or from MOE offices.  In the case of mobile facilities, it may be the docking station operator or mobile facility operator who registers. In most cases, it will be the docking station owner because mobile operators would have to register each site where they operate.  (a) Annual production can be estimated based on # of animals processed;  (b) Maximum amount of wastewater can be estimated based on volume of water used per animal processed, by dividing volume of a full tank by the number of days taken to fill it, or by flow rate or flow meter

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>that have been completed as required under this code:</p> <ul style="list-style-type: none"> <li>(i) a nutrient management plan under section 8(3) or 26;</li> <li>(ii) a groundwater monitoring and assessment plan under section 10 (2) (d);</li> <li>(iii) a vector control plan under section 12;</li> <li>(iv) a landfill closure plan under section 14 (2) (b).</li> </ul>	<p>readings.</p> <p>(c) This subsection was repealed in an amendment because it was requiring duplicate information.</p> <p>(d) Plans are <u>not submitted</u> to MOE. They are to be kept for 10 years and must be made available to an officer within two days of a request. For a higher risk site, e.g., landfilling more than 5,000 kg/ha/yr, or in a high precipitation area, it is recommended the EPO request and review the groundwater monitoring and assessment plan.</p> <p>Registrations are regulated under Section 4 of the <u>Waste Discharge Regulation</u>, including the requirement to provide information and the authority of the Director to request additional information (Section 4(2)(l)).</p> <p>WDR Section 4(4) restricts any discharge until 45 days after the completed registration is delivered to MOE Permit Authorization and fee is paid, unless the director notifies that the effective date of the registration is earlier than the 45 days.</p> <p>WDR Section 4(5)(b) requires the registrant to inform the director of any changes, or cessation of operation, within 30 days.</p> <p>Failure to notify the director results in the registration being ineffective (i.e., they lose their WDR discharge exemption per Section 4(1)), and continued operation would be a contravention of the WDR.</p>
2(2)	<p>A person engaged in the slaughter industry or the poultry processing industry is not required to register under section 4 of the Waste Discharge Regulation for the purpose of an exemption under that section in relation to this code if</p>	<p>This provision provides an exemption for personal consumption, i.e., a person who slaughters his/her own stock for personal use does not have to register under this code, as long as there is no sale of the product.</p> <p>There is an exemption for farmers who</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>(a) the products the person produces from either of those industries are for the person's personal use and not for sale, or</p> <p>(b) the person</p> <p>(i) carries out an agricultural operation, and</p> <p>(ii) produces</p> <p>(A) less than 5 tonnes of live weight killed red meat per year if engaged in the slaughter industry, or</p> <p>(B) less than 1.5 tonnes of live weight killed poultry per year if engaged in the poultry processing industry.</p>	<p>slaughter small volumes; these are small volumes with low risk. They must follow the Agricultural Waste Control Regulation.</p> <p>5 tonnes (5,000 kgs.) is approximately 8 cows, 179 goats, 91 sheep, or 50 hogs.</p> <p>1.5 tonnes (1,500 kgs.) is approximately 708 chickens or 136 turkeys.</p>
<b>3 Records and plans</b>		
3	<p>Records required to be kept under this code and plans referred to in section 2(1)(d) must be</p> <p>(a) retained for at least 10 years, and</p> <p>(b) made available for inspection by an officer within 2 days of a request by the officer to inspect those records.</p>	<p>In addition to the plans required by S. 2(1)(d), records are required to be maintained under S. 5(c), 9(3), 13, and 19(4).</p>
<b>4 Exception</b>		
4	<p>A person engaged in the slaughter industry or the poultry processing industry is not required to comply with Part 3 or 4 if</p> <p>(a) the products the person produces from either of those industries are for the person's personal use and not for sale, or</p> <p>(b) the person</p> <p>(i) carries out an agricultural operation, and</p> <p>(ii) produces</p> <p>(A) less than 5 tonnes of live weight killed red meat per year if</p>	<p>Personal consumption, i.e., a farmer can slaughter his/her own stock for personal use, so long as there is no sale of the product.</p> <p>There is an exemption for farmers who slaughter small volumes which are low risk. They must follow the Agricultural Waste Control Regulation.</p> <p>5 tonnes (5,000 kgs.) is approximately 8 cows, 179 goats, 91 sheep, or 50 hogs.</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>engaged in the slaughter industry, or</p> <p>(B) less than 1.5 tonnes of live weight killed poultry per year if engaged in the poultry processing industry.</p>	<p>1.5 tonnes (1,500 kgs.) is approximately 708 chickens or 136 turkeys.</p>
PART 3 ~ DISCHARGE OF WASTEWATER		
<b>5 Discharge by category A facilities</b>		
5	<p>A person operating a category A facility</p> <p>(a) must not discharge wastewater directly into groundwater or into a watercourse,</p> <p>(b) must take measures to control fugitive dust and odour caused by the operation of the category A facility, and</p> <p>(c) must keep records of the following information:</p> <p>(i) the amount of wastewater discharged, in cubic meters per day, from the category A facility for any period during which there is a discharge, and</p> <p>(ii) production volumes of red meat or poultry, in tonnes of live weight killed per year.</p>	<p>These are the requirements for smaller operations (Category A), which are still subject to EMA 6(4): a person must not introduce waste into the environment in such a manner or quantity as to cause pollution.</p> <p>There is no requirement as to how they discharge.</p> <p><u>Please note:</u> an EPO could use the general power of the director (EMA Section 77(1)) to require further information.</p>
<b>6 Discharge by category B facilities</b>		
6	<p>A person operating a category B facility</p> <p>(a) must comply with section 5, and</p> <p>(b) must ensure that a discharge of wastewater from the category B facility is carried out in accordance with either section 7 or 8, as applicable.</p>	<p>These are the wastewater requirements for larger operations (Category B). In addition to the basic requirements in Section 5, Category B operations have the option of subsurface discharge (section 7) or irrigation (section 8).</p>
<b>7 Subsurface discharge of wastewater</b>		
7(1)	<p>Wastewater discharged into the subsurface of the ground from a category B facility must not surface and must not cause the groundwater</p>	<p><u>Fact Sheet 1 - Liquid Waste</u></p> <p>No testing is required; it simply must be a</p>



	CODE REQUIREMENT	POLICY / CLARIFICATION
	table to be raised to the surface.	properly functioning system, e.g., a tile field. If the ground above the tile field is saturated, then the tile field is not properly functioning. They may not have adequate pre-treatment or treatment, resulting in blocking of the drain tiles.
7(2)	A person discharging wastewater under subsection (1) must conduct inspections of the discharge site to ensure compliance with that subsection.	Operator is expected to inspect tile field to ensure effluent is not surfacing or causing the groundwater table to rise. The onus is on the operator to be regularly inspecting (and recording when, the condition of the field, etc.).
7(3)	The subsurface wastewater disposal system of a category B facility that discharges wastewater into the subsurface of the ground for the first time after September 30, 2007 must be designed by a qualified professional and installed according to that design.	Systems installed prior to September 30, 2007, and which are functioning according to Section 7(1), do not require any work by a QP. However, after September 30, 2007, all category B subsurface wastewater disposal systems must be designed by a QP and installed accordingly.
7(4)	<p>A category B facility that has discharged wastewater contrary to subsection (1) may resume discharging wastewater into the subsurface of the ground only if</p> <p>(a) the discharge is carried out in accordance with a revised or new design remedying the subsurface wastewater disposal system, and</p> <p>(b) the design is prepared by a qualified professional.</p>	If the system fails, (i.e., causes wastewater to surface or the groundwater table to rise to the surface), the discharge is no longer authorised. A new design must be developed by a QP to remedy the problem and the new design must be in place before the discharge can resume.
7(5)	<p>A person operating either a category A facility or a category B facility may discharge wastewater containing domestic sewage into the subsurface of the ground if</p> <p>(a) the domestic sewage source is from the facility,</p> <p>(b) the discharge complies with subsection (1),</p> <p>(c) the person complies with subsection (2), and</p>	<p>This provision authorizes the discharge of domestic sewage with the slaughterhouse wastewater, if requirements a, b, c, and d are met.</p> <p><u>Note:</u> the authorization is only for domestic sewage from washrooms located within the slaughter facility and does not include domestic waste from an attached house, restaurant, or business. Domestic sewage discharges usually fall under the Ministry of</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	(d) the subsurface disposal system is designed by a qualified professional and installed according to that design.	Environment's Municipal Sewage Regulation or the Ministry of Health's Sewerage System Regulation.
<b>8 Wastewater irrigation</b>		
8(1)	Wastewater must not be discharged on ground with agricultural crops intended for human consumption.	This subsection applies to both category A and category B facilities. Legal interpretation is that, since it doesn't state a category specifically, and the rest of the subsections do state the category specifically, in this absence, it applies to both categories.
8(2)	<p>Except for wastewater discharged by a farmer under subsection (5), wastewater discharged from a category B facility onto the surface of the ground to irrigate that ground must meet all of the following conditions:</p> <ul style="list-style-type: none"> <li>(a) it must not contain more than 10 mg per litre of fat, oil or grease;</li> <li>(b) it must not exceed a carbonaceous biochemical oxygen demand concentration of 45 mg per litre;</li> <li>(c) it must not contain more than 60 mg per litre of total suspended solids;</li> <li>(d) it must not contain more than total coliform organisms of 1,000 per 100 ml of wastewater and total fecal organisms of 200 per 100 ml of wastewater.</li> </ul>	Prior to any discharge via spray irrigation, or any other discharge on to the surface of the ground, the operator must ensure that effluent standards listed in Section 8(2) are met. Also see sampling and analysis requirements in Section 9.
8(3)	<p>A person intending to discharge wastewater from a category B facility under subsection (2) must ensure that</p> <ul style="list-style-type: none"> <li>(a) a qualified professional designs a nutrient management plan for the beneficial use of treated wastewater or irrigation, and</li> <li>(b) the nutrient management plan referred to in paragraph (a) is carried out as designed.</li> </ul>	Prior to any discharge via spray irrigation, or any other discharge on to the surface of the ground (S. 8(2)), the operator must ensure that a nutrient management plan (NMP) has been prepared by a QP and that spraying is carried out according to that plan.
8(4)	A plan referred to in subsection (3) (a) must	This sets out requirements for what is included

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>include</p> <p>(a) a description of the public access to and use of the ground, and</p> <p>(b) an analysis of the effect on the ground of the wastewater discharged on it from the category B facility.</p>	<p>in an NMP, as well as the recommendations in the Nutrient Management Plan Guidelines.</p>
8(5)	<p>Wastewater discharged by a farmer onto the surface of the farmland to irrigate that land</p> <p>(a) must be discharged at an agronomically sound rate, and</p> <p>(b) must not exceed 100 cubic meters annually.</p>	<p>This provision is to allow operations, located on a farm, to land apply a small portion of their wastewater without any treatment, sampling or monitoring, and applies to both Category A &amp; B facilities. Typically, this will have blood mixed with the wastewater from the kill floor and may contain feces.</p> <p><u>Note</u> that there is no specific minimum area requirement for the application of the prescribed maximum amount of discharged wastewater; however it must be discharged at an agronomically sound rate to meet the requirements of this section.</p>
8(6)	<p>A person operating either a category A facility or a category B facility may discharge wastewater containing domestic sewage onto the surface of the ground if</p> <p>(a) the domestic sewage source is from the facility,</p> <p>(b) the discharge complies with subsections (1) and (2), and</p> <p>(c) the person complies with subsection (3) and (4).</p>	<p>See section <u>7(5)</u> above.</p>
<b>9     <i>Sampling and analysis</i></b>		
9(1)	<p>To ensure compliance with section 8(2), a person discharging wastewater from a category B facility under that section must ensure that sampling and analysis of the wastewater are carried out</p> <p>(a) before the wastewater is discharged, and</p> <p>(b) every two weeks during the period when</p>	<p>To ensure that the wastewater used for irrigation meets the standards stated in section 8(2), the person must take samples and have them analyzed.</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	the wastewater is being discharged.	
9(2)	<p>The sampling and analysis required under subsection (1) must be carried out</p> <p>(a) in accordance with the requirements of the latest version of the Field Sampling Manual issued by the ministry, and</p> <p>(b) by a laboratory registered with the Canadian Association for Environmental Analytical Laboratories.</p>	<p>BC MOE Field Sampling Manual:  <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/field_man_03.html">http://www.env.gov.bc.ca/epd/wamr/labsys/field_man_03.html</a></p> <p>Canadian Association for Environmental Analytical Laboratories:  <a href="http://www.caeal.ca/">http://www.caeal.ca/</a></p>
9(3)	A person referred to in subsection (1) must keep records of the results of the sampling and analysis carried out under this section.	Must keep records for 10 years and make records available within two days as per S. 3.
<b>PART 4 ~ DISCHARGE AND DISPOSAL OF SOLID WASTE AND SEMI-SOLID WASTE</b>		
Division 0.1 – General Application		
<b>9.1 Discharge or disposal of solid waste or semi-solid waste</b>		
9.1	<p>A person engaged in the slaughter industry or the poultry processing industry and registered under section 4 of the Waste Discharge Regulation who introduces solid waste or semi-solid waste into the environment must discharge or dispose of the solid waste or semi-solid waste by</p> <p>(a) disposing of the solid waste of semi-solid waste in a landfill in accordance with Division 1 of this part,</p> <p>(b) incinerating the solid waste of semi-solid waste in accordance with Division 2 of this part, or</p> <p>(c) composting the solid waste of semi-solid waste in accordance with Division 3 of this part and doing one of the following:</p> <p>(i) disposing of the compost product in a landfill in accordance with Division 1 of this part;</p> <p>(ii) incinerating the compost product in accordance with Division 2 of this</p>	<p><b>Amendment:</b> an option to compost solid or semi-solid wastes under the Code was added on December 23, 2010, in response to industry's request.</p> <p><u>Please note:</u> if the discharge is to an existing authorized discharge location off-site, e.g., a municipal landfill, then it would not need to be registered as a discharge at this site.</p> <p><u>Fact Sheet 2 - Landfilling Solid and Semi-solid Wastes</u></p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	part; (iii) applying the compost product to land in accordance with Division 3 of this Part.	
Division 1 - Landfills		
<b>10      <i>Landfill site</i></b>		
10(1)	<p>Subject to subsection (3), a landfill</p> <p>(a) must not be more than 2 m wide,</p> <p>(b) must be located</p> <ul style="list-style-type: none"> <li>(i) on a site that has a slope of less than 0.5%,</li> <li>(ii) at least 1 m below ground level,</li> <li>(iii) within a property so that there is at least 50 m between the property line and the boundary of the landfill, and</li> <li>(iv) so that there is at least 4 m between the seasonal high water table beneath the landfill and the bottom of the landfill, and</li> </ul> <p>(c) must not be located within</p> <ul style="list-style-type: none"> <li>(i) 100 m of the nearest surface water,</li> <li>(ii) the 200-year flood plain,</li> <li>(iii) 100 m of unstable or potentially unstable terrain</li> <li>(iv) 30 m of another landfill, either closed or currently in use, or</li> <li>(v) 300 m of residence, hotel, restaurant, school, church, public park, water supply well, or water supply intake.</li> </ul>	<p>10(1) gives the operator of a facility, the option of landfilling &lt;5,000 kg/ha/year, on site, with no QP involvement.</p> <p>10(1) describes the design and setback requirements for a small landfill (trench/hole in the ground).</p> <ul style="list-style-type: none"> <li>- 2 m wide - reduces the exposed area and is about the width of a tractor bucket;</li> <li>- 0.5% slope is a relatively flat area (a rise of 6 inches in 100 feet);</li> <li>- 1m below the ground reduces the exposure of the waste;</li> </ul> <p>Groundwater records can be used to estimate seasonal high water tables.</p> <p>Examples of unstable terrain are cliffs, slide areas, gullies, etc.</p> <p>Once the landfill (trench/hole) has been closed, the next trench must be at least 30m away.</p>
10(2)	<p>A person proposing to establish a landfill</p> <p>(a) for the disposal of more than 5,000 kg/ha/year of solid waste, semi-solid waste, compost product or any combination of solid waste, semi-solid waste or compost product,</p>	<p>5,000 kgs. is approximately the waste from 16 cows, 6,000 chickens, 111 pigs or 227 sheep/lambs.</p> <p>If an operation is landfilling more than 5,000 kg/ha/yr, is in an area with high precipitation, or cannot meet the requirements of 10(1), a</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>(b) in an area in the Province for which the sum of the average precipitation for a year exceeds 600mm, or</p> <p>(c) that will not meet a requirement set out in subsection (1), must ensure that</p> <p>(d) a qualified professional evaluates the landfill and designs a groundwater monitoring and assessment plan, and</p> <p>(e) repealed</p> <p>(f) the person complies with the plan referred to in paragraph (d).</p>	<p>QP must be used to evaluate the landfill site and, if deemed necessary, design a groundwater monitoring and assessment plan. (see <u>Technical Guidance Document</u> for more detailed information).</p> <p>Average precipitation can be found at the following link: <a href="http://www.climate.weatheroffice.gc.ca/climate_normals/stnselect_e.html">http://www.climate.weatheroffice.gc.ca/climate_normals/stnselect_e.html</a></p>
10(3)	A landfill established under subsection (2) in compliance with a plan referred to in paragraph (d) of that subsection is not subject to the requirements of subsection (1).	This means that minimum requirements specified under Section 10(1) do not have to be met so long as a QP evaluates the landfill and, if deemed necessary, designs a groundwater monitoring and assessment plan.
<b>11 Landfill use</b>		
11(1)	<p>Solid waste, semi-solid waste or compost product disposed of at a landfill, must immediately after the disposal, be covered with</p> <p>(a) at least 0.15 m of low-permeability soil, and</p> <p>(b) an impermeable cover to prevent precipitation from entering the landfill.</p>	<p>See “Low-permeability soil” in the definitions section. An example of a low-permeability soil is clay.</p> <p>An impermeable cover can be as simple as a tarp held down so the wind or animals cannot remove it.</p> <p>The soil cover reduces vectors and odours, and the impermeable cover reduces the likelihood of leachate development and subsequent contamination from runoff.</p>
11(2)	A person operating a landfill must take measures to control fugitive dust and odour caused by the operation of the landfill.	<p>Applying adequate cover and lime will reduce odours.</p> <p>Dust may be associated with the access road to the landfill, or during trench digging.</p>
<b>12 Vector Control Plan</b>		
12	A person intending to begin operating a landfill must complete and retain a plan setting out how the person intends to control	<p>Refer to the <u>Technical Guidance Document</u>.</p> <p>If electric fencing is required to keep</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	vectors at the landfill.	bears/wildlife at bay, see specifications outlined in Appendix 5.
<b>13 Records of use</b>		
13	<p>A person operating a landfill must keep records containing all of the following information:</p> <p>(a) the date of disposal of solid waste, semi-solid waste or compost product made at the landfill;</p> <p>(b) the location of the landfill;</p> <p>(c) the types and quantity, by mass, of solid waste, semi-solid waste or compost product disposed of at the landfill.</p>	<p>Record when waste is deposited, where it is deposited (i.e., landfill site), the type (i.e., red meat or poultry), and the quantity by mass.</p> <p>Records must be retained for 10 years and made available within 2 days of a request as per Section 3.</p>
<b>14 Landfill closure</b>		
14 (1)	<p>A landfill must be closed by covering the landfill with at least 1 m of low-permeability soil that extends</p> <p>(a) at least 0.3 m above ground level, and</p> <p>(b) at least 0.5 m beyond the landfill site.</p>	This is the minimum requirements for all landfill closures, whereby the landfill (trench) will be covered with at least 1 m of low permeability soil. It must rise at least 0.3 m in height and be 0.5 m beyond the edges of the trench.
14 (2)	<p>At least 3 months before the closure of a landfill referred to in section 10 (2)(a) the person operating the landfill must</p> <p>(a) notify the director of the intended closure,</p> <p>(b) complete and retain a landfill closure plan, prepared by a qualified professional, for the closure of the landfill, and</p> <p>(c) comply with the plan referred to in paragraph (b), or, if the plan is amended under subsection (3), with the plan as amended.</p>	10(2) refers to the large site, or high precipitation, or can't meet basic requirements for landfill. If the landfill falls into one of these categories, then a more substantial closure plan is required.
14 (3)	The director may amend a plan referred to in subsection (2) (b).	
14 (4)	A person must not deposit solid waste, semi-solid waste or compost product at a landfill that has been closed.	This means that once a landfill (trench) has been closed, as per the closure requirements; it cannot be reopened and used.

	CODE REQUIREMENT	POLICY / CLARIFICATION
Division 2 - Incineration		
<b>15 Incinerator sites</b>		
15	An incinerator must not be located <ul style="list-style-type: none"> <li>(a) within 500 meters of a residence other than a residence of the person operating the facility, and</li> <li>(b) within 1000 metres of an existing <ul style="list-style-type: none"> <li>(i) other business,</li> <li>(ii) school,</li> <li>(iii) hospital, or</li> <li>(iv) continuing care facility.</li> </ul> </li> </ul>	<p><a href="#">Fact Sheet 3 - Incineration of Solid Waste</a></p> <p>A person can operate an incinerator within any distance of their own residence; otherwise they must follow the setbacks described in Section 15.</p> <p>If an operator cannot meet these incinerator setback or standards a substitution may be applied for. See WDR sections 7 and 8.</p>
<b>16 Operation of incinerators</b>		
16(1)	An incinerator, including all equipment that is an integral part of an incinerator or is used to operate an incinerator, must be installed, operated and maintained in accordance with the manufacturer's specifications and recommended procedures.	Altering from the manufacturer's specifications and recommendations for installation, operation and maintenance is not authorized under this code. These actions would trigger the need for a permit.
16(2)	A person operating an incinerator must take measures to control fugitive dust and odour caused by the operation of the incinerator.	Refer to the <a href="#">Technical Guidance Document</a> for further information.
<b>17 Loading Rates</b>		
17	The maximum loading rates for an incinerator are as follows: <ul style="list-style-type: none"> <li>(a) for a continuous feed incinerator, 400 kg/hour;</li> <li>(b) for a batch feed incinerator, 400 kg/load.</li> </ul>	Incinerator loading rates above 400 kg/hour or 400 kg/load are not authorized by the code and trigger the need for a permit.
<b>18 Emissions limits</b>		
18	An incinerator must not exceed the following emissions limits: <ul style="list-style-type: none"> <li>(a) total particulate matter of not more than 50 mg/m<sup>3</sup> at reference conditions of dry gas at 25°C and 101.3 kPa, corrected to</li> </ul>	<p>These emission limits must be met during the whole time the incinerator is operating.</p> <p>An opacity level of 10% is virtually smokeless, if smoke is seen, this would be cause to do a</p>



