

## Guidance to Preparing Effective Plans for *Environmental Management Act* Permits

### Context: *Environmental Management Act* and Plans

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*Environmental Management Act* (EMA) authorizations include clauses with operational requirements that must be followed to ensure that waste discharges do not harm the environment. While many authorization clauses include prescriptive details about how waste products are managed, there are circumstances when operational details are complex and/or it may be more appropriate for waste management strategies to include some degree of flexibility for authorization holders to efficiently and effectively manage their operations while still meeting permit requirements. One of the tools to address complexity and provide flexibility is to allow authorization holders to develop their own plans, suited to their operations and environmental conditions. The ability to review and modify plans without the administrative burden of amending permit language also facilitates timely adaptive management of an operation, ideally resulting in improved environmental protection.

### Purpose of this Guide

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Many permits, operational certificates, and regulations include requirements for the preparation and implementation of various plans. These plans, usually prepared by Qualified Professionals, describe how the authorization holder will operate or manage their activities and processes, handle and discharge waste, and monitor the discharge and/or receiving environment. Examples of such plans include nitrogen management plans, design, operation and closure plans (e.g. for landfills), sediment management plans, monitoring plans, trigger action response plans and water management plans.

These plans are prepared in response to regulatory requirements (e.g. a permit clause), and it is necessary to implement the plan, exactly as it is written, to ensure these requirements are satisfied. The plan must therefore include prescriptive language that clearly demonstrates the steps the authorization holder will take to operate in accordance with the plan. Clear, specific and measurable actions ensure the plan addresses the issue it was intended for, which is crucial for tracking and evaluating implementation of these plans. The purpose of this guide is to support authorization holders to develop clear and effective plans, which are understood by all parties and detail how an authorized facility will be operated in a manner that is protective of the environment and human health and safety, as per the intent of the regulatory requirement.

This guide serves as a general reference for Qualified Professionals who are responsible for the preparation of plans in response to regulatory requirements, on behalf of an applicant or authorization holder. This guide is not specific to the technical content of a specific plan and how it addresses the applicable regulatory requirements, but instead provides advice on the language within the plan, to ensure that when it is implemented, the actions stipulated in the plan are clear and effective.

Submitted plans will be reviewed by Ministry of Environment and Climate Change Strategy (ENV) staff to ensure that they are clear, the actions will be effective, the language is enforceable, and they have been prepared following applicable ENV guidance documents (including this one). Adherence to the advice laid out in applicable ENV guidance documents in the preparation of the plan will not only result in more effective plans but will also reduce the likelihood that the plan will need to be significantly amended following ENV review. This will result in savings of time and expenses for the authorization holder.

## Scope

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This guide recommends best practices for the preparation of plans that may be required under *Environmental Management Act* regulations, codes of practice, and site-specific authorizations such as permits. This guide is not directly applicable to the development of Solid and Liquid Waste Management Plans that are developed in accordance with Section 24 of EMA for managing municipal waste; there is extensive guidance for these specific plans.

## Principles for Preparing an Effective Plan

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Improve the effectiveness of a plan by implementing the following guidelines:

1. **Use mandatory wording instead of discretionary:** The choice of wording in a plan will determine the strength of the management commitment. The use of words such as “may” and “should” leave too much room for potentially conflicting interpretation. Instead, mandatory wording such as “will”, “must” and “shall” indicates that the action is a requirement and must be implemented as specified. This wording communicates a willingness on the part of the authorization holder to commit to the actions necessary in an effective plan. See the examples below:

### Example

- ✘ “In the event of an exceedance of the trigger level at the point of discharge, the operator may reduce the flow rate and conduct additional monitoring as per Table X.”

vs

- ✓ “In the event of an exceedance of the trigger level at the point of discharge, the operator will reduce the flow rate to XX m<sup>3</sup>/sec, and conduct additional monitoring as per Table X.”

2. **Be specific about when actions are to be implemented:** Clarify the threshold that will trigger an action. Rather than using ambiguous wording such as “to the maximum extent possible”, “wherever practicable” or “as necessary”, which indicates that the approach is encouraged, but not actually required, prescribe the situations or circumstances that would require the implementation of an action (see ‘The SMART Principle – Measurable’ below). A good example of this would be clear numerical triggers based on discharge limits, in a Trigger Response Action Plan.

**Example**

✘ “The operator will implement the listed fugitive dust mitigation measures as necessary.”

vs

✓ “The listed fugitive dust mitigation measures will be implemented when wind speeds (as measured at the onsite meteorological station) are in exceedance of XX km/h.”

3. **Clearly define potentially ambiguous or unclear phrases/statements that could result in misinterpretation.** Jargon words or technical terms should be avoided or clearly defined in a glossary.

**Example**

✘ “Monitoring Program A will be implemented during summer and fall, Monitoring Program B will be implemented during winter and spring each year.”

vs

✓ “Monitoring Program A will be implemented from 1 June until 30 November each year, and Monitoring Program B will be implemented from 1 December until 31 May each year.”

4. **Avoid using terms that are inherently subjective, such as “significant”, “numerous”, or “frequently”.** Try to be specific when discussing variables such as quantities, concentrations, or distances (i.e. above what value would be considered significant?). Then specify in the plan that this action will be implemented above that specified value.

**Example**

✘ “A TSS sample will be collected for analysis at a certified laboratory, in the event that turbidity values are observed to increase significantly, at the point of discharge.”

vs

✓ “A TSS sample will be collected for analysis at a certified laboratory, in the event that turbidity values exceed 30 NTU, at the point of discharge.”