	CODE REQUIREMENT	POLICY / CLARIFICATION
	11% O <sub>2</sub> ; (b) total opacity of not more than 10% averaged over 6 consecutive minutes.	test for particulate matter.
<b>19      <i>Stack monitoring and record keeping</i></b>		
19(1)	Subject to subsection (2), a person operating an incinerator must conduct stack monitoring (a) on the first day of operation, and (b) no later than one year after the day that stack monitoring was last conducted.	
19(2)	Stack monitoring must be conducted in accordance with the Stationary Air Emission Testing section in the latest version of the Field Sampling Manual issued by the ministry.	Field Sampling Manual found at following link: <a href="http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html#field">http://www.env.gov.bc.ca/epd/wamr/labsys/lab_meth_manual.html#field</a>
19(3)	The director may require testing in addition to the stack monitoring required under subsection (1) if the director considers this necessary or advisable in the circumstances.	
19(4)	A person operating an incinerator must keep records (a) of the results of the stack monitoring analysis conducted under this section and (b) of the quantities of solid waste, semi-solid waste or compost product disposed of by the incinerator.	Records must be kept for 10 years and be available within two days of a request as per Section 3.
Division 3 - Composting		
<b>20      <i>Storage requirements of solid waste and semi-solid waste before composting</i></b>		
20(1)	A person who stores solid waste or semi-solid waste before composting the solid waste or semi-solid waste must do all of the following: (a) store the solid waste or semi-solid waste in a covered container; (b) locate the solid waste or semi-solid waste (i) at least 15 metres from any watercourse,	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<ul style="list-style-type: none"> <li>(ii) at least 30 metres from any source of water for domestic purposes, and</li> <li>(iii) on an impermeable surface that is capable of withstanding wear and tear from normal operations and that will prevent the release of leachate into the environment;</li> <li>(c) take measures to <ul style="list-style-type: none"> <li>(i) prevent the attraction of and access by wildlife,</li> <li>(ii) control odour caused by the storage,</li> <li>(iii) prevent the attraction of vectors, and</li> <li>(iv) prevent the escape of solid waste, semi-solid waste or leachate.</li> </ul> </li> </ul>	
20(2)	A person storing solid waste or semi-solid waste must construct berms or other works around the storage area if necessary to prevent the escape of solid waste, semi-solid waste or leachate.	
<b>21     <i>Amount and type of solid waste and semi-solid waste that may be composted</i></b>		
21	<p>A person may compost solid waste or semi-solid waste under this Division if</p> <ul style="list-style-type: none"> <li>(a) the quantity of the solid waste and semi-solid waste does not exceed <ul style="list-style-type: none"> <li>(i) 30 tonnes per year of solid waste and semi-solid waste from red meat,</li> <li>(ii) 30 tonnes per year of solid waste and semi-solid waste from a combination of red meat and poultry processing, or</li> <li>(iii) 10.5 tonnes per year of solid waste and semi-solid waste from poultry processing, and</li> </ul> </li> <li>(b) in the case of compost product being land applied, the solid waste or semi-solid waste is generated <ul style="list-style-type: none"> <li>(i) in a facility located on a farm that is</li> </ul> </li> </ul>	<p>30 tonnes of solid or semi-solid waste is approximately the waste from 95 - 99 cows;</p> <p>10.5 tonnes of solid or semi-solid waste is approximately the waste from 18,000 - 20,000 chickens;</p> <p>Quantities over these amounts must follow the composting requirements under the <u>Organic Matter Recycling Regulation (OMRR)</u>.</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>the same farm where the solid waste or semi-solid waste is composted and land applied,</p> <p>(ii) from the slaughter of red-meat animals raised on a farm that is the same farm where the solid waste or semi-solid waste is composted and land applied, or</p> <p>(iii) from the processing of poultry raised on a farm that is the same farm where the solid waste or semi-solid waste is composted and land applied.</p>	<p>A farmer may take his or her animals for slaughter to a facility off the farm and bring back the wastes from his or her own animals to compost and land apply.</p> <p>A CFIA permit for transport, receiving and disposal is required if SRM are included in this waste.</p>
<b>22 Composting requirements</b>		
22(1)	<p>A person who composts solid waste or semi-solid waste must do all of the following:</p> <p>(a) locate the solid waste or semi-solid waste being composted</p> <p>(i) at least 15 metres from any watercourse,</p> <p>(ii) at least 30 metres from any source of water for domestic purposes, and</p> <p>(iii) on an impermeable surface that is capable of withstanding wear and tear from normal operations and that will prevent the release of leachate into the environment;</p> <p>(b) cover the solid waste or semi-solid waste being composted from October 1 to April 1 inclusive in the following areas:</p> <p>(i) the Fraser Valley Regional District;</p> <p>(ii) the Greater Vancouver Regional District;</p> <p>(iii) Vancouver Island;</p> <p>(iv) Any area of the Province for which the sum of the average precipitation for the months of October to April inclusive exceeds 600 mm;</p>	<p>These requirements are similar to the Agricultural Waste Control Regulation requirements.</p>

	CODE REQUIREMENT	POLICY / CLARIFICATION
	(c) take measure to <ul style="list-style-type: none"> <li>(i) prevent the attraction of and access by wildlife,</li> <li>(ii) control fugitive dust and odour caused by the storage,</li> <li>(iii) prevent the attraction of vectors, and</li> <li>(iv) prevent the escape of solid waste, semi-solid waste or leachate.</li> </ul>	
22(2)	A person composting solid waste or semi-solid waste must construct berms or other works around the composting area if necessary to prevent the escape of solid waste, semi-solid waste or leachate.	
<b>23 Time and temperature requirements</b>		
23(1)	When composting solid waste or semi-solid waste, a person must ensure the following: <ul style="list-style-type: none"> <li>(a) the temperature of the compost must be raised to 40° C or higher and maintained for 5 days;</li> <li>(b) the temperature of the compost must exceed 55° C for 4 hours during the 5-day period;</li> <li>(c) after completing the composting process stages described in paragraphs (a) and (b), the compost must be retained in curing piles for at least 21 days during which time <ul style="list-style-type: none"> <li>(i) the curing piles must be formed in a location where the ambient temperature remains in the range of 5° to 30° C, and</li> <li>(ii) the compost must not re-heat on standing to greater than 20° C above ambient temperature.</li> </ul> </li> </ul>	These temperatures are easily achievable as long as the pile is aerated.  This does not have to be 5 consecutive days – so it may take longer than 5 days to achieve this minimum temperature and time;
23(2)	A person composting solid waste or semi-solid waste must keep <ul style="list-style-type: none"> <li>(a) a daily record of temperature and retention</li> </ul>	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>time during the composting process described in subsection (1), and</p> <p>(b) a record of the number of tonnes of the following types of waste that are composted each year:</p> <p>(i) solid waste or semi-solid waste from red meat;</p> <p>(ii) solid waste or semi-solid waste from poultry processing.</p>	<p>This does not include the quantity of agricultural wastes or other components, e.g., sawdust, bedding, woodwaste, which should be added to achieve a good compost mix.</p>
23(3)	The temperatures for the daily record required under subsection (2) must be measured at the same time every day during the composting process.	
<b>24 Storage requirements for compost product</b>		
24(1)	In this section, “ <b>covered storage facility</b> ” means a covered structure that contains compost product before it is land applied, located on an impermeable surface that is capable of withstanding wear and tear from normal operations and that will prevent the release of leachate into the environment, but does not include a reservoir, lagoon, gutter, vehicle or any mobile equipment used for the transportation of solid waste, semi-solid waste or compost product.	
24(2)	A person who stores compost product before land applying the compost product must store the compost product in a covered storage facility or on a field in accordance with this section.	
24(3)	<p>A person storing compost product must take measures to</p> <p>(a) prevent the attraction of and access by wildlife,</p> <p>(b) control fugitive dust and odour caused by the storage,</p> <p>(c) prevent the attraction of vectors, and</p> <p>(d) prevent the escape of solid waste, semi-</p>	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	solid waste or leachate.	
24(4)	A person storing compost product must construct berms or other works around the storage area if necessary to prevent the escape of compost product or leachate.	Berms can be constructed from hay bales or soil mounded up around the perimeter of the pile, or a low concrete curb.
24(5)	A person who stores compost product on a field must cover the compost product from October 1 to April 1 inclusive in the following areas:  (a) the Fraser Valley Regional District; (b) the Greater Vancouver Regional District; (c) Vancouver Island; (d) Any area of the Province for which the sum of the average precipitation for the months of October to April inclusive exceeds 600 mm.	
24(6)	Compost product may be stored on a field for (a) Up to 2 weeks if the compost product is located at least 15 metres from any watercourse and at least 30 metres from any source of water used for domestic purposes, and (b) Up to 9 months if the compost product is located at least 30 metres from any watercourse or source of water used for domestic purposes.	This is to ensure that the compost is used within the 9 months and that the pile does sit around forever.
<b>25 Land application</b>		
25(1)	In this section, “soil test” means testing the soil of the land to which compost product is applied for, at a minimum, the information described in section 26(2) (c) and (d).	
25(2)	Before the land application of compost product, (a) the registered owner, or (b) if the registered owner is not the person land applying the compost product, the person who is land applying the compost	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	product, must ensure that a soil test is carried out on the land to which the compost product will be land applied.	
25(3)	If the area of land to which compost product is applied is greater than 10 hectares, the land must be subdivided into areas of land of 10 hectares or less and the soil testing under subsection (2) must be carried out on each area of land.	This requirement is due to the fact that It is unlikely that soils will be homogeneous over a larger area than about 10 hectares depending upon the topography, consequently would not have the same residual levels of nutrients.
25(4)	Subject to subsection (5), the registered owner or, if the registered owner is not the person who land applied the compost product, the person who land applied the compost product must ensure that a soil test is carried out on each area of land to which the compost product was applied  (a) within 30 days of the one-year anniversary of the date the compost product was first land applied to the areas of land, and  (b) if compost product is land applied to the areas of land in subsequent years, at least once every 3 years from the date of the soil testing carried out under paragraph (a).	The intention is to ensure that there is no build-up of nutrients in the soil over time.
25(6)	A person carrying out a soil test under this section must keep records of the soil test results.	
<b>26 Land application – nutrient management plan</b>		
26(1)	A person intending to land apply compost product must  (a) have a nutrient management plan prepared to ensure that the land application is beneficial to plant growth, and  (b) ensure that the nutrient management plan described in this section is carried out.	A nutrient management plan does not have to be prepared by a Qualified Professional.
26(2)	A nutrient management plan must include the following information about the land to which	A Nutrient Management Plan template is being developed in cooperation with Ministry

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>compost product is applied:</p> <ul style="list-style-type: none"> <li>(a) the pH level in each pile of compost product;</li> <li>(b) the level of nutrients in the compost product, including the levels of the following nutrients: <ul style="list-style-type: none"> <li>(i) the total organic carbon to organic nitrogen ratio;</li> <li>(ii) total nitrogen;</li> <li>(iii) ammonium nitrogen;</li> <li>(iv) total phosphorus;</li> <li>(v) total potassium;</li> </ul> </li> <li>(c) the pH level in the soil to which the compost product is being applied;</li> <li>(d) the level of nutrients in the soil to which the compost product is being land applied, including the levels of the following nutrients: <ul style="list-style-type: none"> <li>(i) available phosphorus;</li> <li>(ii) available potassium;</li> <li>(iii) nitrate-nitrogen;</li> <li>(iv) ammonia-nitrogen;</li> </ul> </li> <li>(e) a calculation of crop nutrient requirements;</li> <li>(f) a calculation of the rate of application;</li> <li>(g) a description of the method of application, including whether the compost product will be incorporated into the soil.</li> </ul>	of Agriculture.
26(3)	If the area of land to which compost product is applied is greater than 10 hectares, the land must be subdivided into areas of land of 10 hectares or less and the nutrient management plan must include the information described in subsection (2) for each area of land.	
26(4)	The person who land applied the compost product must keep records of the results of the	



	CODE REQUIREMENT	POLICY / CLARIFICATION
	sampling and analysis carried out in respect of the nutrient management plan under this section.	
<b>27 Land application – control measures</b>		
27(1)	When land applying compost product, a person must ensure that <ul style="list-style-type: none"> <li>(a) the compost product is not directly discharged into surface water or groundwater, and</li> <li>(b) runoff or escape of the compost product does not go beyond the boundary of the farm where the compost product is being land applied.</li> </ul>	
27(2)	A person must not land apply compost product <ul style="list-style-type: none"> <li>(a) on frozen land,</li> <li>(b) in diverting winds,</li> <li>(c) on land with standing water or snow,</li> <li>(d) on saturated soil, or</li> <li>(e) at rates of application that exceed the amount required for crop growth.</li> </ul>	
27(3)	A person must not land apply compost product if the compost product contains <ul style="list-style-type: none"> <li>(a) identifiable parts of the slaughtered animals,</li> <li>(b) more than 1% foreign matter by dry weight, or</li> <li>(c) any sharp foreign matter in a size or shape that could cause injury.</li> </ul>	
27(4)	A person who land applies compost product that contains specified risk material must comply with all of the following: <ul style="list-style-type: none"> <li>(a) ensure domestic animal grazing is restricted for 5 years on land on which the compost product is applied;</li> <li>(b) must not land apply compost product on</li> </ul>	If a person has composted SRM but has no land available that meets these requirements, they may still landfill the SRM compost.

	CODE REQUIREMENT	POLICY / CLARIFICATION
	land used for growing food crops for human consumption.	
<b>28 Notification of land application</b>		
28(1)	<p>In this section:</p> <p><b>“first land application”</b> means the first application that a proponent carries out in a reporting year, excluding the reporting year commencing on the date of the initial land application;</p> <p><b>“initial land application”</b> means the initial land application that a proponent carries out after this section comes into force;</p> <p><b>“reporting year”</b>,</p> <p>(a) in relation to the year commencing on the date of the initial land application, means a period beginning on the actual date of the initial land application and ending 12 months later, and</p> <p>(b) in relation to each successive year, means a period beginning on the actual date of the first land application after the most recent reporting year is complete and ending 12 months later.</p>	<p>These definitions are to distinguish the first ever time that a compost product from composting slaughter wastes is land applied (the initial land application) from the first time each year, after the initial time.</p>
28(2)	<p>A person who intends to land apply compost product must provide</p> <p>(a) notification of the proposed initial land application to the director at least 30 days before the proposed initial land application, and</p> <p>(b) in successive years, notification of any proposed land application 30 days before the proposed first land application.</p>	<p>This notification is only to the director, and is appealable. However, it is anticipated that there would be little risk for shortening the waiting period, so would not expect appeals.</p> <p><u><a href="#">Notification of Land Application Form</a></u></p>
28(3)	<p>The notification under subsection (2) must include all of the following information:</p> <p>(a) the full name and address of the registered owner of the land where the compost product is being land applied;</p> <p>(b) the full name and address of the person</p>	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	<p>land applying the compost product, if different from the person described in paragraph (a);</p> <p>(c) the application schedule for land application for the reporting year, including, with respect to each area of land of 10 hectares or less, how many times and at what intervals during the reporting year the compost product will be land applied and the rate of application for each land application;</p> <p>(d) the address and location of the land where the compost product is being land applied;</p> <p>(e) a description of what the land where the compost product is being land applied will be used for during the reporting year;</p> <p>(f) confirmation that a nutrient management plan under section 26 has been prepared for the land application;</p> <p>(g) the full name and address of the person who prepared the nutrient management plan;</p> <p>(h) written authorization by the registered owner of the land where the compost product is being land applied if the registered owner is not the person land applying the compost product;</p> <p>(i) any other information required by the director.</p>	
28(4)	The director may, after receipt of a notification under this section, request additional information.	
28(5)	If the director requests additional information under section (4) within 30 days after the proponent provided notification under this section, the proponent must not land apply the compost product until 30 days after the proponent has provided the additional information to the director.	

	CODE REQUIREMENT	POLICY / CLARIFICATION
<b>29</b>	<b><i>Notification of change</i></b>	
29(1)	A proponent must notify the director of a change in any information previously provided under section 28 or this section as soon as the proponent becomes aware of the change.	
29(2)	<p>The proponent providing a notification of change under subsection (1) must not land apply compost product until the earlier of the following dates:</p> <p>(a) the date the director sends a notice in writing signed by the director stating that the proponent may land apply the compost product;</p> <p>(b) the date that is 30 days after the date the proponent provided the notification of change to the director.</p>	
29(3)	The director may, after receipt of a notification of change under this section, request additional information.	
29(4)	<p>If the director requests additional information under subsection (3) within 30 days after the proponent provided a notification of change under this section, the proponent must not land apply the compost product until the earlier of the following dates:</p> <p>(a) the date the director sends a notice in writing signed by the director stating that the proponent may land apply the compost product;</p> <p>(b) the date that is 30 days after the date the proponent has provided the additional information to the director.</p>	
29(5)	If the change in the information provided in a notification of change under this section relates to a change of location of the land application and the proponent proposes to land apply compost product to an area of land not previously identified in the notification under section 28, the proponent must ensure	

	CODE REQUIREMENT	POLICY / CLARIFICATION
	both of the following in respect of that area of land: (a) soil testing is carried out in accordance with section 25; (b) a nutrient management plan is prepared in accordance with section 26.	

## 6. Waste Discharge Regulation Requirements ~ Substitutions

	WASTE DISCHARGE REGULATION REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
7	Substituted Requirements Minister or Director may substitute a different requirement if specified conditions are met.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>• Substitutions should be minimal and this provision used only if absolutely necessary.</li> <li>• Site-specific requirements will normally be addressed in the notification (S. 9) and plan requirement (S.8) authorities</li> <li>• A substitution application package may be found at:  <a href="http://www.env.gov.bc.ca/epd/industrial/regs/codes/concrete/pdf/sub_appl_pkg.pdf">http://www.env.gov.bc.ca/epd/industrial/regs/codes/concrete/pdf/sub_appl_pkg.pdf</a> </li> </ul>

## 7. Authorization Management

### Registration Form

[Registration Form](#)

### Notification Form

[Notification of Land Application of Compost Product](#)

### Fees

The annual fee is \$100 per media. There are three types of media, including effluent (liquid), refuse (solid or semi-solid) and air emissions. Given three media options, the minimum annual fee is \$100 with a maximum of \$300. There are no variable fees or an initial registration fee. Fees must be submitted with the registration form for processing to commence. See the last 2 pages of the registration form for further information.

### Security

No securities are required.

## 8. Other Related Legislation

### Environmental Management Act

Waste Discharge Regulation

Organic Matter Recycling Regulation and Supporting Documents

Agricultural Waste Control Regulation

### Food Safety Act

Meat Inspection Regulation

## 9. Compliance Promotion

### Best Management Practices

Technical Guideline Document for the Slaughter and Poultry Process Industries

### Contacts & Resources

Margaret Crowley, Environmental Management Officer

Agricultural Waste Specialist

Third Floor, 2975 Jutland Road, Victoria, BC V8T 5J9

[Margaret.Crowley@gov.bc.ca](mailto:Margaret.Crowley@gov.bc.ca) Phone: (250) 387-6018

Stakeholder List: Available upon request

Qualified Professionals: See the definition ([section 1](#)) for links

## 10. Compliance and Enforcement

The Ministry's Compliance and Enforcement Policy and Procedure should be consulted for compliance and enforcement activities.

## Appendix 1 - Staff Training PowerPoint Presentations

January 2008

### Welcome to the SPPI Code of Practice Training Session

It will begin at 9:30 a.m.

#### Useful Hints:

- Dial in separately for the audio to 1 866 596-5278 - ID 8695403 #
- Use F5 to expand your view to full screen.
- It will be useful to have a copy of the SPPI Code and Draft Implementation & Policy document to follow along with.
- If you have any questions, please call cell #: (250) 920-9342.

#### Etiquette

- Please use your mute button or \*6 to mute / unmute.
- Try not to speak over those engaged in conversation.
- Please state your name and Region before you ask your question.
- You can change the seat colour to indicate you have a question.
- The session will be recorded for future use.

### Implementation training for the

### Code of Practice for the Slaughter and Poultry Processing Industries

January - 2008

### What is covered?

- Code Development
- Purpose
- Definitions
- Code Highlights
- Resources
- Examples of situations

### Code Development

- Previously, waste discharges for the slaughter and poultry processing industries regulated by site-specific permits and approvals
- MOE reviewing Acts and Regulations
  - SPPI's considered appropriate for a "Code of Practice"
- SPPI's regulated under the MOH's Food Safety Act and a new Meat Inspection Regulation for health and sanitation aspects
- By Sep 2007 – all facilities slaughtering red meat or poultry in province now needed to be licensed.
  - a requirement of this was new MIR was that all facilities must have a waste disposal system and meet all other regulations – including environmental;

### Purpose of Code

- A "code of practice" (Minister's regulation) was established under provisions of the *Environmental Management Act* (EMA) and the *Waste Discharge Regulation* (WDR).
- intent of this code of practice is to set requirements for waste discharges (air emissions, liquid and solid wastes) from the slaughter and poultry processing industries.
- eliminates the administrative processes and costs associated with issuing permits and approvals.

### Provides an Exemption

- The Code of Practice for the Slaughter and Poultry Processing Industries was brought into force on June 30, 2007. Section 2, which was the requirement to register, came into force on September 30, 2007.
- The Code provides clear, consistent standards for discharges and streamlines the waste discharge authorization process for the industry.
- A person registered and complying with the requirements in this code would be exempt from the prohibition against discharging waste to the environment found in section 6(2) &/or 6(3) of the *Environmental Management Act*.

## Code Highlights

### Part 1 – DEFINITIONS

#### (1) Definitions

### Part 2 – GENERAL

#### (2) Registration Information

#### (3) Records and Plans

#### (4) Exception

### Part 3 – DISCHARGE OF WASTEWATER

#### (5) Discharge by category A facilities

#### (6) Discharge by category B facilities

#### (7) Subsurface discharge of wastewater

#### (8) Wastewater irrigation

#### (9) Sampling and analysis

## Code Highlights

### Part 4 – DISCHARGE AND DISPOSAL OF SOLID WASTES

#### Division 1 – Landfills

##### (10) Landfill site

##### (11) Landfill use

##### (12) Vector control plan

##### (13) Records of use

##### (14) Landfill closure plan

#### Division 2 – Incineration

##### (15) Incinerator sites

##### (16) Operation of incinerators

##### (17) Loading rates

##### (18) Emission limits

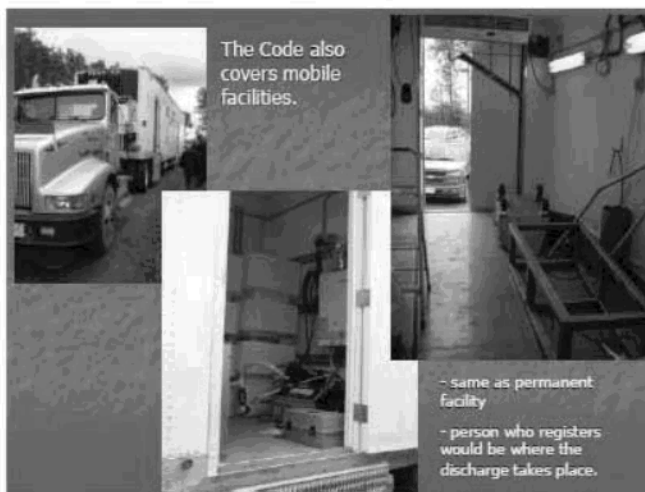
##### (19) Stack monitoring and record keeping

## Part 1 - Definitions

- The facilities at which slaughter of red meat or poultry occurs are commonly described as abattoirs, slaughterhouses, meat packing plants or poultry processing plants.



2 typical slaughterhouses



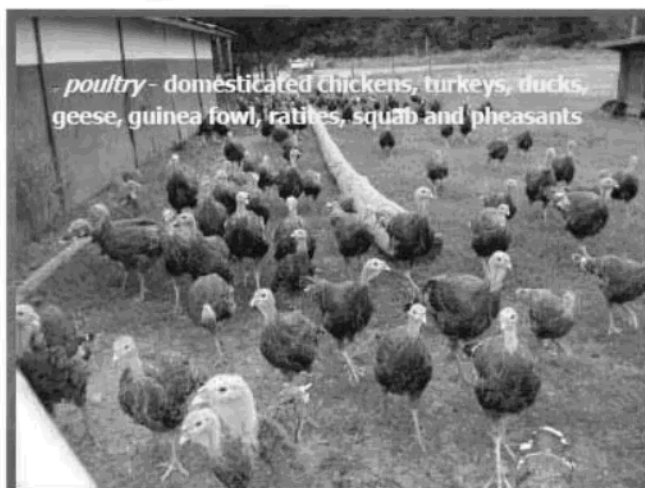
The Code also covers mobile facilities.

- same as permanent facility  
- person who registers would be where the discharge takes place.

### Definitions cont'd.

- Slaughter Industry and Poultry Processing Industry* are defined as establishments engaged in processing red-meat animals, or poultry, for human consumption;
- processing* includes holding, **kill**ing, hide removal or defeathering, eviscerating, cutting, deboning and/or further processing (e.g., chilling, cooking, curing, smoking, canning and packaging )
- red-meat animals* - cattle, swine, sheep, fallow deer, farmed game and farmed bison, (also includes horses),

WDR-Schedule 2.



*poultry*- domesticated chickens, turkeys, ducks, geese, guinea fowl, raptors, quail and pheasants



Definitions cont'd.

- Does not include "*meat by-product processing industry*", which is processing or rendering by-products from the processing of red meat, poultry or fish, i.e., not killing;  
WDR: Schedule 1
- Slaughter and poultry processing industries produce liquid wastes
  - Defined as wastewater – includes blood, feces, fats, oil, greases, and industrial cleaners
- and semi-solid and solid wastes,
  - i.e., feathers, hides, inedible materials, guts, bones and carcasses

Code Highlights cont'd.

Part 1 – DEFINITIONS

2 categories of facilities, based on volume of wastewater generated per day, and the number and type of animals killed per year.

	Category A		Category B	
	Poultry	Slaughter	Poultry	Slaughter
Wastewater	Less than 5 m <sup>3</sup> per day		5 m <sup>3</sup> or more per day	
Equivalent to	5 cubic metres is equivalent to ~ 5,000 litres or 1,100 Imperial gallons			
Live weight killed	Less than 40 tonnes <sup>1</sup> per year	Less than 80 tonnes <sup>2</sup> per year	40 tonnes <sup>1</sup> or more per year	80 tonnes <sup>2</sup> or more per year
Equivalent to	<sup>1</sup> ~ 18,800 broilers; <sup>2</sup> ~ 100 head of beef			

Code Highlights cont'd.

Amendments to the Code – deposited on December 6, 2007:

- to allow domestic sewage from a toilet within the slaughtering facility to be discharged with the liquid wastewater;
- to clarify registration requirements; and
- to take out references to submit plans to make this Code consistent with other codes;
  - must still complete plans or have them completed, and retain them.



Code Highlights cont'd.

Part 2 – GENERAL

Registration Information (Section 2)

- A requirement to register:
- Registration must include: (subsection 1)
  - 2(1) - Information listed in Section 4(2) of WDR; and
  - 2(1)(a) - the annual production, of red meat and/or of poultry products, in tonnes of live weight killed per calendar year, of the facility;

Code Highlights cont'd.

Part 2 – GENERAL

Registration Information (Section 2)

Section 2(1)(b)

- the maximum amount of wastewater discharged from the facility, in cubic meters per day;
- if they are discharging liquid or solid wastes, or both, and
- how they are discharging it, e.g., by subsurface discharge, or irrigation of the wastewater, or landfilling solids.



Code Highlights cont'd.

Part 3 – DISCHARGE OF WASTEWATER

Section 5 Persons operating Category A facilities

- a) must not discharge directly to groundwater or a watercourse;
- b) must control fugitive dust and odour;
- c) must keep records.

Section 6 Persons operating Category B facilities

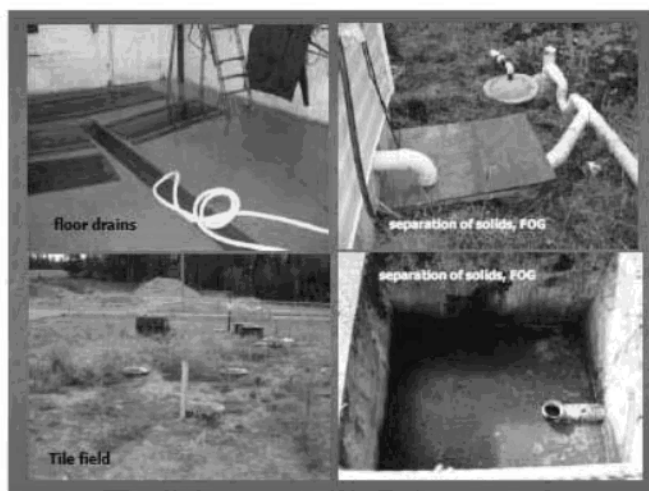
- a) comply with first 3 above; and
- b) ensure wastewater discharged in accordance with, either, section 7 – subsurface discharge, or section 8 – irrigation.

Code Highlights cont'd.

Part 3 – DISCHARGE OF WASTEWATER cont'd.

Subsurface discharge of wastewater (section 7)

Code	Intention
7(1) Wastewater ... must not surface and must not cause groundwater table to be raised to the surface ...;	- must ensure that the tile field is properly functioning;
(2) A person ... must conduct inspections ...;	- onus is on the discharger to check;
(3) After Sept. 30, 2007, the subsurface wastewater disposal system of category B facilities ... must be designed by a QP ...;	- this allowed for those already discharging to a system prior to September 30 <sup>th</sup> ; - not required to have a QP designed system;
(4) ... may resume discharging if carried out in accordance with a plan designed by a QP ...;	- if the system failed, then need to have a plan designed by a QP, and installed or repaired in accordance to that design, then could resume discharging;



Code Highlights cont'd.

Part 3 – DISCHARGE OF WASTEWATER cont'd.

Subsurface discharge of wastewater (section 7)

Code	Intention
7(5) A person operating either a category A facility or a category B facility may discharge wastewater containing domestic sewage into the subsurface of the ground if (a) The domestic sewage source is from the facility.	- new section added as one of the amendments  Includes category A facilities;  does not include domestic waste from an attached house, restaurant, or business
(b) The discharge complies with subsection (1).	- must ensure tile field properly functioning;
(c) The person complies with subsection (2).	- onus on discharger to check;
(d) The subsurface disposal system is designed by a qualified professional and installed according to that design.	- must have QP design system for either category A or category B facility

Code Highlights cont'd.

Part 3 – DISCHARGE OF WASTEWATER cont'd.

Wastewater irrigation (section 8)

Code	Intention
8(1) Wastewater must not be discharged on ground with agricultural crops intended for human consumption.	
8 (2) Except for wastewater discharged by a farmer under subsection 5, wastewater discharged from a category B facility onto the surface of the ground to irrigate that ground must meet all following conditions ...;	- An exception for farmers (subsection 5) ...  - For category B facilities;  - Prior to irrigating, must ensure effluent standards are met

Code Highlights cont'd.

Part 3 – DISCHARGE OF WASTEWATER cont'd.

Wastewater irrigation (section 8)

Code	Intention
8(2) ... (a) not more than 10 mg/L FOG; (b) not more than 45 mg/L CBOD; (c) not more than 60 mg/L TSS; (d) Not more than 1,000/ml TCO and 200/ml TFO;	Wastewater from slaughter and poultry processing operations commonly contain significantly higher levels of potentially deleterious substances than those of domestic waste.  See Table 1 Comparison

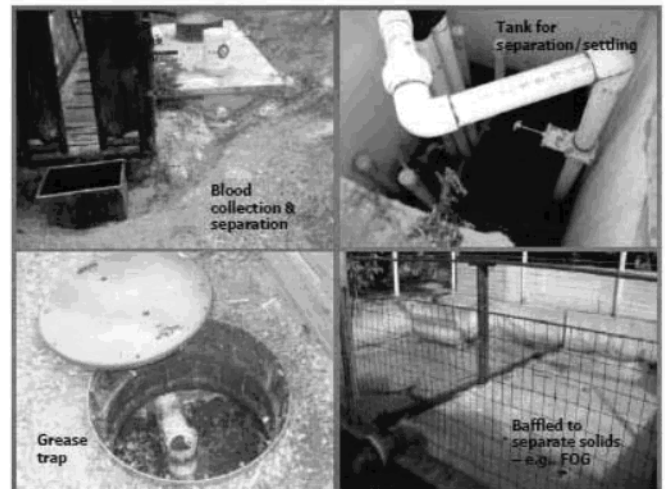
FOG - fats, oils and grease  
CBOD - carbonaceous bio-chemical oxygen demand  
TSS - total suspended solids  
TCO - total coliform organisms  
TFO - total fecal organisms

Code Highlights cont'd.

Table 1: Comparison of Wastewater Characteristics

	Slaughter Facilities	Poultry Processing Facilities	Domestic Sewage
CBOD (mg/L)	7,237	1,662	200
TSS (mg/L)	1,153	760	200
TKN (mg/L)	306	54	30
TP (mg/L)	35	12	6
FOG (mg/L)	146	665	10

- carbonaceous bio-chemical oxygen demand (CBOD)
- total suspended solids (TSS)
- total Kjeldahl nitrogen (TKN)
- total phosphorus (TP)
- fats, oils and grease (FOG)



Code Highlights cont'd.

Code	Intention
8(3) A person intending to discharge wastewater from a category B facility under subsection (2) ... (a) must have a QP design a NMP for the beneficial use of the wastewater ..., and (b) it must be carried out as per the plan;	For category B facilities, prior to irrigation of the wastewater, the operator must have a nutrient management plan prepared by a QP, and they must follow that plan.
8(4) A plan referred to in 8(3)(a) must include ...	sets out minimum requirements for the NMP;
8(5) Wastewater discharged by a farmer onto the surface of the farmland to irrigate that land (a) must be discharged at an agronomically sound rate, and (b) must not exceed 100 cubic meters annually.	an exemption for farmers (as defined by the Code) ...  for the 100 m <sup>3</sup> , not required to meet section 8(2) requirements (for FOG, CBOD, TSS, TCO, TFO) for surface irrigation of wastewater from category B, if meet 8(5)(a) & (b).



Code Highlights cont'd.

Code	Intention
8(6) A person operating either a category A facility or a category B facility may discharge wastewater containing domestic sewage onto the surface of the ground if (a) the domestic sewage source is from the facility, (b) the discharge complies with subsections (1) and (2), and (c) the person complies with subsection (3) and (4).	authorizes the discharge of domestic sewage for irrigation with the slaughterhouse wastewater if requirements a, b, and c are met;  that is, not on crops for human consumption,  if it meets the effluent standards for FOG, CBOD, TSS, TCO and TFC, and  a QP prepares a NMP and the discharge is carried out in accordance with that plan.

Code Highlights cont'd.

Code	Intention
<b>Section 9 Sampling and Analysis</b> 9(1) To ensure compliance with subsection 8(2), a person discharging wastewater from a category B facility ... must ensure that sampling and analysis of the wastewater are carried out ... (a) Before it is discharged, and (b) Every 2 weeks during discharge.	- Sampling of the wastewater and analysis of the samples must be done.
9(2) The sampling and analysis must be carried out (a) in accordance with ... Field Sampling Manual ..., and (b) by a laboratory registered with the CAEAL	- Must use proper field sampling techniques, and samples must be analysed by a <u>registered</u> laboratory.
9(3) ... must keep records of the results ...	- records of the results of the monitoring and analysis must be kept.

## Part 4 - Solid Wastes

### Code Highlights cont'd.

- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 1 – LANDFILLS

Code	Intention
Section 10 Landfill site	Landfill is defined in the Code
(1) Subject to subsection (3), a landfill	Siting requirements:
(a) must not be more than 2 m wide,	- e.g.,
(b) (i) must be located on a site that has a slope of less than 0.5%,	- 2 m wide reduces the exposed area;
(ii) at least 1 m below ground level,	- 0.5% slope is a relatively flat area – e.g., a rise of 1 cm. over 2 metres;
(iii) within a property so that there is at least 50 m between the property line and the boundary of the landfill, and	- 1 m below the ground reduces exposure of waste, and allows for covering;
(iv) so that there is at least 4 m between the seasonal high water table beneath the landfill and the bottom of the landfill, and	- Ground water records can be used to estimate seasonal high water tables;

### Code Highlights cont'd.

- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 1 – LANDFILLS

Code	Intention
10(1)(c) must not be located within	
(i) 100 m of the nearest surface water,	Examples of unstable terrain are cliffs, slide areas, gullies, etc.
(ii) the 200-year flood plain,	Once the landfill (trench/hole) has been closed, the next trench must be at least 30m away
(iii) 100 m of unstable or potentially unstable terrain,	
(iv) 30 m of another landfill, either closed or currently in use, or	
(v) 300 m of residence, hotel, restaurant, school, church, public park, water supply well, or water supply intake.	

### Code Highlights cont'd.

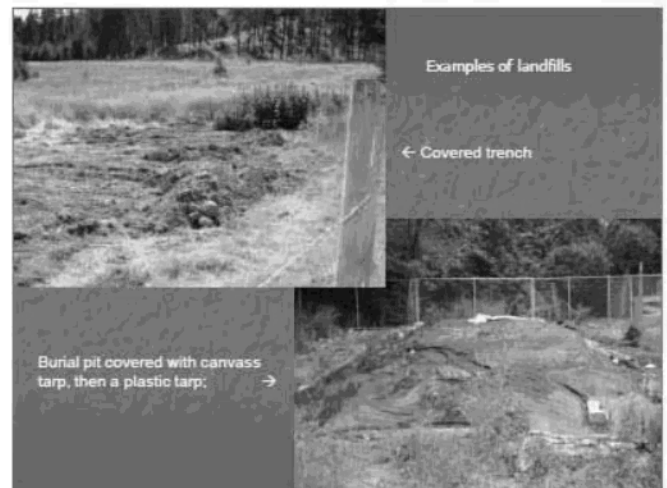
- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 1 – LANDFILLS

Code	Intention
10(2) A person proposing to establish a landfill	- If the proposed landfill does not meet these requirements,
(a) for ... more than 5,000 kg/ha/yr ... ,	Then,
(b) with average precipitation of more than 600 mm/year, or	- need to get a QP to evaluate the proposed landfill and
(c) that will not meet a requirement set out in subsection (1), must ensure that	- design a groundwater monitoring and assessment plan,
(d) a qualified professional evaluates the landfill and designs a groundwater monitoring and assessment plan,	and
(e) repealed,	- the plan must be complied with.
(f) the person complies with the plan referred to in paragraph (d).	Repealed subsection requiring submission of plan,

### Code Highlights cont'd.

- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 1 – LANDFILLS

Code	Intention
10(3) A landfill established under subsection (2) in compliance with a plan referred to in paragraph (d) ... is not subject to the requirements of subsection (1).	This means that minimum requirements specified under S. 10(1) do not have to be met so long as
	- a QP evaluates the landfill and site and
	- designs a groundwater monitoring and assessment plan.



#### Code Highlights cont'd.

- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 1 – LANDFILLS

Code	Intention
Section 11 Landfill use	Sets out requirements for using landfill - immediately covering with "low-permeability soil" to reduce vectors/odour; and an impermeable cover reduces the likelihood of leachate development and subsequent contamination.
Section 12 Vector Control Plan	- must complete and retain vector control plan -
Section 13 Records of use	- must keep records - i.e., date of disposals, location, and types and quantities;
Section 14 Landfill closure	- sets out requirements for closing of landfill site;

#### Code Highlights cont'd.

- Part 4 – DISCHARGE and DISPOSAL OF SOLID WASTES
- Division 2 – INCINERATION

Code	Intention
Section 15 Incinerator sites	- Setback distances to other properties, e.g., residences, schools, businesses, etc.
Section 16 Operation of incinerators	- Incinerators must be installed, operated and maintained properly; and control fugitive dust and odours.
Section 17 Loading Rates	- lists maximum loading rates based on type of incinerator - whether a continuous feed (400 kg/hr), or a batch feed incinerator (400 kg/load).
Section 18 Emissions limits	- incinerator must not exceed the listed emissions limits (not more than 50 mg/m <sup>3</sup> total particulates).
Section 19 Stack monitoring and record - keeping	- a person operating an incinerator must conduct stack monitoring and must keep records.

#### Resources:

- Implementation Policy and Procedures manual
- Technical Guideline for Qualified Professionals
- Factsheets: 1 – Liquid Wastewater  
2 – Landfilling of Solid Waste  
3 – Incineration of Solid Waste

#### • Websites:

Code of Practice information website - [http://www.mca.gov.bc.ca/policy/ena\\_codes\\_of\\_practice/laughlin/index.html](http://www.mca.gov.bc.ca/policy/ena_codes_of_practice/laughlin/index.html)

MIES – Meat Industry Enhancement Strategy information on the BC Food Processors Association website – [www.bcfpa.ca](http://www.bcfpa.ca)

#### Contacts

For any questions, or further information, please contact any of the Team members:

Barb John	<a href="mailto:Barbara.John@gov.bc.ca">Barbara.John@gov.bc.ca</a>	250 371-6293
Ben Van Nostrand	<a href="mailto:Ben.VanNostrand@gov.bc.ca">Ben.VanNostrand@gov.bc.ca</a>	250 565-6528
Alisa Williams	<a href="mailto:Alisa.Williams@gov.bc.ca">Alisa.Williams@gov.bc.ca</a>	250 356-9082
Margaret Crowley	<a href="mailto:Margaret.Crowley@gov.bc.ca">Margaret.Crowley@gov.bc.ca</a>	250-387-6018

We would appreciate feedback on the presentation.

#### Examples of situations:

Situation	How would you deal with this situation?
1. A telephone call received and person has asked for advice regarding their slaughter operation. Their site has a single cell lagoon, authorized by the Ministry of Health, for their wastewater, and landfills their solid waste.	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	

#### Examples of situations:

Situation	How would you deal with this situation?
1. A telephone call received and person has asked for advice regarding their slaughter operation. Their site has a single cell lagoon, authorized by the Ministry of Health, for their wastewater, and landfills their solid waste.	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	
<ul style="list-style-type: none"> <li>Yes - Owner would need to register for landfilling the solid wastes; no registration required for the liquid waste.</li> <li>Need to know facility category – so need to verify their <ul style="list-style-type: none"> <li>- volume of wastewater discharged,</li> <li>- annual production;</li> </ul> </li> <li>\$100 per media – will cost \$100 for solids;</li> <li>Size of the operation will determine the level of QP involvement, if any, is needed.</li> </ul>	



*Examples of situations:*

Situation	How would you deal with this situation?
2. A small seller wants to discharge the liquid waste under the provision of the 100 m³ farmer allowance. Category A, and selling meat;	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	

*Examples of situations:*

Situation	How would you deal with this situation?
2. A small seller wants to discharge the liquid waste under the provision of the 100 m³ farmer allowance.	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	
<ul style="list-style-type: none"> <li>Yes, they are selling products so not exempt from requirement to register, and must comply with Part 3, and would register for discharge of wastewater.</li> <li>Need to verify volume of wastewater discharged, and annual production, to make sure they fit small seller of category A;</li> <li>– they must meet the definition of a farmer, and the requirements in sections 2, 3, and 5, and section 8(5); they do not need to meet effluent standards in 8(2).</li> <li>\$100 per media – so will cost \$100 for liquid waste (effluent);</li> <li>No, a QP is not needed.</li> </ul>	

*Examples of situations:*

Situation	How would you deal with this situation?
3. Operator of a slaughter facility wants to do some composting of solid waste from i) category A operation; ii) category B operation;	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	

*Examples of situations:*

Situation	How would you deal with this situation?
3. Operator of a slaughter facility wants to do some composting of solid waste from i) category A operation; ii) category B operation;	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	
<ul style="list-style-type: none"> <li>For both i) &amp; ii), if they are selling products for human consumption from slaughter facility, and they are discharging liquid or solid wastes, then they should be registered, or will need to register.</li> <li>They need to know that they must meet the requirements under the Organic Matter Recycling Regulation (OMRR) for composting their solid wastes from the slaughter operation.</li> <li>It will not cost them anything for the composted solids – depending upon what they do with the composted product, they may be required to follow other regulations, or the Code.</li> <li>No, a QP is not required for composting under this Code. Depending upon what they do with the composted product, they may need a QP to prepare a Land Application Plan under OMRR.</li> </ul>	

*Examples of situations:*

Situation	How would you deal with this situation?
4. A person has a mobile slaughter operation and has asked for advice on what they need to do?	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	

*Examples of situations:*

Situation	How would you deal with this situation?
4. A person has a mobile slaughter operation and has asked for advice on what they need to do?	<ul style="list-style-type: none"> <li>Do they need to register?</li> <li>What other information is needed?</li> <li>How much will it cost?</li> <li>Is a QP required?</li> </ul>
Suggested response:	
<ul style="list-style-type: none"> <li>The owner of the land where the discharge of the liquid and / or solid wastes takes place would need to register. If mobile operator takes the liquid waste to municipal sewer system, then mobile operator does not need to register the liquid waste.</li> <li>They would need to know the volume of wastewater discharged, and annual production (at each docking station) to determine whether they are category A or B, and then follow requirements under pertinent sections in the Code.</li> <li>Depends upon what is being discharged – at \$100 per media.</li> <li>Depending upon whether category A or B, and what method of discharge is/will be used will determine level of QP involvement.</li> </ul>	





Welcome to the Regional Training Session for  
amendments to the SPPI Code of Practice  
It will begin at 2:00 p.m.

*Useful Hints:*

- Dial in separately for the audio to 1 866 596-5278 - ID 8951922#
- Use F5 to expand your view to full screen.
- It will be useful to have a copy of the amended SPPI Code and Draft Operational Policy Manual to follow along with.
- If you have any questions, please call ...

*Etiquette*

- Please use your mute button or \*6 to mute & unmute.
- Try not to speak over those engaged in conversation.
- Please state your name and Region before you ask your question.
- You can change the seat colour to indicate you have a question.
- The session will be recorded for future use.

Implementation training  
for amendments to the

Code of Practice for the Slaughter and  
Poultry Processing Industries

April - 2011

## Introduction

- Why the Code was amended?
- Amendments
  - Definitions
  - Registration Exemptions
  - Wastewater Discharges
  - Solid or semi-solid waste discharges
- Meat Inspection Regulation

Lisa Levesque, Food Policy Specialist  
Ministry of Health
- Discussion/Questions

## Purpose of Code

- A "code of practice" (Minister's regulation) was established under provisions of the *Environmental Management Act* (EMA) and the Waste Discharge Regulation (WDR).
- Intent of this code of practice is to set requirements for waste discharges (air emissions, liquid and solid wastes) from the slaughter and poultry processing industries.
- Eliminated the administrative processes and costs associated with issuing permits and approvals.
- Became effective on June 30, 2007
- First amendment - December 2007
- Second amendment – December 2010

## Why was the Code amended?

- A person registered and complying with the requirements in this code is exempt from the prohibition against discharging waste to the environment found in sections 6(2) or 6(3) of the *Environmental Management Act*.
- To clarify the wastewater discharge requirements;
- Industry requests:
  - We heard that it was difficult to maintain farm status if the very small processors had to pay a registration fee.
  - We heard that having to meet the requirements for composting under the Organic Matter Recycling Regulation (OMRR) was proving onerous and too costly.

## Amendments

### Draft Operational Policy Manual

- 1 Definitions
- 2 Registration Exemptions
- 3 Wastewater Discharges
- 4 Solid or semi-solid waste discharges


## Guidance Documents

- 4 Factsheets
- Technical Guideline
- Updated website with links to the revised documents and Ministry of Agriculture Nutrient Management Planning information

## Questions / Discussion

Thank you

Margaret Crowley  
Environmental Standards Branch  
Ministry of Environment

	<b>Operational Policy Manual</b> <b>Environmental Protection</b>	Section	Subsection
		2.16	2.16.01

**Name of Policy:** **Vehicle Dismantling and Recycling Industry Environmental Planning Regulation – Policy and Procedures for Implementation**

**Replaces:** The policy is new.

**Application:** This policy applies to staff engaged in administering the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEP Regulation).

**Purpose:** The purpose of the implementation policy and procedures is to assist ministry staff in administering the VDRIEP Regulation.

**Policy Statement:** In September, 2007, the Ministry established the VDRIEP Regulation to set requirements for registration, operational planning and auditing of the vehicle dismantling and recycling industry. The VDRIEP Regulation requires individual operators or industry associations (acting on behalf of their members) to develop environmental management plans that demonstrate how they will comply with existing regulations under EMA (Hazardous Waste Regulation (HWR), Ozone Depleting Substances and Other Halocarbons Regulation, Petroleum Storage and Distribution Facilities Storm Water Regulation, etc.). This regulation will move the industry towards taking on a shared responsibility for environmental stewardship.

**References and Relationships:** These implementation policies and procedures deal only with the requirements of the VDRIEP Regulation and therefore do not deal directly with waste discharge issues. To fully manage vehicle dismantling and recycling facilities requires staff familiarity with the requirements and compliance management approaches of applicable EMA regulations such the HWR, the Ozone Depleting Substances and Other Halocarbons Regulation, and the Petroleum Storage and Distribution Facilities Storm Water Regulation.

The Guidebook for the VDRIEP Regulation was developed to assist users in complying with requirements of the VDRIEP Regulation.

**Approval:**

  
 Assistant Deputy Minister  
 Environmental Protection Division

**Date:** July 26/2011

**Contact Person:** Alisa Williams and Diane Beattie, Environmental Management Analysts  
Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

**IMPLEMENTATION POLICY AND PROCEDURES GUIDE**  
**FOR THE**  
**VEHICLE DISMANTLING AND RECYCLING INDUSTRY ENVIRONMENTAL PLANNING REGULATION**

**JUNE 2011**

# VEHICLE DISMANTLING AND RECYCLING INDUSTRY ENVIRONMENTAL PLANNING REGULATION

## IMPLEMENTATION POLICY AND PROCEDURES

### Contents

<b>1. Purpose of this Document.....</b>	<b>5</b>
<b>2. Purpose of the Regulation .....</b>	<b>5</b>
<b>3. Division Contacts.....</b>	<b>5</b>
<b>4. Background .....</b>	<b>6</b>
<b>5. Summary of Regulatory Requirements ~ Policy and Procedures .....</b>	<b>6</b>
Definitions.....	6
Requirement for an environmental management plan.....	8
Registration.....	10
Reporting by facility .....	11
Reporting by association .....	12
Maintaining a plan .....	13
Records .....	13
Offences and Penalty .....	13
<b>6. Authorization Management.....</b>	<b>16</b>
Registration Form (Initial registration, updated registration and de-registration form) .....	16
Fees .....	16
Security .....	16
<b>7. Other Related Legislation.....</b>	<b>16</b>
<b>8. Compliance Promotion .....</b>	<b>16</b>
June 2008: reminder to register letter mailed to facilities .....	16
Best Management Practices.....	16
Contacts & Resources.....	16
<b>9. Compliance and Enforcement.....</b>	<b>17</b>
<b>Appendix I.....</b>	<b>18</b>
Staff Training PowerPoint Presentation – April 2008 .....	18

## **1. Purpose of this Document**

This document is for guidance purposes only. The current legislation and regulations take precedence over any information provided.

## **2. Purpose of the Regulation**

The purpose of the Vehicle Dismantling and Recycling Industry Environmental Planning Regulation (VDRIEP Regulation) is to establish requirements for registration, operational planning and auditing of the vehicle dismantling and recycling industry. The VDRIEP Regulation also clarifies industry's obligations to meet the requirements of existing regulations under the *Environmental Management Act* (EMA). The VDRIEP Regulation will require individual operators or industry associations (acting on behalf of their members) to develop environmental management plans that demonstrate how they will comply with existing regulations under EMA (Hazardous Waste Regulation (HWR), Ozone Depleting Substances and Other Halocarbons Regulation, Petroleum Storage and Distribution Facilities Storm Water Regulation, etc.). The VDRIEP Regulation also outlines a system of monitoring and reporting to keep operations in compliance with their plans. This regulation will move the industry towards taking on a shared responsibility for environmental stewardship.

These implementation policies and procedures deal only with the requirements of the VDRIEP Regulation and therefore do not deal directly with waste discharge issues. To fully manage vehicle dismantling and recycling facilities requires staff familiarity with the requirements and compliance management approaches of applicable EMA regulations such the HWR, the Ozone Depleting Substances and Other Halocarbons Regulation, and the Petroleum Storage and Distribution Facilities Storm Water Regulation.

The industry will be subject to any new applicable regulatory requirements, if or when they are enacted (. e.g., the VDREIP Regulation does not exempt the industry from future new regulatory requirements).

## **3. Division Contacts**

Alisa Williams  
Environmental Management Analyst  
Telephone: (250) 356-9082  
Email: [Alisa.Williams@gov.bc.ca](mailto:Alisa.Williams@gov.bc.ca)

Diane Beattie  
Environmental Management Analyst  
Telephone: (250) 387-6797  
Email: [Diane.Beattie@gov.bc.ca](mailto:Diane.Beattie@gov.bc.ca)

## 4. Background

This initiative was a result of strong support from the British Columbia Automotive Retailers Association (ARA) who were seeking to ensure that all operators in B.C. meet the environmental requirements set out by the ministry. The ARA had already developed a Code of Practice for the industry and sought to make it a legal requirement. The ARA's concern was that some operators were not following the requirements of regulations under EMA and were thereby creating inequities within the industry. The Province agreed to regulate the industry by developing the regulation as a way to assist the industry achieve more consistent environmental performance standards.

The decision to develop a regulation was also impacted by the results of recent audits conducted on the industry by the Province. Audit results indicated that most operations were out of compliance with some aspect of the EMA regulations. Furthermore, the Insurance Corporation of BC (ICBC) stated that it would welcome a tool that enabled it to choose not to do business with operations that fail to comply with the law.

At the time this project was initiated, the industry was prescribed in schedule 2 of the Waste Discharge Regulation (WDR). As the project proceeded, it became evident that the legislation should become a cabinet approved regulation rather than a Minister's regulation (Code of Practice). This was because vehicle dismantlers and recyclers do not have specific discharges that can be codified and all waste discharge activities undertaken within the industry are covered by regulations already in existence under EMA.

## 5. Summary of Regulatory Requirements ~ Policy and Procedures

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
Section 1 ~ Definitions		
1	<b>Definitions</b>	
	<i>"act" means the Environmental Management Act.</i>	
	<b>"association"</b> means an association of two or more facilities, which association includes in its purposes (a) preparing a plan for the purposes of this regulation, and (b) monitoring and reporting on compliance with the plan;	<b>Clarification/Guidance:</b> An association may be a loose affiliation and legally unincorporated or be a legally incorporated organization.
	<b>"facility"</b> means an establishment that is engaged in	<b>Clarification/Guidance:</b> <ul style="list-style-type: none"><li>The term "facility" includes dismantlers, car</li></ul>



SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	the vehicle dismantling and recycling industry;	<p>crushers and steel recyclers, including portable or mobile facilities.</p> <ul style="list-style-type: none"> <li>For operational purposes, facilities that dismantle or recycle parts of vehicles not listed in S2(3)(b) i to vii, and which do not constitute a waste discharge issue (e.g. removal of alloy rims, seats, high value metal parts), should not be considered a “facility” for the purpose of this regulation.</li> <li>This regulation applies to First Nations lands as it deals mainly with regulation of an activity not land use, and there does not appear to be a conflict with a federal requirement. However, it is up to the discretion of the Regional Operations Branch (ROB) to decide whether or not they choose to enforce the VDRIEPR and require facilities to register. This will allow ROB to prioritize this regulation among other compliance and enforcement issues.</li> </ul>
	<b>"motor vehicle"</b> has the same meaning as in the <i>Motor Vehicle Act</i> ;	<p><u>Motor Vehicle Act</u></p> <p><b>"motor vehicle"</b> means a vehicle, not run on rails, that is designed to be self propelled or propelled by electric power obtained from overhead trolley wires, but does not include a motor assisted cycle;</p> <ul style="list-style-type: none"> <li>The term “motor vehicle” includes motor cycles</li> </ul>
	<b>"plan"</b> means an environmental management plan required under section 2 (1);	
	<p><b>"qualified professional"</b>, in relation to a duty or function under this regulation, means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who</p> <p>(a) is registered in British Columbia with the appropriate professional organization, is acting under that organization’s code of ethics and is subject to disciplinary action by that organization, and</p> <p>(b) through suitable education, experience, accreditation and knowledge, may be reasonably relied on to provide advice within their area of expertise;</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Both conditions (a) and (b) need to be met.</li> <li>Use professional judgment as to education and experience qualifications. Engineers, biologists and technologists in the applicable field and those certified as environmental auditors would be suitable for performing duties under this regulation. professionals may be members of the following associations, among others: <ul style="list-style-type: none"> <li>➤ <u><a href="#">The Canadian Environmental Certification Approvals Board</a></u></li> <li>➤ <u><a href="#">The Association of Professional Engineers and Geoscientists of BC</a></u></li> <li>➤ <u><a href="#">The Association of Professional Biologists of B.C</a></u></li> <li>➤ <u><a href="#">The B.C. Institute of Agrologists</a></u></li> </ul> </li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	<p><b>"vehicle dismantling and recycling industry"</b> has the same meaning as in Schedule 2 of the Waste Discharge Regulation;</p>	<p><u>Waste Discharge Regulation</u></p> <p>"vehicle dismantling and recycling industry" means establishments, except home-based businesses, educational facilities and establishments of hobbyists or artisans, engaged in wrecking or dismantling vehicles or in recycling or disposing of parts and other waste material from vehicles;</p> <p><b>Clarification/Guidance:</b></p> <ul style="list-style-type: none"> <li>The regulation intended to cover facilities wrecking, dismantling or recycling more than 5 wet vehicles per year, regardless if they are a home-based business, therefore WDR will be amended to reflect the intention.</li> <li>See <u>WDR Implementation Guide</u> (pg 145) for clarification.</li> </ul>
	<p><b>"wet vehicle"</b> means a motor vehicle that</p> <p>(a) is no longer used for transportation purposes, and</p> <p>(b) has not been reduced to a steel hulk or to a steel hulk with only the plastic, fabric or foam components still attached.</p>	<p><b>Clarification/ Guidance:</b></p> <p>A "wet vehicle" still contains hazardous materials as defined in s. 2 (3) b of the <u>Vehicle Dismantling and Recycling Industry Environmental Planning Regulation</u>.</p>
<b>2</b>	<b>Requirement for an environmental management plan</b>	
2 (1)	<p>A person that operates or plans to operate a facility that dismantles more than 5 wet vehicles in a calendar year must</p> <p>(a) either</p> <p>(i) have an environmental management plan for waste management, reduction or prevention, or</p> <p>(ii) be a member of an association that has an environmental management plan for waste management, reduction or prevention, and</p> <p>(b) register with a director under section 3.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>See s. 1 for the definition of association.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>S. 7 (2) provides the authority to obtain a copy of a plan for determining compliance with plan requirements.</li> </ul>
2 (2)	<p>A person must comply with subsection (1),</p> <p>(a) if operating the facility on or before September 1, 2008, on or before that date, and</p> <p>(b) otherwise, before beginning to operate the facility.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Operation of a facility begins the moment a vehicle is on site.</li> <li>Vehicle dismantlers, car crushers and steel recyclers must all comply with s. 2 (1) if they dismantle more than 5 wet vehicles in a calendar year.</li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
2 (3)	<p>A plan for the purposes of this section must</p> <ul style="list-style-type: none"> <li>(a) be approved by a qualified professional,</li> <li>(b) describe how each of the following wastes will be removed from wet vehicles at facilities to which the plan applies: <ul style="list-style-type: none"> <li>(i) ozone depleting substances and other halocarbons;</li> <li>(ii) oils, brake fluids, solvents, fuels and other hydrocarbons;</li> <li>(iii) antifreeze;</li> <li>(iv) lead and lead-acid batteries;</li> <li>(v) tires;</li> <li>(vi) mercury switches;</li> <li>(vii) windshield washer fluid,</li> </ul> </li> <li>(c) describe how each waste referred to in paragraph (b) will be stored, treated, recycled or disposed of in compliance with the Act and applicable regulations, and</li> <li>(d) set out <ul style="list-style-type: none"> <li>(i) management processes for minimizing or eliminating the discharge of wastes to the environment, and</li> <li>(ii) a contingency plan documenting procedures to be followed during an emergency.</li> </ul> </li> </ul>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• The <u>Guidebook for the VDRIEP Regulation</u> may provide general guidance on: <ul style="list-style-type: none"> <li>➤ How to comply with legal requirements for specific wastes</li> <li>➤ How to manage specific wastes (Best Management Practices)</li> <li>➤ Responding to spills or other emergencies</li> </ul> </li> <li>• Legal requirements for the management of various wastes contained in the <u>Environmental Management Act</u> or other regulations and codes of practice must be met.</li> <li>• QP approval should be indicated by a signed certification on the plan.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>• S. 7 (2) provides the authority to obtain a copy of a plan to determine if a plan has been prepared as required.</li> </ul>
2 (4)	<p>Within 3 months after each 5th anniversary of the date their registration is effective under section 3 (2), a person operating a facility for which there is a plan specific to the facility must</p> <ul style="list-style-type: none"> <li>(a) review the plan,</li> <li>(b) amend or replace the plan if necessary to ensure that that person has a plan that complies with subsection (3), and</li> <li>(c) have the reviewed, amended or replacement plan approved by a qualified professional.</li> </ul>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>• The plan must be amended and replaced at the specified time if there are: <ul style="list-style-type: none"> <li>➤ Significant changes to the number of vehicles handled,</li> <li>➤ Significant changes to the wastes or waste quantities managed (e.g. new wastes that must be registered under the HWR),</li> <li>➤ Changes to EMA and/or applicable regulations (as indicated in s. 6), or</li> <li>➤ Better technologies that can be utilized, or</li> <li>➤ Newly introduced Best Management Practices.</li> </ul> </li> <li>• QP approval should be indicated by a signed certification on the plan.</li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<b>Compliance Verification:</b> <ul style="list-style-type: none"> <li>S. 7 (2) provides the authority to obtain a copy of the plan to determine if the plan has been reviewed, amended or replaced as required.</li> </ul>
2 (5)	<p>Within 3 months after September 1, 2013 and within 3 months of each fifth anniversary of that date, an association that has a plan for 2 or more facilities must</p> <p>(a) review the plan,</p> <p>(b) amend or replace the plan if necessary to ensure that the association has a plan that complies with subsection (3), and</p> <p>(c) have the reviewed, amended or replacement plan approved by a qualified professional.</p>	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>See procedure/guidance notes from s. 2 (4) above.</li> </ul> <b>Compliance Verification:</b> <ul style="list-style-type: none"> <li>See compliance verification notes from s. 2 (4) above.</li> </ul>
<b>3</b>	<b>Registration</b>	
3 (1)	<p>A person described in section 2 (1) must register by providing all the following information to a director in a form approved by the director:</p> <p>(a) the full legal name of the individual, partnership, corporation or other entity operating or planning to operate the facility;</p> <p>(b) the name, address and telephone number of an individual who is located at or near the facility and is the local contact for the facility;</p> <p>(c) the address of the facility and the legal description of the land on which the facility is located;</p> <p>(d) the address at which the plan that applies to the facility may be viewed or copied;</p> <p>(e) confirmation that the facility has a plan that complies with section 3, or is a member of an association that has a plan that complies with section 3 and the name, address and telephone number of that association;</p> <p>(f) any other relevant information the discharger wishes to provide.</p>	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>The registration form is available online: <a href="http://www.env.gov.bc.ca/epd/industrial/regs/vehicle/pdf/recycl_dismantl_form.pdf">http://www.env.gov.bc.ca/epd/industrial/regs/vehicle/pdf/recycl_dismantl_form.pdf</a></li> <li>All initial registrations should be received by September 1, 2008.</li> </ul> <b>Compliance Verification:</b> <ul style="list-style-type: none"> <li>Regional staff should identify facilities that have not registered.</li> <li>Inspections to verify compliance will normally be conducted as necessary or if complaints regarding a facility are received by the ministry. Inspections may also be conducted based on compliance priorities and the regional work plan.</li> </ul>
3 (2)	Registration under this section takes effect on the date a complete registration is received by a director.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>Registration takes effect on September 1, 2008 if a complete registration form has been received</li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		<p>by the ministry on or before September 1, 2008.</p> <ul style="list-style-type: none"> <li>Otherwise, the date of registration is the date the form is received and date stamped in Victoria (regardless if the facility operated before September 1, 2008).</li> </ul>
3 (3)	<p>A person registered under this section must provide a director with written notice within 30 days after</p> <p>(a) a change in information provided in the person's registration, or</p> <p>(b) ceasing to</p> <p>(i) operate the facility, or</p> <p>(ii) dismantle more than 5 wet vehicles in a calendar year.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Facilities should be instructed to provide notice by resubmitting the registration form and indicate the appropriate report type (updated registration or de-register) in part 1 of the form.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>Inspections will be conducted if complaints regarding a facility are received by the ministry. Inspections may also be conducted based on compliance priorities and the regional work plan.</li> </ul>
4	<b>Reporting by facility</b>	
4 (1)	<p>A person operating a facility that is not a member of an association must have a report prepared by a qualified professional on the matters described in subsection (2)</p> <p>(b)</p> <p>(a) for the period up to the date that is 2 years after the date of registration under this regulation, and</p> <p>(b) for each 2-year period after that date.</p>	<p><b>Procedures / Guidance:</b></p>
4 (2)	<p>A report under subsection (1) must</p> <p>(a) be in writing,</p> <p>(b) describe</p> <p>(i) how the wastes described in the plan for the facility were managed,</p> <p>(ii) whether the management of those wastes was in accordance with the plan, and</p> <p>(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and</p> <p>(c) be completed within 3 months after the end of each 2-year period described in subsection (1).</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>If the report is requested and obtained by ministry staff, compliance can be assessed by referring to the applicable regulation and by using the determination of compliance criteria in the <u>Guide for the VDRIEP Regulation</u>.</li> <li>Facilities operating on or before September 1, 2008 that do not register by that date, must complete a report within 3 months of the 2 year anniversary of their registration.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>S. 7 (2) provides the authority to obtain a copy of the report for determining compliance with the regulation.</li> </ul> <p><b>Information Only:</b></p> <ul style="list-style-type: none"> <li>ICBC may request these reports from facilities to ensure they are selling salvage to vehicle</li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
		dismantlers and recyclers that comply with environmental laws.
<b>5</b>	<b>Reporting by association</b>	
5 (1)	<p>An association that has prepared a plan for more than one facility must have a report prepared by a qualified professional on the matters described in subsection (2) (b)</p> <p>(a) for the period up to September 1, 2010, and</p> <p>(b) for each 2-year period after that date.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>An association must have a report prepared by a qualified professional for the period up to September 1, 2010, and for each 2 year period after that date, regardless of the date a facility represented by the association registers.</li> </ul>
5 (2)	<p>A report under subsection (1) must</p> <p>(a) be in writing,</p> <p>(b) provide the name and address of each facility to which the plan applies,</p> <p>(c) specify how many members of the association were audited for compliance with the plan and the identity of each of those members, and</p> <p>(d) describe</p> <p>(i) how the wastes described in the plan were managed by each facility audited,</p> <p>(ii) whether the management of those wastes was in accordance with the plan, and</p> <p>(iii) the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment, and</p> <p>(e) be completed within 3 months after the end of each period described in subsection (1).</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>If the report is requested and obtained by ministry staff, compliance can be assessed by referring to the applicable regulation and by using the determination of compliance criteria in the <u>Guidebook for the VDRIEP Regulation</u>.</li> <li>A report must be prepared for each 2 year period if the facility will be operating during that time. The report due date for associations is not linked to the registration dates of the facilities that it represents.</li> </ul> <p><b>Compliance Verification:</b></p> <ul style="list-style-type: none"> <li>S. 7 (2) provides the authority to obtain a copy of the report for determining compliance with the regulation.</li> </ul> <p><b>Information Only:</b></p> <ul style="list-style-type: none"> <li>ICBC may request these reports from associations to ensure that it works with vehicle dismantlers and recyclers that comply with the law.</li> </ul>
5 (3)	<p>An association that has at least 3 members must audit</p> <p>(a) one third of its members for a report under this section, and</p> <p>(b) each of its members at least once in the course of completing 3 consecutive reports under this section.</p>	<p><b>Procedures / Guidance:</b></p> <ul style="list-style-type: none"> <li>Each reporting period, an association with at least 3 members must audit one third of its members.</li> <li>Audits must involve determining how the wastes described in the plan were managed, verifying if wastes were managed according to EMA and subordinate legislation, and assess the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment.</li> </ul>

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
5 (4)	An association that has 2 members must audit (a) one member for a report under this section, and (b) each of its members at least once in the course of completing 2 consecutive reports under this section.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>Each reporting period, an association with 2 members must audit 1 of its members.</li> <li>Audits must involve determining how the wastes described in the plan were managed, verifying if wastes were managed according to the association plan, and assess the effectiveness of the management processes used for minimizing or eliminating the discharge of wastes to the environment.</li> </ul>
6	<b>Maintaining a plan</b>	
6	At all times, a person operating a facility that has its own plan, and an association that has a plan for 2 or more facilities, must maintain the plan, and amend it as necessary, so that if a person complies with the plan, the person also complies with the requirements of the Act and applicable regulations.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>Whenever there is a change to EMA or an applicable regulation, a person operating a facility must verify that the plan is in compliance and update the plan if it is not.</li> <li>S. 7 (2) provides the authority to get a copy of the plan for determining compliance with requirements to maintain and amend (as necessary) a plan.</li> </ul> <b>Enforcement:</b> <ul style="list-style-type: none"> <li>If a request for a plan is refused, a person or association would not be in compliance with this regulation and therefore liable to consequence under s. 8.</li> </ul>
7	<b>Records</b>	
7 (1)	A person described in section 2 (1) must keep, at the address required under section 3 (1) (d) for the person's registration form, an up-to-date copy of the plan that applies to the facility, and the report prepared under section 4 or 5, as applicable, in relation to the plan.	
7 (2)	On request of a director or officer, a person described in subsection (1) must produce the plan or report to the director or officer for inspection or copying.	<b>Procedures / Guidance:</b> <ul style="list-style-type: none"> <li>S. 7 (2) provides the authority to get a copy of the plan for determining compliance with the regulation.</li> </ul> <b>Enforcement:</b> <ul style="list-style-type: none"> <li>If a request for a plan is refused, the person would not be in compliance with this regulation and therefore liable to consequence under s. 8</li> </ul>
8	<b>Offences and Penalty</b>	

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
8 (1)	<p>A person described in section 2 (1) who is not a member of an association commits an offence and is liable on conviction to a fine of not more than \$200 000 if the person does any of the following:</p> <ul style="list-style-type: none"> <li>(a) fails to have a plan when required under section 2 (2);</li> <li>(b) fails to register with a director when required under section 2 (2);</li> <li>(c) has a plan that contains false or misleading information;</li> <li>(d) provides false or misleading information in a registration form;</li> <li>(e) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (4);</li> <li>(f) fails to have a report prepared when required under section 4 (1);</li> <li>(g) has a report prepared that <ul style="list-style-type: none"> <li>(i) does not comply with section 4 (2), or</li> <li>(ii) contains false or misleading information;</li> </ul> </li> <li>(h) fails to maintain the plan as required under section 6.</li> </ul>	<p><b>Procedures / Guidance:</b></p> <p>2 (1) A person that operates or plans to operate a facility that dismantles more than 5 wet vehicles in a calendar year must</p> <p>(a) either</p> <ul style="list-style-type: none"> <li>(i) have an environmental management plan for waste management, reduction or prevention, or</li> <li>(ii) be a member of an association that has an environmental management plan for waste management, reduction or prevention, and</li> </ul> <p>(b) register with a director under section 3.</p>
8 (2)	<p>An incorporated association, or each member of an unincorporated association, that does any of the following commits an offence and is liable on conviction to a fine of not more than \$200 000:</p> <ul style="list-style-type: none"> <li>(a) fails to have a plan prepared when the facilities to which the plan relates are required under section 2 (2) to have a plan;</li> <li>(b) has a plan that contains false or misleading information;</li> <li>(c) fails to have a reviewed, amended or replacement plan approved by a qualified professional within the period established by section 2 (5);</li> <li>(d) fails to have a report prepared when required under section 5;</li> <li>(e) has a report prepared that <ul style="list-style-type: none"> <li>(i) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or</li> <li>(ii) contains false or misleading information;</li> </ul> </li> <li>(f) fails to maintain the plan as required under section</li> </ul>	<p><b>Procedures / Guidance:</b></p> <p>2(5) Within 3 months after September 1, 2013 and within 3 months of each fifth anniversary of that date, an association that has a plan for 2 or more facilities must</p> <p>(a) review the plan,</p> <p>(b) amend or replace the plan if necessary to ensure that the association has a plan that complies with subsection (3), and</p> <p>(c) have the reviewed, amended or replacement plan approved by a qualified professional.</p>



SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	6.	
8 (3)	<p>A member of an association commits an offence and is liable on conviction to a fine of not more \$200 000</p> <p>(a) whether or not the association is incorporated, if the person</p> <p>(i) does not have a plan,</p> <p>(ii) fails to register with a director when required under section 2 (2),</p> <p>(iii) has a plan that includes false or misleading information, or</p> <p>(iv) provides false or misleading information in a registration form, and</p> <p>(b) if the association is incorporated and the association</p> <p>(i) fails to have a plan reviewed, amended or replaced when required under section 2 (5),</p> <p>(ii) fails to have a report prepared when required to do so under section 5,</p> <p>(iii) has a report prepared that</p> <p>(A) does not comply with section 5 (2), and with section 5 (3) or (4) as applicable, or</p> <p>(B) contains false or misleading information, or</p> <p>(iv) fails to maintain the plan as required under section 6.</p>	
8 (4)	<p>Subsection (3) (b) does not apply to a member if the member,</p> <p>(a) in relation to subsection (3) (b) (i), has a reviewed, amended or replacement version of the association's plan approved by a qualified professional when the association is required to do so under section 2 (5),</p> <p>(b) in relation to subsection (3) (b) (ii), has a report on the association's plan prepared under section 4 when the association is required to do so under section 5,</p> <p>(c) in relation to subsection (3) (b) (iii), when the association is required to have a report prepared that complies with section 5 (2), and with section 5 (3) or (4) as applicable, has a report prepared that</p> <p>(i) complies with section 4 (2), and</p> <p>(ii) does not contain false or misleading information, and</p>	

SECTION	REGULATORY REQUIREMENT	POLICY / PROCEDURE / CLARIFICATION
	(d) in relation to subsection (3) (b) (iv), maintains the association's plan as required under section 6.	

## 6. Authorization Management

Registration Form (Initial registration, updated registration and de-registration form)

Registration Form for the VDRIEP Regulation

Fees

No fees are payable under this regulation.

Security

No securities are required under this regulation.

## 7. Other Related Legislation

Environmental Management Act

Contaminated Sites Regulation

Hazardous Waste Regulation

Ozone Depleting Substances and Other Halocarbons Regulation

Waste Discharge Regulation

Petroleum Storage and Distribution Facilities Storm Water Regulation

Motor Vehicle Act

## 8. Compliance Promotion

June 2008: reminder to register letter mailed to facilities

January 2009: reminder to register letter sent by registered mail to facilities

Best Management Practices

Guidebook for the VDRIEP Regulation

Contacts & Resources

Stakeholder list – available upon request

See Qualified Professional Definition (Section 1) for links

## **9. Compliance and Enforcement**

The Ministry's Compliance and Enforcement Policy and Procedure should be consulted for compliance and enforcement activities.

## Appendix I

### *Staff Training PowerPoint Presentation – April 2008*

# Vehicle Dismantling and Recycling Industry Environmental Planning Regulation Training Session

April 2008

## Overview:

Not your usual  
Regulation!

## Expectation of MoE Staff

## What will we cover?

- A Short History
- Regulation Highlights
- Resources

## History

- Automobile Recyclers Association
- Recent compliance audits indicated some level of non-compliance in all operations
- ICBC

## Regulation Highlights What's this Reg all about?

- Environmental
  - Planning
  - Monitoring
  - Reporting
- Greater reliance on qualified professionals

## Who's Covered

- Any operation that dismantles more than 5 wet vehicles per year
- "Wet Vehicle" means a motor vehicle that
  - (a) is no longer used for transportation purposes, and
  - (b) has not been reduced to a steel hulk or to a steel hulk with only the plastic, fabric or foam components still attached.

## Applicable Regulations

- Hazardous Waste Reg
- Ozone Depleting Substances and Other Halocarbons Reg
- Petroleum Storage and Distribution Facilities
- Storm Water Reg
- Spill Reporting Reg

## Definitions

Association means an association of two or more facilities, that

- (a) prepares a plan for the purposes of this regulation, and
- (b) monitors and reports on compliance with the plan;

## Definitions

**Qualified professional**, in relation to a duty or function under this regulation, means an applied scientist or technologist specializing in an applied science or technology applicable to the duty or function, including, if applicable and without limiting this, agrology, biology, chemistry, engineering, geology or hydrogeology and who

## QP continued

- (a) is registered in British Columbia with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization, and
- (b) through suitable education, experience, accreditation and knowledge, may be reasonably relied on to provide advice within their area of expertise;

## Section 2 ~ Environmental Management Plan (EMP)

- Required for facilities that dismantle more than 5 wet vehicles in a calendar year must:
- (a) either (i) have an EMP for waste management, reduction or prevention, or (ii) be a member of an association that provides site specific EMP and
- (b) register with a director under section 3.

## Section 2 (2) ~Timing

- Existing facilities must have EMP by September 1, 2008 and register.
- New facilities must have EMP before beginning to operate.

## Section 2 (3) ~ Contents of the EMP

- EMP must be approved by a QP
- Covers storage, treatment and management of:
  - Ozone depleting substances;
  - Oils, brake fluids, solvents, fuels and other hydrocarbons;
  - Antifreeze
  - Lead and lead-acid batteries
  - Mercury switches
  - Windshield washer fluid

## Section 2 (4) and (5) ~ Plan Review

For a facility:

EMP must be reviewed within 3 months after each 5<sup>th</sup> anniversary of the registration date.

For an association that has a plan for 2 or more facilities:

EMP must be reviewed within 3 months after September 1, 2013 and within 3 months of each 5<sup>th</sup> anniversary of that date.

## Section 3 ~ Registration

- 3 (1) Lists required info (name, address etc.).
- 3 (2) Registration is effective on the date received by a director.
- 3 (3) Must provide within 30 days notification of change of information or if ceasing to operate.

## Section 4 ~ Reporting by Facility

- Every 2 years, must have report prepared in writing by QP containing the following information:
  - i) how wastes were managed
  - ii) if the management was in accordance with the plan, and
  - iii) the effectiveness of the management processes on reducing waste discharges to the environment.

## Section 5 ~ Reporting by Association

- Every 2 years, must have report prepared by QP Containing the following information:
  - i) Names and addresses of association members
  - ii) Members that were audited for compliance
  - iii) how wastes were managed by each facility
  - iv) if the management was in accordance with the plan, and
  - v) the effectiveness of the management processes on reducing waste discharges to the environment.

## Section 5 ~ Reporting by Association cont'd

- An association with at least 3 members must audit:
  - i) one third of its members for each reporting period, and
  - ii) each of its members at least once within 3 consecutive reporting periods

## Section 5 ~ Reporting by Association cont'd

- An association that has at least 2 members must audit:
  - i) one member for a report under this section, and
  - ii) each of its members at least once within 2 consecutive reporting periods

## VDR Flow Chart

### All Operators Must

- Register
- Plan QP
- Audit Report QP
- New Plan 5 years QP

### Non Member

- Register ✓
- Plan QP ✓
- Audit Report 2 yrs QP ✓
- New Plan 5 yrs QP ✓

## VDR Flow Chart

### Association – 2 Members

- Register ✓
- Plan QP ✓
- Audit Report QP – 1 Member for a report ✓
- Audit each member at least once in 2 consecutive report periods QP ✓
- New Plan 5 yrs QP ✓

### Association 3+ Members

- Register ✓
- Plan QP ✓
- Audit QP (min 1/3 members for a report) QP ✓
- Audit each member at least once within 6 yrs QP ✓
- New Plan 5 yrs QP ✓

## Section 6 Maintaining a Plan

In order to comply with the requirements of the Act and applicable regulations individual operators or associations must maintain and amend their plans as necessary.

## Section 7 Records

- Each operator must keep up-to-date plans and the most recent audit report at their registered address.
- Each operator at the request of a director or officer must produce the plan or audit report.

## Section 8 Offences

- Failure to have a plan
- Failure to register
- Plan that contains false or misleading information
- Registers false or misleading information
- Failure to amend, review, or replace plan
- Failure to report
- Failure to maintain a plan

## Resources

### Ministry Contacts:

Bob Konkin (250) 387-9463  
[Bob.Konkin@gov.bc.ca](mailto:Bob.Konkin@gov.bc.ca)


Alisa Williams (250) 356-9082  
[Alisa.Williams@gov.bc.ca](mailto:Alisa.Williams@gov.bc.ca)

### On the MoE Website\*:

- The Regulation
- Background Info (IP, Response to Comments, etc.)
- Guideline for industry
- Implementation Policy & Procedures (Admin and policy advice to staff)

<http://www.env.gov.bc.ca/epd/industrial/regs/vehicle/index.htm>



	Operational Policy Manual Environmental Protection Division	Section	Subsection
		2.0	2.08.02

**Name of Policy:** **Notice of Applications and Decisions by posting on the Ministry Website**

**Replaces:** This policy is new.

**Application:** Environmental Protection Division (EPD)

**Purpose:** The purpose of this policy is to provide guidance to EPD statutory decision makers when ensuring that the requirements of Section 4 of the Public Notification Regulation are satisfied.

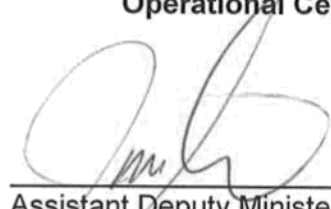
**Policy Statement:** In addition to the mandatory requirements of the Public Notification Regulation, Notice of Applications and Decisions by posting on the Ministry Website is encouraged. Posting of a Notice of Application or Decision may be posted on the EPD website directly by the Web Administrator, once approved by the statutory decision maker having authority for the particular application or decision. The format and content is the responsibility of the statutory decision maker, consistent with requirements of the Public Notification Regulation.

**References and Relationships:** **This policy is to be used with the procedures set out in policy 1.04.01 Web and Print Publishing Guidelines**

**This policy augments but does not replace the requirements of the Public Notification Regulation B.C. Reg. 202/94**

**EP Operational Policy 2.08.01 Public Notification of an Operational Certificate**

**Approval:**



Assistant Deputy Minister  
Environmental Protection Division

**Date:** June 8, 2012

**Contact Person:** Christa Zacharias-Homer or Chris Jenkins  
Regional Operations Branch Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

**Contact Person:** Alisa Williams and Diane Beattie, Environmental Management Analysts  
Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

**A. General:**

With reference to Section 4 of the Public Notification Regulation a copy of the same notice that is to be published in the local newspaper or posted at a local post office may also be posted to the EPD website.

For clarity, this also applies to a notice created by the statutory decision maker in order to fulfill a director's obligation with respect to providing notice of their decision under the Public Notification Regulation.

**B. Example Template (application):**

**Application Number:**

**Environmental Protection Notice**

Application for an Authorization to Discharge Waste under the Provisions of the *Environmental Management Act*

I, *<company representative name>*, *<name of applicant>*, intend to submit this application to the Director to authorize *<describe discharge>* from *<describe facility>*.


The land upon which the facility will be situated and the discharge will occur is located at *<as indicated on the application>*. The operating period for this facility will be *< as indicated on the application >*. The discharge will be *< as indicated on the application >* produced by *< as indicated on the application >*.

*<further description as contained in the application>*

Any person who may be adversely affected by the proposed discharge of waste and wishes to provide relevant information may, within 30 days after the last date of posting, publishing, service or display, send written comments to the applicant, with a copy to the Regional Director, Environmental Protection at *<appropriate regional office>*. The identity of any respondents and the contents of anything submitted in relation to this application will become part of the public record.

Dated this *<>* day of *<>*.

Contact Person: *<company representative name>* Telephone Number: *<###-###-###>*

	<b>Operational Policy Manual</b> <b>Environmental Protection Division</b>	<b>Section</b>	<b>Subsection</b>
		2.12	2.12.02

**Name of Policy:** **Substitutions under the Landfill Gas Management Regulation**

**Replaces:** None

**Application:** This policy is intended to be applied by Environmental Protection Division staff when reviewing substitution requests submitted under the Landfill Gas Management Regulation (LFGMR).

**Purpose:** The policy summarises the intent and scope of the LFGMR providing background information for SDMs reviewing requests for substitutions received under the LFGMR.

**Policy Statement:** The LFGMR that came into force in 2008 contains a provision for substitution that can be submitted under this LFGMR. The policy provides information on the scope of the LFGMR and conditions that should be met by substitution requests in order to meet the intent of the LFGMR.

**References and Relationships:** *Greenhouse Gas Reduction (Emissions Standards) Statutes Amendment Act;*  
*Environmental Management Act*

**Approval:**

  
 Assistant Deputy Minister  
 Environmental Protection Division

**Date:** May 11/2016

**Contact Person:** Natalia Kukleva, Environmental Management Officer  
 Environmental Standards Branch

Effective Date if different than Approval Date:
Original Date of Policy:
Date of Policy Amendment(s):

## Introduction

The LFGMR came into force in 2008. Landfill sites generating methane in excess of the generation threshold were required to install and ensure proper operation of landfill gas capture equipment with a capture efficiency target of at least 75% of generated gas.

The LFGMR incorporated a phased-in approach to take into account the economic feasibility of implementing landfill gas management policy by landfill owners. It contains a time lag of seven years for the regulatory requirements to come in force.

## Legislative authority for substitutions

The LFGMR contains sections 19 and 20 allowing for substituted requirements to be granted under this LFGMR. Specifically, section 19 states that the minister or a director, on his or her own initiative or a director, on application under section 20, *“may, by order, substitute a different requirement for a requirement contained in this regulation if, in the individual case, the minister or director considers that*

- (a) the substitution is necessary to protect the public or the environment, or*
- (b) the intent of the regulation is met by the substituted requirement.”*

The power to issue substitutions does not include the power to eliminate existing, or add additional requirements, to the LFGMR. The power is limited to replacing one requirement with another.

The director may issue none, some, or all of the requested substitutions. Also, substitution can be granted for a definite or indefinite period of time, and additional terms and conditions can be included if deemed appropriate. For example, the director could approve a substitution request to extend the compliance deadline from 7 years to another date deemed appropriate.

The LFGMR does not specify the timeframe for issuing a decision on an application for substitution. Decisions should generally be made within a reasonable timeframe once all necessary information has been obtained.

## Intent of the LFGMR

The intent of the LFGMR and associated guidelines are:

### **1. To maximize reductions of landfill gas emissions with the goal of meeting the targets of the *Greenhouse Gas Reduction Targets Act*.**

To meet the intent of the LFGMR all landfills captured by the LFGMR are expected to design and install **active** LFG collection systems to collect LFG. Installation of an **active** gas collection system was determined as the most effective and reliable technology that should be used to achieve the above intent for the following reasons:

- Best capture efficiency rate.
- Reliable performance.
- Provides opportunity for beneficial use of LFG.
- Reduces the potential for adverse health effects and the potential safety hazards (e.g. explosion hazards, odor and toxicity problems) and improves local air quality.

The LFG management system was prescribed by the LFGMR and further refined in the Landfill Gas Management Facilities Design Guidelines (Guidelines). The LFGMR requires that the system be designed and operated in accordance with the Guidelines and certified by a Qualified Professional.

### **2. To identify potential opportunities to increase landfill gas recovery and its beneficial use.**

The LFGMR and Guidelines require that all captured LFG must undergo a reduction in global warming potential as it relates to the methane component of the gas. Flaring is a prescribed method of LFG destruction. Other beneficial uses may be allowed if they result in reducing methane emissions as much as or more than flaring the landfill gas.

The LFGMR encourages considering various beneficial use options for recovered landfill gas while acknowledging site-specific constraints.

## Substitutions under the LFGMR

A substitution provision in the LFGMR was included to provide some flexibility in the design of the LFG collection system described in the LFGMR and guidance, consistent with the intent of the regulation stated previously. Potential valid reasons to justify the requests for substitutions can include:

- Advances in design of **active** LFG collection systems from those described in the guidelines.

- New data obtained through landfill site investigation and field study that might affect the LFG generation projections and collection process (such as correction of modelled LFG quantities and system design using direct field investigations).
- Site-specific issues (such as deep or shallow sites, climatic variations, etc.).

Substitutions are expected to:

- Concentrate on different approaches to the active landfill gas collection system, and not completely substitute it with other technologies.
- Meet or exceed the requirements outlined in the LFGMR. The design and performance objectives/standards required under the LFGMR are outlined on Table 1.1, page 12, of the [Guidelines](#).

### Note of clarification on alternative GHG emission reduction measures

The Ministry developed [Guidance for Best Management Practices](#). They describe a variety of different measures that can be effectively implemented to help reduce overall GHG emissions from landfills, e.g. biocovers. The Best Management Practices:

- are complementary to the **active** LFG collection system where required by the LFGMR, and not to be used as an alternative or substituted approach to those systems on regulated landfills.
- can be used as recommended GHG emission reduction measures at small landfill sites where **active** collection systems are not required.

### Scope of the LFGMR

The LFGMR does not contemplate the different solid waste management options for potential future methane emission reductions such as organic waste diversion or zero waste programs. This LFGMR mainly deals with the waste that has been already landfilled or is going to be landfilled before all those programs can be implemented in a full scale.

### Submission of a substitution

The LFGMR states that “an owner or operator of a landfill site may apply for a substitution by filing with a director a completed application in the form specified by the director”. A pre-application meeting with the ministry staff is strongly recommended to ensure that applicants are aware of their responsibilities.

An application request is expected to be submitted on the attached form (see attached form).

A director may or may not require additional studies or research to assess the proposed substitution. A director may request additional information if the submitted information would be considered not sufficient for the evaluation of the application.

### **Compliance and Reporting on a substitution**

Substitution approval may contain additional monitoring and performance tracking requirements imposed on a landfill owner. Reporting can be required as necessary or on annual basis. If it is required annually it can be submitted separately or included in annual landfill reports.

Section 14 of the LFGMR provides authority to require the proponent to not only include information listed in this section, but also to include other information if requested in writing by the director.



# Attachment 1 - Substitution Form

## Application to Substitute a Requirement in the Landfill Gas Management Regulation under the *Environmental Management Act*

### ENVIRONMENTAL PROTECTION NOTICE

Waste Discharge Authorisation No.: insert registration number

company/individual name of mailing address , is applying to the Director, *Environmental Management Act* to substitute a requirement in the Landfill Gas Management Regulation (Regulation) as it applies to a landfill site located at street address or commonly identified location.

This application asks the Director to make the following substitution(s):

Section of the Regulation	Current Requirement in the Regulation	Requested substitution

The intent of the Regulation will be met by:

*provide justification for the requested substitution*

Any person who may be adversely affected by the proposed substitution and wishes to provide relevant information may, within 30 days after the last date of posting, publishing, service or display, send written comments to the applicant, with a copy to the Director, Environmental Protection at << ROB staff to insert appropriate mailing/e-mail address>>

The identity of any respondents and the contents of anything submitted in relation to this application will become part of the public record.

Date: \_\_\_\_\_, 20\_\_\_\_. \_\_\_\_\_

(Signature)

Contact person\_\_\_\_insert name \_\_\_\_\_ Telephone No.\_\_\_\_insert tel no. \_\_\_\_\_

## Additional Information for an Application to Substitute a Requirement in the Regulation

Until such time as the Director has made a decision on this application, full compliance with any current authorizations and all the requirements of the Regulation is required.

<b>1.</b>	<b>Applicant Information</b>	
a.	Name (registered company name, partnership or individual)	
b.	Registered Address, City and Postal Code	
c.	Phone number	

<b>2.</b>	<b>Contact Person</b>	
a.	Name	
b.	Title/Position	
c.	Mailing Address	
d.	Email address	
e.	Telephone number	
f.	Fax number	

<b>3.</b>	<b>Background Information</b>	
	Current registration number	
	Type of waste	
	Location of facility	

<b>4.</b>	<b>Substitution Request</b>	

<b>5.</b>	<b>Rationale for substitution</b>
a.	In summary, the reasons for the application for the substitution are (list all):
b.	The intent of the Regulation will be met with the proposed change(s) because:
c.	The public and the environment will be protected with the proposed substitution to the Regulation because:
d.	Additional information supporting the substitution is attached separately. This may include, but not limited to, supporting documentation on the site location, pollution control works, methods, contaminant properties, ambient environmental conditions, economics, etc.

Complete Section 6 after Publication and Notification as required by the Director.

6. Publication and Notification	
a.	Date application was posted at all main entrances to the site
b.	Date and name of newspapers where notice of application was published
c.	If the Director required you to serve a copy of the application on individual(s) potentially impacted by the substitution application, please list the names, mailing addresses and the dates that they were served. Attach separate page if necessary.
d.	If the Director required you to post a copy of the application at a branch post office of Canada Post Corporation, please indicate the date and location this posting occurred.
e.	If additional consultation for the proposed substitution occurred, list dates and events. Summarize concerns and resolutions if applicable. Attach separate page if necessary.

**Form completed by:**

Signature\_\_\_\_\_

Print name\_\_\_\_\_

Title:\_\_\_\_\_

Dated:\_\_\_\_\_

Mail this application form to:

Director, Environmental Management Act

<<ROB staff to insert appropriate address>>

# MINISTRY OF ENVIRONMENT STATUTORY DECISION MAKING HANDBOOK

*Environmental Management Act and Integrated Pest Management Act*



VERSION 1

MAY 2013



Ministry of  
Environment

# Table of Contents

Introduction .....	4
About this Document.....	5
Purpose of this Document .....	5
Scope of this Document.....	7
 Chapter 1: Key Legal Concepts.....	8
1.1 Statute Law .....	8
1.2 Administrative Law .....	9
1.3 Duty to Consult with First Nations.....	10
 Chapter 2: Statutory Decisions .....	12
2.1 Ministry Legislative Context.....	12
2.2 Role of the Statutory Decision Maker.....	13
 Chapter 3: Responding to an Authorization Request .....	15
<i>Smooth Operator</i> .....	17
3.1 Pre-Application .....	18
3.2 Preparation of the Application .....	20
3.3 Application .....	22
3.4 Ministry Review .....	22
3.5 Making the Decision.....	23
<i>Airshed Showdown</i> .....	27
 Chapter 4: Intervening .....	29
4.1 Gathering Information .....	30
4.2 Ministry Review .....	32
4.3 Making the Decision.....	33
<i>Win-Win</i> .....	36
 Chapter 5: Mechanisms for Reviewing Decisions .....	38
5.1 Environmental Appeal Board Hearing .....	38
5.2 Flowchart of process followed by EAB.....	39
5.3 Role of the Statutory Decision Maker in an EAB Hearing .....	40
5.4 Judicial Review .....	41

Definitions.....	42
Table I: <i>Effluent Permitting Process and Roles</i> .....	43
Appendix I: Criteria for Providing Written Reasons.....	45
Appendix II: Information Sources .....	46

# Introduction

The Ministry of Environment provides leadership in ensuring a natural legacy for future generations and supporting positive economic outcomes for British Columbia. Through partnerships with all levels of government, First Nations, the private sector and communities, the Ministry works to enhance the stewardship of water, land and air resources, and advance the sustainable use of environmental resources.

In order to accomplish this, the Ministry administers numerous statutes established by government to protect the environment, human health and public safety. Many of these statutes authorize ministry staff to make decisions. They are called 'Statutory Decision Makers'. These decision makers respond to requests which permit, restrict or refuse the undertaking of a wide variety of economic activities or they may intervene, requiring certain activities to be undertaken.

## Two Types of Decision Making Processes



To make a decision, the Statutory Decision Makers must consider a variety of factors including risk to the environment, human health or public safety, use of technology to mitigate pollution, and potential for community impact.



## About this Document

This guide describes the unique role of Statutory Decision Makers and the processes they use in making statutory decisions under the *Environmental Management Act (EMA)* and the *Integrated Pest Management Act (IPMA)*.

**Chapter 1:** discusses key legal concepts related to statutory decision-making.

**Chapter 2:** provides the ministry legislative context in which decisions are made and the role of decision makers.

**Chapters 3 and 4:** describe the processes followed by Statutory Decision Makers when responding to an authorization request, or when intervening in a regulatory matter.

**Chapter 5:** outlines the mechanisms available to parties who are aggrieved by the decision of a Statutory Decision Maker (SDM).

Finally, for easy reference, Appendix II lists all of the sources of further information mentioned elsewhere in the document.

## Purpose of this Document

The purpose of this document is to:

- provide guidance to staff carrying out their duties as Statutory Decision Makers;
- provide a framework for discussion around the various considerations within the decision;
- help establish a transparent and defensible process in decision making; and,
- enhance consistency in how site specific decisions are made across the province.

**In 2010, the Honourable Barry Penner, Minister of Environment, commented in the legislature on the independence and professional discretion of Statutory Decision Makers within the ministry.**

“In the case of Kamloops, those people that made the decision actually live in Kamloops, their children live in Kamloops, and their children breathe the air. Why would they make that decision? Well, because they're trained professionals. One is a chemical engineer with 14 years' experience. Another is an air quality meteorologist. They looked at the data and concluded that with respect to the proposal for Kamloops, the emissions would amount to that of a single wood-burning stove.”

“In my case, I just have a bachelor of arts degree in economics and political science and a law degree. But I would rather put the trust of these decisions in the hands of people who are chemical engineers, air quality meteorologists ...with 25 years of experience. Those are the people in the Ministry of Environment who made the decision for the air emissions permit in Kamloops. Would you rather put your judgment in place of theirs?”

This document will also help other interested parties understand the processes and considerations employed by Statutory Decision Makers.

These parties include:

- ministry staff who support the decision makers; and
- members of the Ministry's Executive team.

Describing the Statutory Decision Maker's role in administering fair, predictable and consistent decisions, provides greater transparency in, and understanding of, those decisions.

The information in this document should be used to guide SDMs in making informed and balanced statutory decisions that ensure the protection of human health, public safety and the environment. SDMs are expected to put their minds to all relevant factors, including those provided in this guidance document when making their decisions.

This document **does not impair** the professional judgment, discretion and autonomy exercised by ministry Statutory Decision Makers. It is complementary to administrative law training, First Nations Consultation guidelines, the Ministry's Compliance Management Framework, and the Compliance and Enforcement Policy and Procedure.

## Scope of this Document

This document is relevant to all decisions under the *Environmental Management Act* and the *Integrated Pest Management Act*. This document is also relevant to issuing a licence, certificate or permit under the *Integrated Pest Management Act*.

### Definition of “Decision”

<i>Environmental Management Act</i>	<i>Integrated Pesticide Management Act</i>
Section 99 defines a “decision” as:	Section 14(1) defines a “decision” as:
(a) making an order,	(a) making an order, other than an order under section 8 [ <i>minister's orders</i> ];
(b) imposing a requirement,	(b) specifying terms and conditions, except terms and conditions prescribed by the administrator, in a licence, certificate or permit;
(c) exercising a power except a power of delegation,	(c) amending or refusing to issue, amend or renew a licence, certificate or permit;
(d) issuing, amending, renewing, suspending, refusing, cancelling or refusing to amend a permit, approval or operational certificate,	(d) revoking or suspending a licence, certificate, permit or confirmation;
(e) including a requirement or a condition in an order, permit, approval or operational certificate,	(e) restricting the eligibility of a holder of a licence, certificate, permit or pest management plan to apply for another licence, certificate or permit or to receive confirmation;
(f) determining to impose an administrative penalty, and	(f) determining to impose an administrative penalty;
(g) determining that the terms and conditions of an agreement under section 115 (4) [ <i>administrative penalties</i> ] have not been performed.	(g) determining that the terms and conditions of an agreement under section 23 (4) [ <i>administrative penalties</i> ] have not been performed.

While these two respective sections categorically *define* what a decision is, the actual decisions themselves are found throughout the Acts and the regulations. If a party is aggrieved by one of those decisions, the decision may be appealable to the Environmental Appeal Board (EAB). If a decision is not appealable to the EAB, the party might ask the courts to determine whether the decision is eligible for a judicial review.

Although the Minister of Environment is granted certain decision-making powers under these Acts, this document does not apply to decisions made by the Minister. Furthermore, this document also does not apply to decisions regarding emergency response powers because those decisions are made to address exigent circumstances related to risks to human health, public safety and the environment.

# Chapter 1: Key Legal Concepts

Statutory Decision Makers are trained in the fundamentals of the law that apply to their unique role. An overview of the principles of statute law, administrative law and the duty to consult with First Nations is provided in this chapter.

## 1.1 Statute Law

Statute law is the body of law that has been written down and has passed through the legislative process. The *Environmental Management Act* and the *Integrated Pest Management Act* are examples of statutes. The following are some basic rules about interpreting statutes. These rules also apply to the regulations and codes of practice under those statutes.<sup>1</sup>

---

**Rule #1 Apply the law as it was intended.** The B.C. Legislature creates the law, and therefore only the Legislature's intentions are relevant. The goal when reading a statute is to determine the Legislature's intentions from the wording of the statute. Anyone else's intentions (including those of any government official or non-government representative who may have been involved in drafting the statute) are irrelevant.

**Rule #2 Plain meaning.** Whenever possible, apply the plain and ordinary meaning of the words, as determined from their context and the general spirit and intent (i.e., the purpose and object) of the statute.

**Rule #3 Common sense.** If applying the plain and ordinary meaning of the words in the statute would lead to an utterly absurd result (i.e., one that could not possibly have been the intent of the Legislature), apply – with caution – any secondary meaning the words are reasonably capable of bearing which will satisfy the purpose and object of the statute.

**Rule #4 Be fair and reasonable.** Generally, any ambiguities (double meanings created by unclear language) in the statute should be resolved in favour of the person most directly affected by the statute, to the extent possible, while still satisfying the spirit and intent of the statute.

**Rule #5 All the sections have meaning.** Do not interpret one section of the statute at the expense of another i.e., in such a way that we render another section meaningless.

**Rule #6 Point in time.** Unless the law specifically provides otherwise, use the statute that was in effect at the time a contravention occurred. This might not necessarily be the statute that is in effect now.

---

<sup>1</sup> “.... the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act and the intention of Parliament.” – *Driedger's modern principle*

## 1.2 Administrative Law

Administrative law is a body of common law<sup>2</sup> that establishes guidelines for the exercise of statutory decision-making powers. This law addresses both the procedures by which a decision is made, and the substance of the decision itself. Administrative law applies to the actions of government officials, establishing rules that limit their authority. It also establishes the remedies that are available when government officials exceed those limits.

Program staff should consider the following principles when exercising their statutory powers and authorities:

- **Consistency and flexibility:** In most enactments, a balance is struck between the desire for consistency and the desire for flexibility. For example, since BC's environmental legislation regulates everything from wildlife conservation areas to flood hazard management infrastructure to landfills, it is not practical to try to prescribe all requirements for each of these areas. Therefore, the consistency that we may desire is traded for a significant amount of flexibility (in the form of discretionary authority).
- **Discretion:** Discretion involves the idea of choice. It is the professional judgment of the Statutory Decision Maker which is rooted in knowledge and experience. Discretion is important for many reasons. For example, when a detailed set of rules is needed for authorizing a particular activity, discretion is useful for customizing the law to individual circumstances. In other words, the Statutory Decision Maker uses their discretion to fairly and appropriately apply the law.

### Principles of Natural Justice:

- the duty to act in good faith and without bias in making the statutory decision;
- The duty to give each party an opportunity to know the information upon which the decision will be based and respond to that information; and
- for the person who hears the case to decide.

The Statutory Decision Maker must be able to exercise a decision making authority freely. If constraints are placed on a decision maker to such a degree that they no longer feel able to make an independent decision, then the Statutory Decision Maker is said to be "**fettered**". The decision must reflect the judgment of the Statutory Decision Maker.

It is the responsibility of the Statutory Decision Maker to apply their discretion, and avoid succumbing to any external pressure. It is expected that there will be strong opinions surrounding most decisions. Government ministries develop policies, guidelines and interpretive bulletins in an effort to treat all parties consistently, and to support **unfettered decisions** based on the specific facts of each authorization request or issue needing government intervention.

The Statutory Decision Maker must ensure that only the information relevant to the decision is considered and that this information is given an appropriate weight. Weighing evidence is part

---

<sup>2</sup>Common law is law based on precedent which is set and refined by decisions of courts and similar tribunals.

of the fact finding process. When an SDM has to decide an issue, the SDM will have to weigh the evidence and decide which evidence is most convincing, in order to make findings of fact. Findings of fact are found on a balance of probabilities: on the basis of what is most likely or more likely than not. Weighing evidence is an assessment of the extent to which the evidence is both reliable and persuasive. Reliability often goes to the source of the evidence, while persuasiveness goes to its strength, relative to other contrary evidence, if any.

There is no policy, person, or board of people that can lawfully compel a Statutory Decision Maker to arrive at a particular decision outcome. Below is an excerpt from the training manual of the Ministry of Environment's *Foundations of Environmental Regulatory Law* course. This excerpt describes the relationship between policy and the discretion of a Statutory Decision Maker which, in this case, happens to be a tribunal.

“...tribunals must ensure that their decisions are not simply a blind application of a policy laid down in advance. In legal terms, the policy is “fettering the discretion” of the tribunal. By failing to keep its “mind ajar”, or by “shutting its ears” to an application, the tribunal effectively forecloses its participation in the decision-making process, and so breaches the principles of natural justice that “he/she who hears the case must decide the case”. Therefore, while a policy or rule may be adopted which effectively decides “normal” cases, the tribunal must ensure, first, that the rule or policy is itself proper, and, second, that the tribunal retains **a willingness to consider** each case.”<sup>3</sup>

For more information about administrative law, see the Ministry of Environment's *Foundations of Environmental Regulatory Law* course.

## 1.3 Duty to Consult with First Nations

The courts have held that governments in Canada have a legal duty to consult with First Nations whenever they are contemplating decisions or actions that could potentially impact treaty rights or aboriginal rights (including title), claimed, proven or asserted. Aboriginal and treaty rights were recognized and affirmed in Section 35(1) of the *Constitution Act, 1982*. The courts continue to clarify the nature of existing aboriginal and treaty rights and, consequently, define the legal relationship between the Provinces and Territories with First Nations.

As a result, government decision makers have legal obligations to consider and potentially accommodate claimed aboriginal rights and title which might be impacted by decisions. Moreover, decision makers are required to give notice where decisions or actions could potentially infringe proven aboriginal rights (including title) or treaty rights. No infringements can be justified without consultation occurring.

The responsibilities with respect to such consultation are as follows:

---

<sup>3</sup> Foundations of Environmental Regulatory Law: September 2012 version, Module 2, Chapter 5, page 62

- **Government decision makers** with authority to make decisions about provincial land or resources are responsible for ensuring appropriate and sufficient consultation and accommodations. Consultation for complex projects involving multiple ministries are often led by specialists within another ministry on behalf of all Statutory Decision Makers involved in the project.
- **Applicants** (any party, including industry, local governments, federal agencies and Crown Corporations, seeking decisions from the Province in support of activities related to land or resource development) are encouraged to engage First Nations as early as possible when seeking a decision. In some cases, the Province may delegate certain procedural aspects of consultation to applicants. Applicants are often in a better position compared to the Province, to exchange information about their decision requests and directly modify plans to mitigate any concerns.
- **Costs** to participate in the process are the responsibility of each party. The courts have yet to rule on assigning costs for consultation. In limited circumstances, such as the environmental assessment process, the province will provide limited financial support directly to First Nations to help off-set consultation participation costs. Capacity funding for consultation may also be provided in Strategic Engagement Agreements made with First Nations, or consultation processes built into revenue sharing agreements. The Ministry of Aboriginal Relations and Reconciliation is the lead agency on behalf of the provincial government.

The BC government has prepared a document entitled *Interim, Updated Procedures for Meeting Legal Obligations When Consulting First Nations* to explain the legal obligations with respect to the duty to consult. The document also outlines an approach to consulting and accommodating First Nations where a proposed decision or activity may affect claimed or proven aboriginal rights (including title) or treaty rights.<sup>4</sup>

---

<sup>4</sup> For more information about the duty to consult First Nations go to [http://www.gov.bc.ca/arr/reports/down/updated\\_procedures.pdf](http://www.gov.bc.ca/arr/reports/down/updated_procedures.pdf)

**“Aboriginal Rights”** are practices, customs or traditions integral to the distinctive culture of the First Nation claiming the right. A practice undertaken for survival purposes can be considered integral to a First Nation’s culture. Some examples of aboriginal rights are hunting, fishing, and gathering plants for traditional medicines and spiritual ceremonies. Aboriginal rights may be connected to a particular piece of land, and are generally not exclusive.

**“Aboriginal title”** is a subcategory of aboriginal rights that has its own test for proof. It is a unique interest in land that encompasses a right to exclusive use and occupation of the land for a variety of purposes. Those uses must not be inconsistent with the nature of First Nation’s historical attachment to the land. A claimant must prove exclusive occupation of land prior to sovereignty.

# Chapter 2: Statutory Decisions

## 2.1 Ministry Legislative Context

The Ministry of Environment has a mandate to protect human health and environmental quality by:

- regulating discharges to the air, land and water;
- promoting environmental stewardship with partners;
- responding to high-risk environmental emergencies;
- reducing and removing toxins and waste that contaminate the land, air and water;
- ensuring the use of integrated pest management practices;
- regulating pesticides; and
- monitoring and reporting on environmental quality.

To achieve this mandate, the ministry is responsible for the implementation and enforcement of the following statutes and their accompanying regulations:

***Environmental Management Act:*** regulates industrial and municipal waste discharge, pollution, air quality, hazardous waste and contaminated site remediation, as well as other general matters. It provides power to correct detrimental environmental impacts and to respond to environmental emergencies.

A primary feature of the *Environmental Management Act* is that it targets regulatory effort on higher-risk discharges, and enables results-based regulation of waste management in the province. By way of the Waste Discharge Regulation (WDR) under *EMA*, only prescribed industries, trades, businesses and activities require authorizations for waste discharges. Those generally considered low to medium risk have been designated as discharges that can be authorized by way of regulation or code of practice as opposed to site-specific permits or approvals. In theory, only high risk or unique prescribed industries, trades, businesses and activities need permits or approvals.

***Integrated Pest Management Act:*** regulates the sale, use and handling of pesticides in the province and requires an integrated approach to managing pests. This Act also targets regulatory effort based on risk, and enables results-based regulation of pesticide use. Only pesticide uses with an elevated potential to create an adverse effect require an authorization from the Ministry.

Given that permits are focused on higher-risk activities, the ministry wants to emphasize the importance of the current processes and best practices which ensure that those statutory decisions are made with a high degree of transparency, consistency and fairness.<sup>5</sup>

---

<sup>5</sup> The Division has operational policies such as the Setting Standards, Guidelines and Policies; Best Available Technology Policy; Financial Securities Policy; Procedures for meeting FN Consultation; etc. These can be found at: <http://www.env.gov.bc.ca/epd/policy/manual/index.htm#1>



## 2.2 Role of the Statutory Decision Maker

Statutory Decision Makers must be impartial and independent. They are required to make decisions fairly and in accordance with the applicable legislation. They cannot be fettered in the exercise of their statutory powers; they must make decisions independently, free from undue influence of any party within or external to the Ministry. Furthermore, a Statutory Decision Maker's duty to exercise their legislative authority always trumps their duty, as an employee, to follow ministry policy.

- Laws are rules intended to apply to everyone, equally, in all circumstances.
- Policy is supervisory direction intended to apply to everyone, within reason, in a normal range of circumstances.

A few Statutory Decision Makers are granted decision making authority directly from the Acts. Most are **delegated**<sup>6</sup> their decision making authority by a Director under the *Environmental Management Act (EMA)* or by the Administrator under the *Integrated Pest Management Act (IPMA)*. The Minister of Environment may also delegate some or all of their decision-making powers to Statutory Decision Makers in accordance with the provisions of the Acts.

These designated or delegated individuals have in-depth knowledge and specialized technical expertise required to make the types of decisions arising from the legislation. These individuals typically occupy the position of Executive Director, Administrator, Regional Director, Section Head or Pesticide Officer. They are supported by staff in the Environmental Management and Environmental Quality sections and Integrated Pest Management Program.

In broad terms, statutory decisions fall into two categories:

**Responding to a Request:** A decision maker is approached by a party requesting an authorization (eg. a permit) or an exemption from a general prohibition to carry out a regulated activity. The role of the Statutory Decision Maker when responding to an authorization or exemption request is to advise the applicant of all the statutory and technical requirements, ensure sufficient consultation is conducted with affected parties, review the application package, and then decide whether to grant the request.

**Intervening:** A decision maker is made aware of a situation where there is potential risk to human health, public safety or the environment. The role of the Statutory Decision Maker when intervening is to gather all relevant information, evaluate that information and decide how best to address the issue.

The processes followed by Statutory Decision Makers in each of these situations are described in detail in Chapters 3 and 4.

---

<sup>6</sup> Delegate (verb): to grant someone a statutory power that the grantor has.

If a person, company or agency is aggrieved by either of these types of decisions, they can file an appeal with the Environmental Appeal Board (EAB) or, if the decision falls outside of the EAB's jurisdiction, file for a judicial review with the BC Supreme Court. Statutory Decision Makers are usually asked to demonstrate they had jurisdiction to make the decision, describe the administrative process they followed and explain their rationale behind the decision. The appeal and judicial review processes are described in detail in Chapters 5 and 6.

Given the impact of statutory decisions, the role of the Statutory Decision Maker is not to be taken lightly. The following is an example where the EAB has noted the difficult balancing act performed by Statutory Decision Makers in this 2006 decision relating to the *Environmental Management Act*:

***Excerpt from the EAB decision on the Gibraltar Mines Appeal***

[108] There is a tension inherent in this scheme. The tension is between protecting the environment and authorizing the introduction of waste into that same environment. Although the government has a broad goal or policy of protecting the quality of the environment for present and future generations, it is also faced with a society that generates a great deal of waste that needs to be disposed of. This waste includes "effluent" that, by definition, may injure or be capable of injuring the health or safety of a person, property or a life form, or may damage or be capable of damaging the environment. How can this waste be disposed of in a manner and still protect the environment?

[109] The Panel finds that this *Act*, like its predecessor the *Waste Management Act*, reflects a policy of compromise. This policy was described by the BC Supreme Court in *BC Minister of Environment, Lands and Parks (MELP) v. Alpha Manufacturing* (1996), D.L.R. (4<sup>th</sup>) 688, as follows:

... it is abundantly clear from the *Waste Management Act* as a whole that it represents the legislative policy of controlling, ameliorating and where possible, eliminating the deleterious effect of pollution on the environment in a broad sense. The means adopted are in great measure the provision of permits and approvals before potentially polluting activities can be undertaken.

[110] On appeal, the Court of Appeal expressly agreed with the conclusions above (*British Columbia (Minister of Environment, Lands and Parks) v. Alpha Manufacturing Inc.*, (1997), 150 D.L.R. (4<sup>th</sup>) 193 (B.C.C.A.)).

[111] Thus, the *Act* is not an example of a zero tolerance, or zero harm approach. Permits may be issued allowing waste into the environment (defined as the air, land, water and all other external conditions or influences under which humans, animals and plants live or are developed). The environmental impact of the waste is to be controlled, ameliorated and, where possible, eliminated.

[112] It appears that the underlying rationale is that the environment can assimilate, dissolve, treat or otherwise deal with wastes within certain limits that do not lead to unacceptable conditions or harm. Thus, one can use the environment's assimilative capacity within limits that do not lead to unacceptable results. This is what the Director and Gibraltar say will happen to the discharge in the present appeal. The Xats'ull disagree.

*2006-EMA-006(a) Xats'ull First Nation v. Director, Environmental Management Act (Gibraltar Mines Ltd., Third Party)*

## Chapter 3: Responding to an Authorization Request

In the Ministry's Compliance Management Framework, decisions to approve, amend or refuse an authorization fall within the "setting a regulatory requirement" category of its compliance model.

Under *EMA*, requests for authorizations are typically made by companies, municipalities and other government ministries. Authorizations take a variety of forms: they can be permits, licences, certificates, approved plans, etc. For example:

- a Section Head receives a request from a company for a permit to discharge diluted amounts of a pollutant from an industrial operation into a waterway;
- a Regional Director receives a request from a municipality for an operation certificate after it has developed a waste management plan;
- a Director receives a request from a company for the issuance of a certificate of compliance with respect to the remediation of its contaminated site; or
- an Executive Director receives a request from another ministry for an open burning approval as part of a forest fire fuel reduction program.

Effluent discharge authorizations for mining projects are particularly complex. *"The Effluent Permitting Process under EMA: An Overview for Mine Project Applicants"* is the primary guidance document for those types of applications.

Under *IPMA*, parties request authorizations to either sell pesticides or to apply pesticides. A "certificate" is an authorization that is awarded as a result of the applicant earning a specific score on a product knowledge and safety test. This type of decisions has very little room for a Statutory Decision Maker to apply their discretion.<sup>7</sup> If the applicant meets the listed criteria for the certificate then the application will (likely) be approved. For example:

- a Pesticide Licence Officer receives notification that a company has achieved an acceptable test score and paid the required certificate fee. The pesticide officer then issues a certificate to the company authorizing it to apply pesticides to its apple orchard.

### Ministry's Vision for Setting Regulatory Requirements

Regulatory requirements will be set in a manner that:

- best achieves the desired environmental outcomes;
- can be readily understood and complied with by the regulated parties; and
- balances the social and economic costs associated with compliance.

Ministry of Environment  
Compliance Management  
Framework, 2007

<sup>7</sup> Pesticide certification categories are listed here:

[http://www.env.gov.bc.ca/epd/ipmp/pest\\_certification/certif\\_categories.htm](http://www.env.gov.bc.ca/epd/ipmp/pest_certification/certif_categories.htm)

Permits are different, however. Under *IPMA*, permits are issued for exceptional pest management activities. The Statutory Decision Maker may have a significant range of options when making a permit decision. The following are examples of permit requests<sup>8</sup>:

- the Administrator receives a request from a municipality for a permit to use a helicopter to apply pesticides to a city park; or
- the Administrator receives a request from another ministry for a permit to apply pesticides to a lake to kill invasive fish.

For both *EMA* and *IPMA*, the decision to approve or refuse requests for authorizations can have a significant impact on the environment, as well as individuals, businesses and the public. Consequently, these decisions need to be fair, just and balanced. It is essential that the procedures and processes used by the Statutory Decision Makers are clear, consistent and proportionate to the nature and impact of the decisions. Fair, just and balanced decisions also result in fewer appeals to the Environmental Appeal Board or the courts, providing faster resolutions to the issues at hand and saving time and expense for all parties involved.



This chapter outlines the steps that a Statutory Decision Maker should take when responding to an authorization request.

---

<sup>8</sup> Under *IPMA*, the decision to issue a permit is not appealable. The decision to **refuse to issue** a permit is appealable. All authorization decisions can be subjected to a judicial review, however. For more information about the types of decisions that may be appealed to the Environmental Appeal Board see *IPMA*, Section 14(1).

## Smooth Operator

Crystal McLeerly has been making decisions about permit applications for over 30 years. Plus, she is no stranger to the *Environmental Management Act*. This morning, Crystal received an email from a new mining company based in India. The company is requesting information about the application process for the authorization(s) it will need under BC's *Environmental Management Act*. The company wants to begin applying for an authorization to discharge water from a gold mining project that is currently making its way through BC's Environmental Assessment process.

The company wrote, "We are at the advanced exploration stage, and we want to go underground to check out a high-grade vein of gold. What do we need to do?"

Crystal schedules a pre-application conference call with the company and encourages them to review the Environmental Protection Division's **Waste Discharge Authorizations** website prior to the meeting.

Throughout the phone call, Crystal helps the company develop clear expectations about the application process. She also describes the type of information, amount of data and level of analysis that she will need from the company in order to make her decision about the application.

The company's project manager draws the conference call to a close by saying, "Thank you for your time, Ms. McLeerly. Next week we had planned to hire a qualified professional to focus on the potential impacts to the soil around the project site, but now we know that we need to include lots of information about the risks to groundwater. You have saved my company both money and time; and perhaps you also saved yourself a bit of frustration."

In due time, the application package arrives. It's complete and full of great information about local groundwater. It also contains a lot of detail and technical reports about a new technique called dry-drilling which the company proposes to use to minimize any potential impacts to groundwater.

### Lessons:

- Developing clear expectations about the application process will help the applicant better manage costs and time.
- Communicating the decision maker's information needs to the applicant will help ensure the application package is complete.
- During the planning phase, improvements can be made by the applicant to address concerns about potential impacts to the receiving environment.

## 3.1 Pre-Application

The purpose of this part of the process is to ensure that the applicant understands what needs to be included in their application package. This will help to ensure that the Statutory Decision Maker receives a complete application package to adjudicate and that the applicant does not experience unexpected delays. The following table contains key actions taken by the Statutory Decision Maker.

### Step 1

Ensure the **scope of the project** is defined.

- Scope is important. Have the applicant provide a written project description in advance of a pre-application meeting, this does not need to be exhaustive, but should provide a basic scope for the project. Some applicants change the scope of their project midstream. For example, a resort development can end up being a bare land strata without notice. Also, since *EMA* does not prevent the construction of works, the construction phase can proceed in advance of permitting, so having a clear project scope at the start helps ensure clear communication with the applicant.

### Step 2

Arrange a pre-application meeting with the applicant. During this meeting, help the applicant manage expectations by clearly explaining the **application process**, the **standard amount of information** needed to support the application, and the **standard format** for presenting that information.

- Verify that you have the authority to consider the proposed application. To exercise decision making authority under a particular enactment, an SDM needs to be granted that authority and the decision needs to be made as prescribed by the enactment. For example, under *EMA*, an Operational Certificate must comply with an approved Waste Management Plan, so an SDM could not consider issuing an Operational Certificate if it did not comply with the Waste Management Plan.
- Explain the requirements under the applicable statute(s) and the potential for delay if you decide to approve the application and your decision gets appealed.
- Ensure the applicant has access to information about the application process.
  - For a description of the waste discharge authorization process:  
[http://www.env.gov.bc.ca/epd/waste\\_discharge\\_auth/process.htm](http://www.env.gov.bc.ca/epd/waste_discharge_auth/process.htm)
  - For a description of the pest management authorization processes:  
<http://www.env.gov.bc.ca/epd/ipmp/publications/index.htm>

- Tell the applicant what their application package should contain. List any applicable policies and describe any supporting technical information that you, the decision maker, will be using to adjudicate the application. Encourage the applicant to consider the liabilities, costs and benefits of hiring a qualified professional.
- Ensure that your interactions with the applicant are respectful, easy to understand, and are an efficient use of public service resources. Create a **Terms of Reference** if appropriate.
- Engage with internal experts such as Environmental Quality or Water Science sections. (see Table I for a graphic of these internal expertise roles)

### Step 3

Explain the **public** notification requirements and the government's duty to consult with **First Nations**.

- For decisions under the *Environmental Management Act*, the Public Notification Regulation (PNR) stipulates the applicant's duty to provide public notice and notice to local government. This regulation also empowers the SDM to add notification duties. The efforts and results of consultation should be documented in a consultation report prepared by the applicant.
- For decisions under the *Integrated Pest Management Act*, the sections that prescribe consultation requirements are in Appendix 3 of the IPM Regulation.
  - To access *EMA* or *IPMA* go to [www.bclaws.ca](http://www.bclaws.ca)
  - For guidance on *EMA* public consultation refer to EPD Inspector Manual
  - For guidance on *IPMA* public consultation refer to "Issuing Pesticide Use Permits – A Guide for IPM Program Staff."
- Ensure the applicant understands their role and the procedural aspects of consultation with First Nations have been clearly communicated.
  - Review the current policy on First Nations consultation. Be advised that this is a rapidly evolving area of policy and delegated consultation duties. This is the province-wide policy on meeting the government's duty to consult. *Interim, Updated Procedures for Meeting Legal Obligations when Consulting First Nations* Province of British Columbia, May 2010. ([http://www.gov.bc.ca/arr/reports/down/updated\\_procedures.pdf](http://www.gov.bc.ca/arr/reports/down/updated_procedures.pdf))
  - On a case by case basis, refer to regional First Nation-specific Strategic Engagement Agreements (SEA's) and the consultation matrices within them. Some of BC's Strategic Engagement Agreements (SEA) can be found here: [http://www.newrelationship.gov.bc.ca/agreements\\_and\\_leg/engagement.html](http://www.newrelationship.gov.bc.ca/agreements_and_leg/engagement.html)

- For an online, interactive mapping tool that allows First Nations, the general public, industry and other levels of government to draw a point, line or polygon in iMapBC and generate a list of First Nations' contact information for the area go to: <http://geobc.gov.bc.ca/> .
- For major projects such as mining, there is a “one government” approach. A single project lead is assigned to streamline the decision making process when an applicant is applying for multiple authorizations from multiple ministries. In addition, a First Nations consultation coordinator is assigned to oversee the FN consultation process. This includes reviewing the adequacy of consultation, assessment of rights, strength of claim for title, need for accommodation and adequacy of accommodation. In some cases the SDM or MOE technical staff will be asked to become involved in the consultation to discuss the technical aspects of an application and/or the development of accommodation measures that affect the authorization conditions. When the final application package is submitted and FN consultation is complete, the project lead writes a recommendation report to the Statutory Decision Makers who then decide whether to approve the authorizations. SDMs at the Ministry of Environment take into consideration the report recommendations from the government's project lead, as well as the applicant's First Nations consultation report.

- Ensure that the government's duty to consult with First Nations has been met.

#### Step 4

Complete **internal administrative** tasks:

- Follow-up in the Authorization Management System by documenting the notification requirements that were discussed with the applicant. Create an issue tracking sheet (similar to the major project process) so that issues raised during the pre-application stage can be revisited throughout the development of the final application.
- CRISP is the pesticide authorization database, but it does not capture meeting notes. Using a checklist and keeping detailed notes about what was discussed in the pre-application meeting are recommended as an alternative.

#### Best Management Practice

For larger projects, ensure there is a Terms of Reference document that clearly describes what will be included in the technical assessment.



## 3.2 Preparation of the Application

The purpose of this part of the process is to provide technical guidance to the applicant.

### Step 1

Ask your support staff to determine if the applicant met all of **your** expectations in terms of **completeness and quality** of the application package. If your support staff have not been trained to perform this role, then perform it yourself. The application package should include an application form and all supporting information. Under *EMA*, this may include:

#### **Characterization of the receiving environment and environmental impact statement**

What are the expected impacts and will there be a monitoring plan to adequately manage uncertainty? Provide the Environmental Impact Assessment Report to the EIA Biologist. The biologist will review it and provide a written response to the Statutory Decision Maker articulating the uncertainties and risk.

#### **Technical assessment**

The applicant must provide clarity in the application regarding the requested source and amount of a discharge, the duration and frequency of a discharge and must clearly characterize the constituents and contents of the discharge. Will the proposed technology achieve the expected outcomes? Often this technical assessment is done by a team of Environmental Protection Officers with expertise in areas such as engineering, hydrogeology, acid rock drainage, impact assessment, meteorology and Environmental Protection Division policy and procedures. A review of Best Achievable Control Technology may be needed depending on the nature and scope of the proposed discharge. In many cases, the Environmental Protection Officer will provide a summary report and recommendations regarding a decision to the SDM.

#### **Public consultation**

Ensure that the applicant has met public notification requirements as outlined in the Public Notification Regulation and any specific directions for notification provided by the SDM. Ensure that the applicant has addressed public concerns. Often, applications are required to be published by the applicant to give the public an adequate opportunity to comment. In most cases, the Ministry asks the applicant to respond to the public's concerns. The appropriate role for the Ministry is to ensure the proponent has adequately informed the public about the activity for which the party is requesting an authorization.

#### **First Nations consultation**

Ensure that the government's duty to consult with First Nations has been/will be met. Determine if there is anything in the application that would possibly infringe upon aboriginal rights or title or impact an aboriginal interest. Determine if appropriate mitigation measures are in place or if alternative means would be more appropriate. If there is still a potential for infringement that is not justifiable, the Ministry may need to request assistance from the Ministry of Aboriginal Relations and Reconciliation to engage affected First Nations and discuss accommodation measures.

### 3.3 Application

The purpose of this part of the process is to review the submitted application package for completeness and to ensure that the Statutory Decision Maker has sufficient information to make an informed decision.

#### Step 1

Communicate **further information requirements** to the applicant (if needed).

- Ensure the application contains the information discussed during the pre-application meeting and all subsequent communications. If additional information is needed to make your decision, this is the point at which you request it from the applicant in writing.
- Ensure the report is written well. Higher quality reports are more effective at communicating data and study results clearly.

Common reasons why an SDM might need more information:

- the scope of the project changed since the pre-application meeting
- the applicant wishes to request additional permit amendments since the original pre-application meeting
- the applicant is requesting to discharge all year round, but there might not be any stream flow information for the winter months; or
- the absence of scientific certainty makes it difficult to predict the likelihood that harm will occur and potential level of impact.

### 3.4 Ministry Review

The purpose of this part of the process is to ensure the appropriate support staff review the application package. This is typically an iterative process where the application gets screened again for adequacy.

#### Step 1

Ensure the completed application is adequately **reviewed by ministry staff** and any other agencies requiring a referral.

- Once an application is submitted, the SDM might request that other ministry staff review the application and provide them with professional recommendations. The SDM must ensure that the staff reviewing the application have all relevant information and are capable of providing a full technical review of the application. They may need assistance from others with different areas expertise to also participate in the review.

## 3.5 Making the Decision

The purpose of this process is to determine if an application will be approved or denied by the Statutory Decision Maker. The SDM considers if, and under what conditions, an authorization requested may be issued that adequately protects the environment.

### Step 1

**Gather the information** needed to make your decision.

This likely includes:

- Final application package including technical report and consultation report submitted by the applicant
- A “technical assessment report” likely written by an Environmental Protection Officer or any written recommendations from a Pesticide Licence Officer
- Environmental Quality Section memo likely written by an Environmental Impact Assessment Biologist or Air Quality Meteorologist which provides a review and assessment of EIA reports provided by applicants, including assessment of receiving environment characteristics, expected discharges, recommended discharge limits and monitoring requirements.
- Relevant action plans, airshed plans, site specific objectives, science based environmental benchmarks, etc.
- Documented comments from other ministry staff, comments from other provincial agencies or relevant committees (e.g. mine development review committee)
- Responses from public, First Nations and federal and local government
- Relevant ministry operational policy (e.g. Setting Standards, Policies and Guidelines, Determining Best Achievable Technology Standards, Science and Decision Making – A Framework). <http://iwww.env.gov.bc.ca/epd/policy/manual/index.htm>

### Step 2

**Consider the complete application** package. When making the decision, the SDM considers the following:

- What is the legal test that is set by the legislation? What does the legislation say about the purpose of this particular decision making power?
- What are the potential impacts to the receiving environment? Keep in mind that you can ask the applicant to establish a monitoring program and may at a later date revise the authorization accordingly as new information is generated from the monitoring program.
- What are the relevant standards, policies and guidelines? EPD policy # 1.01.03 - Setting standards, policies and guidelines, and EPD policy # 1.01.04 - Determining best achievable technology standards.
- What is the most applicable standard to use? Consider both “Best Available

Technology Derived Standards” and “Receiving Environment Derived Standards”. And are there appropriate reasons to depart from policy?

- How much can you rely on the advice of a qualified professional? The SDM isn’t trying to redo or replace their work, but the SDM must understand the qualified professional’s work and be able to differentiate between fact-based information versus opinion-based beliefs.
- What is the compliance history of the applicant? Compliance history should be used as an indicator of potential future performance.  
<http://www.env.gov.bc.ca/main/compliance-reporting/>
- What “cumulative effects” information is available and how is this issue relevant to the decision? Consider cumulative effects to the extent that it is relevant to the decision and that the information is available.
  - Cumulative effects assessment framework for BC: <https://spc-env.gov.bc.ca/EB/CE/SitePages/Home.aspx>
  - Cumulative effects operational policy of federal environmental assessment agency: <http://www.ceaa.gc.ca/default.asp?lang=En&n=1F77F3C2-1>
- Are there Environmental Appeal Board decisions that provide any relevant insights? Keep in mind that these are not binding but they can help to identify additional considerations. [www.eab.gov.bc.ca](http://www.eab.gov.bc.ca)

When appropriate, invite the applicant to review a draft of your decision and provide comments. This is the final opportunity for the party most affected by the decision to influence the outcome. This step must be done in a way that does not result in fettering, i.e. it must be clear to the applicant that they are being given an opportunity to comment on a DRAFT and that they are not being asked to approve the decision. This step is very helpful in avoiding subsequent amendment applications, appeals or corrections. It may be best for the Environmental Protection Officer to review drafts with applicants.

Making a decision under *EMA* and *IPMA* requires balancing the goals of protecting the environment and minimizing risks to society, but this has to be balanced with the need to properly and safely dispose of waste, manage pests, and support goals for economic and social development. When it comes to creating this balance, context is critical – the SDM must ensure the environment is protected and in doing so, the SDM may also consider the financial implications of providing that protection; however, this is not at the expense of “ensuring the protection of the environment”.

Some additional factors to consider in addition to guidelines and criteria are:

- current condition of environment and environmental quality objectives
- social and cultural importance of receiving environment
- relative contribution of discharge to cumulative risk (cumulative effects)
- First Nations and local public concerns and values
- current compliance performance and financial stability of regulated party
- typical industry practice
- relative cost of additional or alternative works, and cost of additional treatment relative to additional benefits

### Step 3

Double check the process and make your final decision. To ensure you have met all the administrative fairness requirements of a decision, review this checklist:

***Chain of legislative authority.*** Does the legislation create the authority to make the decision? Does the legislation assign the authority to your position? Are the powers being used in accordance with the purpose of the statute?

***Duty of fairness.*** The courts require that decision making which affects the rights of individuals must follow a fair process. This “duty of fairness” is of particular importance if there is the potential to substantially affect an individual’s rights. Have you fulfilled a duty of fairness that is appropriate for the potential impacts on the party?

***Participation rights.*** Was the affected party given a full and fair opportunity to present its side of the story to you as the decision maker? Did you ensure there was full disclosure of the factors that influenced your decision?

***Reasonable apprehension of bias.*** Were you impartial and independent? Would you appear to be so to others? Did you make the decision by applying your professional opinion?

***Adequate reasons.*** What is the connection between the information presented in the application presented and the decision made? Can you clearly articulate your rationale? Are these reasons written in a document and kept on file?

***Was the decision reasonable?*** A reasonable decision does not equate to whether the decision is wrong or whether it might have been decided in a different way. A reasonable decision should indicate *how* the decision maker considered and assessed the arguments and evidence. Some review bodies such as a court, in certain circumstances, let decisions stand on the basis that they are reasonable, even if they think the decision is incorrect. Were all the factors that were considered relevant to the decision? Were irrelevant factors excluded and absent from the decision?

#### Step 4

**Write your reasons for decision;** if appropriate.

- Determine whether to write out the rationale for arriving at your decision and the weight that you gave to the information that you used to make your decision. This may include an explanation as to why certain provisions exist in an authorization. Documenting the rationale may also help with future decisions. For guidance on whether to write your reasons for decision refer to **Appendix I**. The effort of writing should be proportional to difficulty of decision. This promotes transparency in SDM process.

#### Step 5

**Deliver the decision** to the party.

- Whether you decide to issue or refuse the authorization request, the applicant should receive a letter explaining the decision.
- Under *EMA*, the issuance of a permit or authorization is completed through the Authorization Management System by the administrative staff in Victoria.
- A letter explaining your reasons for the decision should be sent to the First Nations that were engaged through the consultation process. In addition, a notification letter may be appropriate for parties who have expressed an interest in the application decision.
- Ensure the authorization holder understands the permit conditions.

### Best Management Practice

When giving the applicant an opportunity to review a draft decision, they might misunderstand this process and assume that the draft is being provided to them for their approval.

Clearly state that your draft decision is subject to change and it is only being provided to them for consultation purposes, and not for their approval. It may be best that the Environmental Protection Officer or Pesticide Officer review drafts with applicants when finalizing recommendations to the Statutory Decision Maker.

## Airshed Showdown

Dunder Mifflin Paper Company applies for an air discharge permit as part of its plan to construct and begin operating a new pulp mill in Fort Town. Five years ago the Ministry of Human Health released a study linking the amount of particulate matter in the Fort Town airshed with an unusually high number of elementary school students in the Fort Town area being diagnosed with asthma. Ever since the report was released, the general public has been divided about industrial development projects that may contribute to the particulate matter in air. Despite a number of successful air quality stewardship initiatives in the region, each year the health authority's local office continues to see an above-average number of respiratory conditions reported.

To make matters worse, over 1,000 employees at Fort Town sawmill were laid off last year because of the impacts a beetle infestation has had on local forestry operations. The community is still reeling from this financial hardship and local food banks have seen a 10% rise in the number of families in need.

William Skyfall is the section head in the Ministry of Water, Air and Dirt's local office. William has the task of making the decision to either approve or refuse Dunder Mifflin's permit application. William has all of the monitoring data, technical reports, environmental impact assessment documents, and consultation reports sitting in front of him. As well, William has the recommendation memo from the EIA Biologist and the technical assessment report from the environmental protection officer and is in the process of reviewing all of the information relevant to the decision. He walks across the street to grab a coffee and sees the headline in this week's edition of the *Fort Town Citizen*. "Airshed Showdown!"

The article quotes the mayor of Fort Town expressing her opinion that the provincial government would have to be either crazy or corrupt to approve an air discharge permit for the Dunder Mifflin Paper Company. William gets a little nervous as he sips his coffee and climbs the steps of his building because he understands that this is a controversial topic for residents and he has a conference call with his Assistant Deputy Minister in 30 minutes.

"Hello" says the ADM. "I just want to ask you how that permit decision is coming along. I hear it's causing quite a stir in your neck of the woods. Don't worry about the media and the politicians; they are just doing what they get paid to do. Luckily, that's all you have to do too. Make a fair, timely and unbiased decision."

William replies with, "Thanks for the vote of confidence. This decision is turning into a pretty big deal with all of the conflicting public and political opinions. There are many important issues to consider, and, this morning, the newspaper attempted to amplify some of them."

### ***Airshed Showdown, continued***

“Don’t worry about me sir, I am unfetterable. My professional experience, academic training and this pile of public consultation summaries, key sections of legislation, policy papers, monitoring reports, technical reports and impact assessments sitting in front of me will steer me in the right direction. Plus, I’ve got a great team here that I can rely on for excellent technical and scientific support.”

William reviews all of the information that is relevant to the decision, and after giving appropriate weight to each piece of information and due consideration to the decision before him, William decides to issue the permit with a specific set of conditions to adequately protect local air quality along with a monitoring program to ensure that those conditions are indeed sufficient to provide that required level of air protection.

William writes out a draft version of his decision and sends it in an email to Dunder Mifflin. In the email, William invites the company to submit any additional information for his consideration. William explains that this is the standard process for a public servant to ensure administrative fairness when exercising a discretionary power of decision in a situation like this. William concludes his email by stating that he has yet to release a final decision for Dunder Mifflin’s permit application and that this is not an approval letter.

Feeling satisfied and optimistic, William looks at the pile of documents on his desk, the masters degree and long service awards hanging on his wall and the family photo on his desktop background then heads home for the day.

#### **Lessons:**

- **Fettering.** It is the SDM’s responsibility to ensure he/she is not fettered by the opinion of another party. He/She must use his/her own professional discretion to make the decision. An SDM should be able to listen to anyone speak about issues relating to an authorization request without feeling that his/her role as the decision maker is being threatened.
- **He/She who hears must decide.** It is the Assistant Deputy Minister’s responsibility to avoid undue influence during the decision making process of the SDM. The ADM should be cautious when sharing opinions about political issues, public concerns, private interests and environmental impacts. The ADM should encourage the SDM to keep his/her mind free from any bias or encumbrance when working towards a decision outcome.
- **Opportunity to be heard.** The more significant the potential outcome of the decision will be to the party, the greater the duty of fairness becomes for the government official. When exercising a decision-making power that involves professional discretion the Statutory Decision Maker must ensure that a fair process is used. A fair process means ensuring that the party has the opportunity to provide as much relevant information to the SDM as is necessary. In practice, this usually involves the SDM sending a draft version of the decision to the applicant to see if they have any last minute additions to submit to the decision package.



## Chapter 4: Intervening

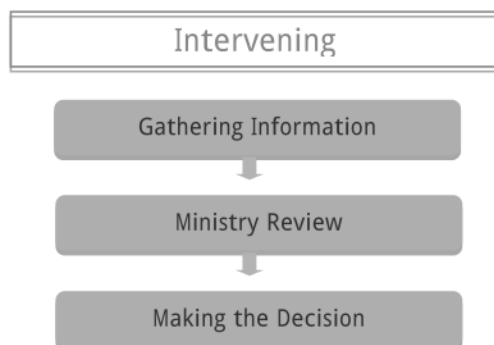
The government's role is to manage risk on behalf of the public. This involves managing issues relating to non-compliance, changing environmental conditions, cumulative effects, in addition to new issues revealed by emerging science and technology.

To fulfill this role, the government ensures regulated parties understand the legal requirements and promotes voluntary compliance, and, sometimes, may need to intervene in a regulated activity or request a particular action from a person, company or agency.

For example, a Statutory Decision Maker becomes aware of a situation where there is potential risk to the environment, human health or public safety and decides to:

- issue an order to prevent pollution from being introduced into the environment;
- amend a company's authorization (which is required to conduct its business) in order to compel the company to comply with the law;
- order a party to clean up and repair its impact(s) upon the environment or human health and public safety;
- amend an authorization to further limit a discharge or impose additional conditions necessary to protect the environment; or
- order a company to stop applying pesticides.

This chapter outlines the steps that a Statutory Decision Maker should take when intervening.



### Ministry's Vision for Verifying Compliance

Verification activities will be based on a planned schedule which considers risk (actual and potential impact to the environment, human health or safety, and the likelihood of occurrence), as well as the need to maintain an appropriate level of contact with regulated parties.

### Ministry's Vision for Enforcing Requirements

- Consistent and predictable responses to non-compliance.
- Enforcement responses will be appropriate for the alleged violation and for achieving an ongoing deterrence effect that benefits the overall compliance rate.
- Prosecution is an essential compliance tool that will be applied vigorously when necessary.

Ministry of Environment  
Compliance Management  
Framework, 2007

## 4.1 Gathering Information

The purpose of this process is to gather information to inform the Statutory Decision Maker's decision.

### Step 1

Understand the pertinent **statutory authority** (the Act and/or Regulation).

- To exercise decision making authority under a particular enactment, a decision maker must have lawful authority to make the decision and must make it within the scope and manner prescribed by the enactment. Verify that your reasons for intervening stem from a specific regulatory requirement in your legislation. ([www.bclaws.ca](http://www.bclaws.ca))
- Determine whether consultation is needed
- Determine if there are any Public Notification Requirements if your decision involves making amendments to an existing authorization.

### Step 2

**Verify the accuracy of the information** about the issue at hand.

- In the event that information is provided by a third party, ministry staff should make reasonable and timely attempts to verify that information is accurate and reliable. This may include an assessment of the data by the EIA Biologist or Environmental Protection officer.
- Information about the context of the situation is essential. For example, is pollution occurring or likely occurring?
- Are there complaints on record about the party's activities?
- Expert evidence is usually given greater weight than non-expert evidence because it is usually more reliable and more persuasive; however, the first-hand observations of credible witnesses can carry a lot of weight too.
  - Expert evidence can be assessed critically by assessing:
    - i. the relevancy or accuracy of the expert's assumptions or premises
    - ii. the suitability of the methods used to arrive at the opinion
    - iii. the qualifications and experience of the expert in relation to the information required
    - iv. the neutrality of the expert

### Step 3

**Gather additional information** and ensure that you understand your authority, as well as how that authority may be limited by a person's Charter Rights.

- Does the legislation describe what you can and/or cannot consider in your decision?
- If you are exercising your inspection powers, you must be conducting an inspection. Inspection powers must not be used to gain access to a site for the purposes of conducting an investigation.
- The difference between an inspection and an investigation is that during an inspection you are acting under the belief that there is still a possibility that the party might be "in compliance". During an investigation, you are gathering evidence to prove a suspected non-compliance. Under the *Canadian Charter of Rights and Freedoms*, everyone is free from unreasonable search and seizure. Evidence that is gathered by violating a person's Charter Rights will not be accepted as evidence in a court of law.
- An information order may be used as a first step in order to gather adequate information for determining if a pollution abatement or pollution prevention order is reasonable. If necessary, consult with your program area's senior management, the Conservation Officer Service and/or Legal Services Branch at the Ministry of Justice.

#### Best Management Practice

Under *EMA*, the Director's powers to order do not apply to every legal entity. For example, only the minister may exercise ordering powers over a municipality, and a pollution prevention order may not be issued to authorization holders who are in compliance with their authorization.

Always make sure you have the authority to issue the order at hand.

## 4.2 Ministry Review

The purpose of this process is to ensure that the Statutory Decision Maker has the information needed to make an informed decision. In doing so, the Statutory Decision Maker may provide an opportunity for the affected party to understand what is being contemplated by the decision maker and to provide information from their perspective.

### Step 1

**Notify the party** of the issue at hand; especially if you are responding to a non-compliance.

- If you are intervening as a response to non-compliance, follow the Ministry of Environment's *Compliance and Enforcement Policy and Procedure*.  
[http://iwww.env.gov.bc.ca/compliance/policy\\_planning/policy.html](http://iwww.env.gov.bc.ca/compliance/policy_planning/policy.html)
- If you are intervening to amend an existing authorization, follow your program area's operational policy.

### Step 2

Give the party an **opportunity to respond** to the information on which you will be basing your decision.

- If issuing an order or amending an authorization, staff should send a draft version to the party prior to making their final decision, unless there are extenuating circumstances that make this unreasonable.

### Step 3

- Determine if there is anything that would possibly infringe upon an **aboriginal interest**. When amending an authorization, the government's duty to consult with First Nations must be met.

## 4.3 Making the Decision

The purpose of this process is to determine what, if any, action should be taken to address the circumstances at hand and manage risk on behalf of the public.

### Step 1

Assemble all **relevant information**. This includes:

- technical reports, environmental impact assessments, results of information orders, complaints, and information provided by others, etc
- relevant policies: <http://iwww.env.gov.bc.ca/epd/policy/manual/index.htm>
- any other evidence gathered by the SDM or submitted by other parties

### Step 2

**Make the decision.** In making the decision, the SDM must consider the following:

- What is the regulatory requirement? What is the legal test? What does the legislation say about the purpose of this particular decision making power?
- What are the facts? The SDM makes findings of fact by weighing the evidence. The standard of proof for findings of fact is on a balance of probabilities. The SDM must determine whether it is more likely than not that something exists, occurred or will occur.
- What is the potential impact to the receiving environment? Keep in mind that you can ask the applicant to establish a monitoring program and may revise the authorization accordingly.
- What is the compliance history of the applicant?
- What does the party have to say on their own behalf about the issue? For example, you could say, "Tell me why I should not issue this order."
- What relevant decisions have been made by the Environmental Appeal Board? These are not binding but they can serve as a guide.

### Step 3

Double check the process and make your final decision. To ensure you have met all the administrative fairness requirements of a decision, review this checklist:

**Chain of legislative authority.** Does the legislation create the authority to make the decision? Does the legislation assign the authority to your position? Are the powers being used in accordance with the purpose of the statute?

**Duty of fairness.** The courts require that decision making which affects the rights of individuals must follow a fair process. This “duty of fairness” is of particular importance if there is the potential to substantially affect an individual’s rights. Have you fulfilled a duty of fairness that is appropriate for the potential impacts on the party?

**Participation rights.** Was the affected party given a full and fair opportunity to present its side of the story to you as the decision maker? Did you ensure there was full disclosure of the factors that influenced your decision?

**Reasonable apprehension of bias.** Were you impartial and independent? Would you appear to be so to others? Did you make the decision by applying your professional opinion?

**Adequate reasons.** What is the connection between the information presented in the application presented and the decision made? Can you clearly articulate your rationale? Are these reasons written in a document and kept on file?

**Was the decision reasonable?** A reasonable decision does not equate to whether the decision is wrong or whether it might have been decided in a different way. A reasonable decision should indicate *how* the decision maker considered and assessed the arguments and evidence. Some review bodies such as a court, in certain circumstances, let decisions stand on the basis that they are reasonable, even if they think the decision is incorrect. Were all the factors that were considered relevant to the decision? Were irrelevant factors excluded and absent from the decision?

### Step 4

**Write your reasons for decision, if appropriate.**

- Determine whether to write out the rationale for arriving at your decision and the weight that you gave to the information that you used to make your decision. This may include an explanation as to why certain provisions exist in an authorization. Documenting the rationale may also help with future decisions. For guidance on whether to write your reasons for decision refer to Appendix I.

## Step 5

### **Deliver the decision** to the party.

- When issuing an order, this may require the use of a Registered Mail service or a request to COS for personal service. Refer to the following for the processes to follow when serving orders, as well as tips for using a Registered Mail service:  
[http://iwww.env.gov.bc.ca/compliance/policy\\_planning/orders/servicing\\_orders.pdf](http://iwww.env.gov.bc.ca/compliance/policy_planning/orders/servicing_orders.pdf)
- When amending an authorization, deliver this information in the same manner as you would with any official Ministry correspondence.
- It is advisable to confirm delivery of an order by communicating with the affected party to ensure receipt and understanding of the imposed requirements.

### Best Management Practice

Orders under *EMA* ensure that parties take appropriate action to protect the environment; they are not an alternative to prosecuting in the event of environmental damage.

The test to be made in determining if an order can be issued is different for different types of orders. For example, the test for issuing a pollution abatement order is whether the decision maker is “satisfied on reasonable grounds that a substance is causing pollution.” The test for issuing a pollution prevention order is whether the decision maker is “satisfied on reasonable grounds that an activity or operation has been or is being performed by a person in a manner that is likely to release a substance that will cause pollution.”

## Win-Win

During a routine inspection of Silver Cloud Market's warehouse facility, Senior Pesticide Officer, George St. Pierre notices a cardboard box sitting on the ground beside the truck delivery platform. George asks the warehouse manager what is in the box. The manager opens the top flap to show George and replies, "These are just some old aluminum and magnesium phosphide packages used as a pesticide in our long-distance shipments."

George takes a few steps backwards. "Yes, I can see that now. Do you know that is the same type of fumigant waste that resulted in 13 people going to the hospital several years ago? Silver Cloud Market was fined \$65,000 under the *Environmental Management Act* for that incident. I would need a hazardous material safety suit and breathing apparatus just to walk up to that box again safely. When exposed to air and water, those packages produce phosphine gas. It is colourless and odorless, so it's hard to tell how much of it is seeping out of that box right now. For an unprotected worker, phosphine gas is 50 times more toxic than cyanide gas and 200 times more toxic than hydrogen sulphide. "

"Yikes!" replies the manager. "I had no idea. I am new here. Tell us what we need to do to keep our crew safe and sort this situation out."

George helps the manager make an emergency call to a qualified professional who takes some interim safety measures. The professional moves the box to a more secure area, protects it from getting wet, ensures the gas can escape rather than explode, fences off a 10 meter radius around the box, and posts warning signs to keep workers out of the area.

George wraps up his visit by reminding the warehouse manager of his role as an inspector and a statutory decision maker, "Please remember the onus is on you to know which laws apply to your business and to ensure that you are in compliance with all of them. I am not here to help run your business or teach a law course. I am here to see whether you are in compliance, or not; and then decide if something needs to happen to make things safer for human health and the environment."

The warehouse manager promises that he will make a detailed clean-up plan and then hire the qualified professional to safely collect and dispose of the material. This will likely cost the company around \$10,000.

George returns to his office and decides that an enforcement action is needed. Due to the high risk to human health and safety, George determines that issuing an order is the most appropriate option.



### ***Win-Win, continued....***

George types out the order, and, in it, he requires Silver Cloud Market to safely dispose of the fumigant before 4pm on March 18<sup>th</sup>, 2013 (in 7 days) using the services of a qualified professional. Then, he sends an e-mail to the company stating that:

- he is issuing an order in response to the non-compliance issue he observed;
- the company is **invited to comment** on the attached draft order;
- the final version of the order will be sent through BC's registered mail service to Silver Cloud Market's office; and
- this enforcement action will appear here: <http://www.env.gov.bc.ca/main/compliance-reporting/>

The next day, the warehouse manager calls George and explains that there was a fire inside the warehouse. Luckily, the fire did not reach the box of fumigant waste because of the interim location that the qualified professional had chosen yesterday. He asks George to adjust the compliance deadline set in the order by 2 weeks so that he can finish cleaning up the debris from the fire. The manager expresses his concern that without this additional time Silver Cloud Market will not be able to comply with the order; which means that the company will have committed yet another offense.

George acknowledges the unusual logistical challenges faced by the company at this time and he offers to change the deadline for completing the work. George sends the final version of the order as an email attachment and sends a hard copy through BC's registered mail service.

The warehouse manager complies with all the requirements in the order and prepares for the enforcement information to be published on the ministry's website.

On the date specified in the order, George arrives for an inspection and finds that the company is not only in full compliance with the order, but that there are new safety notices and warehouse procedures to manage fumigant waste as soon as new shipments arrive.

#### **Lessons:**

- An **opportunity to be heard** must be provided by the Statutory Decision Maker prior to making the decision. For example, a party might provide new or key information resulting in a better decision. This may benefit both the SDM and the party.
- Issuing an order creates a **record of enforcement action** taken by the ministry. This is especially helpful if the ministry chooses to escalate its enforcement response in the future or is looking to identify activity-based or geographically-based patterns of non-compliance.

# Chapter 5: Mechanisms for Reviewing Decisions

All statutory decisions are guided by the principles of administrative fairness and natural justice. Statutory decisions are made in a fair, predictable and transparent manner at arm's length of political officials. The two mechanisms for reviewing the decisions of government officials under *EMA* and *IPMA* are the Environmental Appeal Board (EAB) and judicial review. As the respondent to either type of review, the role of the decision maker is to prove they had jurisdiction, describe the administrative process they followed, and explain their rationale behind the decision.

This chapter outlines what to expect when a decision is reviewed by the Environmental Appeal Board or by the courts via a judicial review.

## 5.1 Environmental Appeal Board Hearing

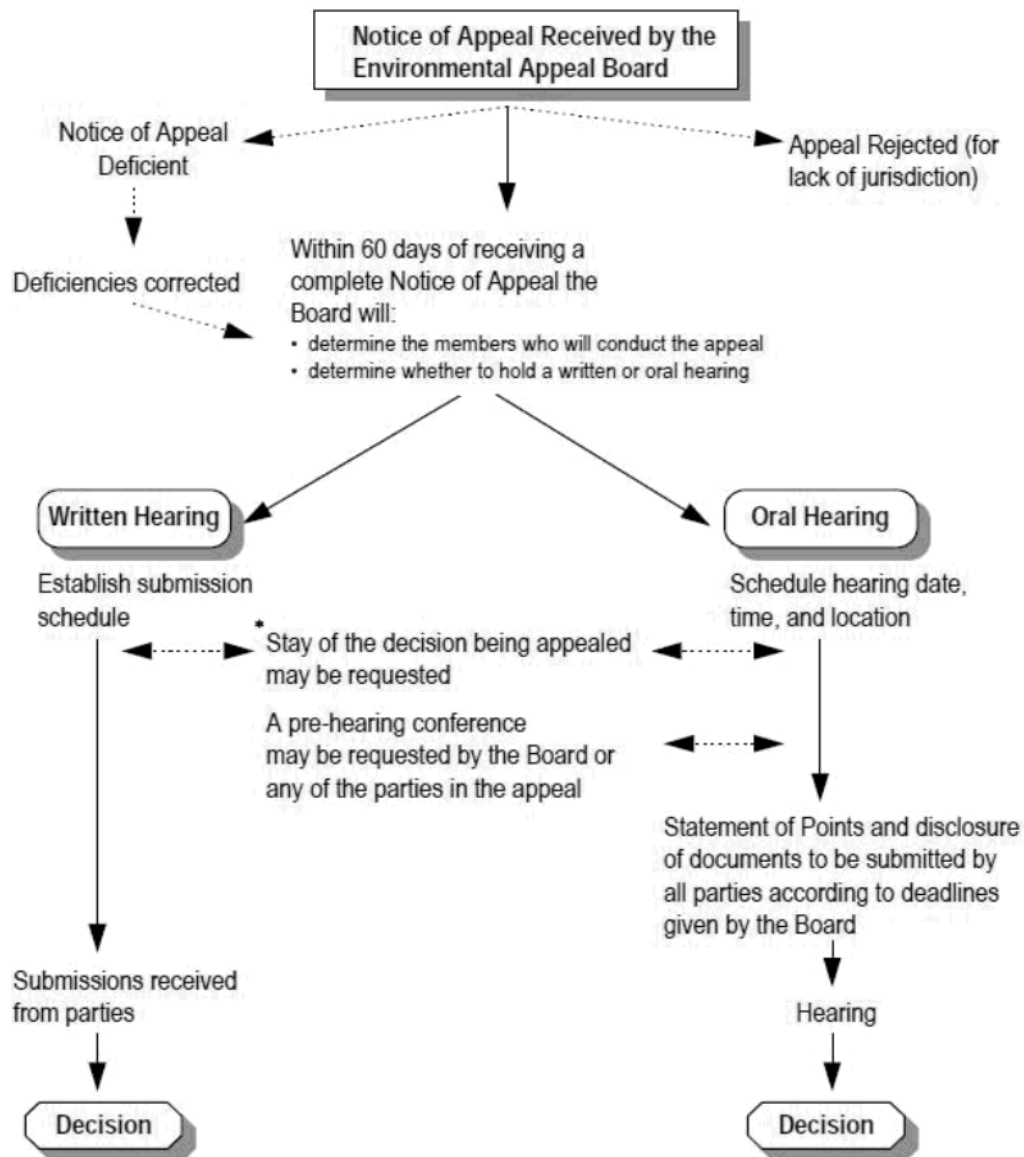
The Environmental Appeal Board was established in 1981 to ensure that those directly aggrieved by decisions made by ministry officials have an opportunity to have their concerns heard. Furthermore, any decision made by the EAB may subsequently undergo a judicial review by the courts if the party has standing.

Statute	Who may appeal to the Environmental Appeal Board
<i>Environmental Management Act</i>	A person who is aggrieved by a decision of a director or district director.
<i>Integrated Pest Management Act</i>	Any person.

The purpose of this process is to provide the applicant with an opportunity to be heard and, if needed, a remedy for erroneous or unfair decisions.

The EAB can hear evidence that was not originally submitted in the application package. The EAB can also consider information that was not available to the SDM at the time they were making their decision.

## 5.2 Flowchart of process followed by EAB



\* The Board's authority to issue a stay varies from one Statute to the next.

## 5.3 Role of the Statutory Decision Maker in an EAB Hearing

The Statutory Decision Maker's role is to describe to the Environmental Appeal Board how and why they came to the decision that they did. Sometimes, this information is presented to the Board in a written submission and sometimes it is presented verbally; either in person or over the phone. This process can take anywhere from a few weeks to a several months. The essential aspect of the appeal hearing is for the SDM to explain their rationale behind the decision. Appeals are not common. Only 2% of all statutory decisions in the Environmental Protection Division will wind up in an EAB hearing.

The Environmental Appeal Board will notify the Statutory Decision Maker if one of their decisions is going to go through the appeal process. The EAB will also provide the Statutory Decision Maker with an opportunity to respond; either in writing or verbally.

The following are steps that Statutory Decision Makers can follow to prepare for a hearing:

<b>Step 1:</b>	<p>Gather any relevant documents and information.</p> <p>This may include:</p> <ul style="list-style-type: none"><li>• File of original decision and reasons for decision</li><li>• Technical report</li><li>• Any documents that are pertinent to the decision (for example, a monitoring report being called into question)</li><li>• Any pertinent information that you used to make the decision</li></ul>
<b>Step 2:</b>	<p>Ask for assistance from Ministry of Justice Legal Services Branch staff.</p>
<b>Step 3:</b>	<p>Send your respondent package to the Environmental Appeal Board.</p>

If the appeal is spurious or has no standing it may be challenged by the Statutory Decision Maker or by Legal Services Branch at the Ministry of Justice.

Transcripts of appeal hearings often contain valuable insights from experts who sit on the Board. Some of these insights serve as a catalyst for SDMs and other ministry staff to revise ministry policy or to update training materials for the ministry's decision makers. The Ministry applies the lessons learned from individual board decisions, and also analyzes at the suite of EAB decisions in their entirety and whether there are broader applications for the way the ministry conducts its business.

## 5.4 Judicial Review

A party dissatisfied with a decision or order of the Environmental Appeal Board may apply to the Supreme Court for a judicial review of the decision pursuant to the *Judicial Review Procedure Act*.

The courts recognize that Statutory Decision Makers have specialized knowledge and experience in their particular subject areas and, because of that, the courts will not easily interfere with a decision maker's decision. In general, the court will only allow a judicial review in limited circumstances. A judge will not allow a judicial review to correct a technical error made by the decision maker/tribunal if the judge does not think that the error caused any harm or prejudice to the party. However, the court will intervene if the decision maker/tribunal did not give the party a procedurally fair hearing. It will also intervene if the decision maker/tribunal had no authority to deal with the subject matter of that case/file.

### **What decisions can the court make?**

In a judicial review, the remedies available to a court are limited. The court will usually set aside the decision of the decision maker/tribunal and order that the case be heard again, applying the proper principles of law.

### **Who can apply for judicial review?**

The word "standing" is used to describe someone who can apply for judicial review. In order to have standing to apply for a judicial review, a person must either be a party to the proceedings being reviewed, or must be directly affected in some special way that is over and above the general public.

There are very few judicial reviews undertaken for decisions under *EMA* and *IPMA*. Decisions of the Environmental Appeal Board that have undergone a judicial review are posted on the EAB website. For more information or to access these decisions go to [www.eab.gov.bc.ca](http://www.eab.gov.bc.ca)

If a decision goes to judicial review, the SDM is supported by Legal Services Branch staff at the Ministry of Justice when preparing materials and giving testimony.

# Definitions

*The following definitions have been used for the purposes of this document:*

**Administrative Fairness** – synonym for Rules of Natural Justice.

**Administrative Law** – a body of common law that establishes requirements for those exercising statutory decision making powers. It is based on principles to be applied in context-specific situations.

**Authorization** – permission granted by the government to participate in a regulated activity. Authorizations take a variety of forms such as permits, licences, certificates, approved plans, etc.

**Common law** – law based on precedent which is set and refined by decisions of courts and similar tribunals, as opposed to statute law which is developed and enacted through the legislative process by members of the Legislative Assembly (provincial) or the House of Commons and Senate (federal).

**Delegate (verb)** – to grant someone a statutory power that the grantor has.

**Designate (verb)** – to identify (e.g. list persons by name or by role).

**Fettering** – having undue influence over the professional discretion of a Statutory Decision Maker.

**Judicial Review** – a legal procedure where a statutory decision is reviewed by a Supreme Court judge.

**Jurisdiction** – the parameters within which judicial or administrative power may be exercised. For example a person will have legal authority to make a decision under certain circumstances if a statute gives the person that power under those circumstances, and not otherwise.

**Results-Based Legislation** – legislation that specifies the legal standards that regulated parties must meet instead of the process they must follow to achieve those outcomes.

**Rules of Natural Justice** – the duty to act in good faith and without bias in making a statutory decision; to give each party an opportunity to know the case against the party and to provide a response; and for only the person who hears the case to decide it.

**Statute** – A collection of legal requirements that restrict or compel the undertaking of an activity. Statutes also contain a description of the actions that government has the authority to carry out.

**Statutory Decision Maker** – a representative of government making a decision, as authorized to do so by their delegated/designated powers under a statute. To exercise decision making authority under a particular enactment, a decision maker must have lawful authority to make the decision and must make it within the scope and manner prescribed by the enactment.

**Statutory Decision** – A decision made by a government official or administrative tribunal, as authorized to do so by a statute.

Table 1: Effluent Permitting Process and Roles

Table is from EPD’s manual for reviewing Environmental Impact Assessments to support effluent permitting.  
The manual can be accessed at: (<http://iwww.env.gov.bc.ca/epd/policy/manual/index.htm>)

		Pre-Application	Preparation of Application	Application	Ministry Review	Decision	Ongoing Permit Administration
Applicant		<ul style="list-style-type: none"><li>Reviews authorization process, guidance and regulatory requirements</li><li>Prepares draft application documents, incl. draft baseline data, and submits to MoE</li><li>Attends pre-application meeting with MoE</li></ul>	<ul style="list-style-type: none"><li>Prepares all required application documents</li><li>Posts public notices</li><li>Consults with FNs and the public as directed under the Public Notification Regulation and any delegated procedural aspects of FN consultation</li></ul>	<ul style="list-style-type: none"><li>Finalizes and submits application to MoE including:<ul style="list-style-type: none"><li>Consultation report</li><li>Final application form</li><li>Technical assessment report with EIA included</li></ul></li></ul>	<ul style="list-style-type: none"><li>Responds to requests for further information</li><li>Reviews draft recommendations including draft authorization</li><li>Provides comments to MoE</li></ul>		<ul style="list-style-type: none"><li>As required under the authorization, conducts and reports on ongoing compliance and environmental effects monitoring</li></ul>
MoE Environmental Management (EM)		<ul style="list-style-type: none"><li>Arranges pre-application meeting with applicant</li><li>Meets with applicant to review draft application documents</li><li>Provides direction on TAR and consultation requirements</li></ul>	<ul style="list-style-type: none"><li>Provides guidance to applicant in conducting best available technology assessment</li></ul>	<ul style="list-style-type: none"><li>Screens application for completeness returning to applicant if information is missing</li></ul>	<ul style="list-style-type: none"><li>Coordinates, assesses and summarizes all information , incl. Bio Memo into MAR</li><li>Provides recommendations to SDM on discharge limits, permit conditions , monitoring and other requirements</li><li>Prepares draft authorization, if applicable</li></ul>	<ul style="list-style-type: none"><li>The SDM (Environmental Management Section Head or Regional Director) makes a decision on the application</li><li>Communicates decision to applicant, EQ and WSA</li></ul>	<ul style="list-style-type: none"><li>Reviews clients’ annual reports, refers to EQ for science review as necessary, and provides comments back to client</li><li>Conducts compliance verification</li><li>Documents and archives data and reports</li></ul>
MoE Environmental Quality (EQ)		<ul style="list-style-type: none"><li>Usually participates in pre-application meeting</li><li>Defines EIA technical requirements for applicants</li><li>Identifies need to engage required experts (incl. WSA) and peer reviewer</li><li>Assists in defining recommended WQG, SSWQO or SBEB for use in FIA</li></ul>	<ul style="list-style-type: none"><li>Provides ongoing guidance (as needed to clarify EIA requirements) and responds to questions</li></ul>		<ul style="list-style-type: none"><li>Reviews EIA submitted by applicant</li><li>Engages required experts (WSA and others) to assist with review</li><li>Incorporates input from experts and prepares Bio Memo with:<ul style="list-style-type: none"><li>Summary of potential impacts</li><li>Recommended receiving environment monitoring</li><li>Recommended environmental effects monitoring</li></ul></li></ul>	<ul style="list-style-type: none"><li>Supports SDM by characterizing environmental risk if a Site Performance Objective is contemplated.</li></ul>	<ul style="list-style-type: none"><li>Works directly with clients as needed to agree on environmental effects monitoring study design and workplan</li><li>Reviews and provides comments on clients’ annual report sections pertaining to monitoring (receiving environment and environmental effects)</li></ul>
MoE Water Science & Adaptation (WSA)		<ul style="list-style-type: none"><li>On request from EQ, provides advice and responds to specific questions regarding the use of WQGs, SSWQOs and other science-based tools as part of the application package</li></ul>			<ul style="list-style-type: none"><li>On request from EQ, provides advice and responds to specific scientific questions related to the applicant’s EIA (e.g., methods, data analysis, etc.)</li></ul>		
AMS Status		Pre-application	Pending final application	Pending final application	In review	Awaiting decision	
Decision Required		<ul style="list-style-type: none"><li>EM section/ SDM determines requirements</li><li>Application ToR sent to client</li></ul>	<ul style="list-style-type: none"><li>Client submits application and fees</li></ul>	<ul style="list-style-type: none"><li>Application accepted by EPO and job advanced to “in review”</li></ul>	<ul style="list-style-type: none"><li>EPO completes review and submits to SDM</li></ul>	<ul style="list-style-type: none"><li>SDM makes decision on application</li></ul>	
		<b>Acronyms</b> AMS = Application Mgmt System EIA = Environmental impact assessment EPO = Environmental Protection Officer FN = First Nation MAR = Ministry Assessment Report SBEB= Science-based environmental benchmark SDM = Statutory decision maker SPO= Site performance objective SSWQO = Site specific water quality objective TAR = Technical assessment report WQG = Water quality guideline					

This row refers to SDM and support staff roles.

# Appendix I: Criteria for Providing Written Reasons

Written reasons for decisions are typically provided by the Statutory Decision Maker when any of the following questions are answered affirmatively:

- Does the public have a high degree of interest in the outcome?
- Does the decision impose negative sanctions on a person, such as revoking a licence or permit, or imposing additional stringent conditions on the licence or permit, or imposing a penalty, monetary or otherwise?
- Has the person directly affected by the decision asked for written reasons?
- Does the decision impose unusual or stringent conditions on a permit or licence?
- Was the scope of First Nation consultation associated with the decision extensive?

For a detailed discussion about providing a party with written reasons read:

*Giving Reasons for Decisions: A Guide to Best Practices for Statutory Decision Makers*

To access this document go to: [http://www.ag.gov.bc.ca/ajo/down/reasons\\_best\\_practices4.pdf](http://www.ag.gov.bc.ca/ajo/down/reasons_best_practices4.pdf)



# Appendix II: Information Sources

For easy reference, this section lists all of the sources mentioned elsewhere in the document.

## Reasons for Decision:

- *Giving Reasons for Decisions: A Guide to Best Practices for Statutory Decision Makers*, Administrative Justice Office, Ministry of Attorney General.  
[http://www.ag.gov.bc.ca/ajo/down/reasons\\_best\\_practices4.pdf](http://www.ag.gov.bc.ca/ajo/down/reasons_best_practices4.pdf)

## Duty to Consult with First Nations

- Province-wide policy on meeting the government's duty to consult:
- *Interim, Updated Procedures for Meeting Legal Obligations when Consulting First Nations* Province of British Columbia, May 2010.  
([http://www.gov.bc.ca/arr/reports/down/updated\\_procedures.pdf](http://www.gov.bc.ca/arr/reports/down/updated_procedures.pdf))
- Some of BC's Strategic Engagement Agreements (SEA) can be found here:  
[http://www.newrelationship.gov.bc.ca/agreements\\_and\\_leg/engagement.html](http://www.newrelationship.gov.bc.ca/agreements_and_leg/engagement.html)
- For an online, interactive mapping tool that allows First Nations, the general public, industry and other levels of government to draw a point, line or polygon in iMapBC and generate a list of First Nations with contact information for the area go to: <http://geobc.gov.bc.ca/>

## Cumulative Effects

- For the cumulative effects assessment framework for BC go to: <https://spc-env.gov.bc.ca/EB/CE/SitePages/Home.aspx>
- For the cumulative effects policy used by the federal government go to:  
<http://www.ceaa.gc.ca/default.asp?lang=En&n=1F77F3C2-1>

## BC Legislation

- For a current version of BC legislation go to [www.bclaws.ca](http://www.bclaws.ca).
- For a summary of laws regulating pesticide use in BC go to:  
<http://www.env.gov.bc.ca/epd/ipmp/regs/index.htm> , and/or  
[http://www.al.gov.bc.ca/pesticides/i\\_4.htm](http://www.al.gov.bc.ca/pesticides/i_4.htm)

## Enforcement Reporting

- For a database and summary reports of all enforcement actions taken by the Ministry of Environment and some of the actions taken by the Ministry of Forests, Lands and Natural Resource Operations go to: <http://www.env.gov.bc.ca/main/compliance-reporting/>

## Ministry of Environment Training Courses

- Compliance Management Framework workshop
- Compliance and Enforcement Policy and Procedure training
- Foundations of Environmental Regulatory Law
- Introduction to Statutory Decision Making

### Ministry of Environment Policies & Processes

- Compliance Management Framework:  
[http://iwww.env.gov.bc.ca/spd/compliance/mgmt\\_framework/index.html](http://iwww.env.gov.bc.ca/spd/compliance/mgmt_framework/index.html)
- Compliance and Enforcement Policy and Procedure:  
<http://iwww.env.gov.bc.ca/spd/compliance/policy.html>
- Process for serving orders:  
<http://iwww.env.gov.bc.ca/spd/compliance/orders/index.html>

### Environmental Protection Division Policies & Processes

- EPD policy website: <http://iwww.env.gov.bc.ca/epd/policy/manual/index.htm>
  - EPD policy # 1.01.03 - Setting standards, policies and guidelines
  - EPD policy # 1.01.04 - Determining best achievable technology standards
  - EPD manual for reviewing Environmental Impact Assessments to support effluent permitting
- **Waste Discharge Authorization process:**
  - [http://www.env.gov.bc.ca/epd/waste\\_discharge\\_auth/process.htm](http://www.env.gov.bc.ca/epd/waste_discharge_auth/process.htm)
  - The guidance document for the mine effluent permitting process is, *"The Effluent Permitting Process under EMA: An Overview for Mine Project Applicants"*.
- **Pesticide Authorization process**
  - For guidance on issuing authorizations read: "Issuing Pesticide Use Permits – A Guide for IPM Program Staff"
  - For a list of the types of authorizations go to:  
[http://www.env.gov.bc.ca/epd/ipmp/pest\\_certification/certif\\_categories.htm](http://www.env.gov.bc.ca/epd/ipmp/pest_certification/certif_categories.htm)
  - For publications and guidance documents go to:  
<http://www.env.gov.bc.ca/epd/ipmp/publications/index.htm>

### Environmental Appeal Board

- Decision summaries, hearing transcripts, and EAB decisions that have undergone a judicial review:  
[www.eab.gov.bc.ca](http://www.eab.gov.bc.ca)

### BC Supreme Court

- Judicial review decisions  
[www.courts.gov.bc.ca/supreme\\_court/index.aspx](http://www.courts.gov.bc.ca/supreme_court/index.aspx)