5. **Use tables, figures, charts and diagrams to clarify the action items within the plan.** Action items can get lost in long, wordy paragraphs. Presenting such items in a table, clearly identifying the trigger, and the subsequent action, makes the plan easier to understand and implement. Another example would be to use a flow chart to clearly describe a process applicable to an operation, such as a decision-making process for determining how contaminated material should be managed at a mine site. Flow charts are often a helpful means of providing a visual summary of an operational process, or a decision-making process, facilitating comprehension of the fundamentals of the plan.
6. **Use well annotated maps and diagrams to clearly identify areas of the site that apply to the specifics of the plan.** These are useful to anyone who may not be familiar with all aspects of the site.
7. **Use symbols and measurement units in a consistent manner throughout the plan document.** Where applicable, ensure measurement units correspond to the units in the authorization or legislation.
8. **Ensure all abbreviations are clearly defined in the plan,** either at the start of the plan or wherever the abbreviation is first included in the plan.
9. **Ensure consistent use of terminology.** Using interchangeable wording can cause confusion, particularly when referring to site infrastructure that may not be familiar to all parties, such as referencing a tailings storage facility, a tailings impoundment, and a tailings pond in the same plan.
10. **The Qualified Professional preparing the plan must not use the plan to provide advice, options or recommendations to the authorization holder.** Instead, plan documents should be used to document actual actions to be conducted. It is expected that recommendations will arise during the plan development and review processes. These should be discussed between the authorization holder and the Qualified Professional, before the decision is made to either incorporate the recommended action/amendment or not in the final version/revision of the plan.
11. **Ensure the advice and guidance included in any applicable ENV guidance documents regarding plan contents (if available) is incorporated into the final plan wherever possible.** These guidance documents have been created to provide clarity about what ENV expects to be included in the final plan, and the final plan will be reviewed for content against these guidance

documents. Adherence to these guidance documents will facilitate a smooth review process for both the authorization holder and ENV.

## The SMART Principle

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Further to the items listed above, the **SMART** principle is a useful method or lens to apply when drafting plans. SMART is an acronym, giving criteria to guide in the setting of objectives, as would happen in the development of a plan.

Using the SMART principle can assist with ensuring actions stipulated in a plan are as clear and enforceable as possible.

The following table outlines and provides examples for each component of SMART:

	Description	Examples
<b>Specific</b>	<p>Actions must be written to be specific, well-defined, and clear to anyone who may become involved with the activity.</p> <p>It is important to consider how the action will be implemented, including who, what, when, where and how.</p>	<p>The plan should identify who specifically must complete a task, i.e. the site manager, the environmental technician, a qualified professional with specific expertise, or another relevant party.</p> <p>It may be helpful to cross reference the condition to a relevant map or diagram in the plan.</p> <p>For example: <i>‘Map 6 shows the location of temporary wind fencing to be installed at a minimum of 10 metres from the outside extent of the active cell of the landfill. The temporary wind fencing must be erected by the Maintenance technician prior to the commencement of any works for this activity. This fencing may be removed after the completion of the activity’.</i></p>
<b>Measurable</b>	<p>Actions stipulated in the plan need to be measurable and quantifiable. This means the progress and final outcome of the condition or contingency plan must be trackable.</p>	<p>A measurable action item will stipulate clearly when the outcome is achieved.</p> <p>For example: <i>‘Six months after completion of the project’</i> is <b>NOT</b> measurable because it isn’t clear as to what constitutes ‘completion of the project’.</p> <p>Whereas:</p> <p><i>‘Six months from the date that this plan is approved’</i>, <b>IS</b> both identifiable and measurable.</p> <p>‘If necessary’ is <b>NOT</b> a measurable term, as it does not specify what action would be considered necessary. For example: <i>‘Additional TSS samples will be collected if</i></p>

		<p><i>necessary</i>'. To be measurable, the sentence instead might read: <i>'Additional TSS samples will be collected if the turbidity is above 30 NTU'</i>.</p>
<p><b>Achievable/ Agreed upon/ Attainable</b></p>	<p>The requirements of a plan must be achievable or attainable. The methods for achieving the outcomes plan must also be agreed-upon by the relevant parties. This aspect of writing a plan may be driven by the actions that need to be undertaken to reach the desired outcome.</p>	<p>In the same way plans must be specific, it is important that they do not become overly prescriptive.</p> <p>For example: <i>specifying a particular brand of material limits the conditions to that single brand. Inclusion of generic terms such as: 'or similar' (as agreed upon by the relevant parties) will achieve the intention of the condition.</i></p>
<p><b>Reasonable/ Relevant</b></p>	<p>In the same way that a plan must be achievable, it must also be reasonable. Plans must be formulated to be objectively practical and consistently written.</p>	<p>Do not rely on other documents, outside of the primary document, without qualifying. Refer instead to the specific section or incorporate the relevant part into the primary document itself. Copies of other documents or guidance can be included in the appendices.</p> <p>By making cross-referencing between documents clear and precise, there is less room for confusion or ambiguity to occur. This keeps the conditions and contingency plans relevant and avoids unreasonable expectations of existing specialist knowledge.</p>
<p><b>Timing/ Time-bound</b></p>	<p>Conditions and contingency plans will most often require a deadline.</p> <p>Conditions may also be required to be completed at particular stages of a project, prior to the commencement of a specific activity, or after the decommissioning of specified infrastructure.</p> <p>It is important to specify timeframes that are anchored to an <u>identifiable</u> date or time.</p>	<p>Include conditions that specify notification to be provided to the relevant parties for commencement and completion of the activity. Communicating the satisfactory undertaking of specific conditions or activities can be useful for signalling completion of milestones, demonstrating compliance and providing closure for record keeping.</p>

## Summary

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Ensure all plans required under the *Environmental Management Act* are prepared in accordance with the following principles:

1. Use mandatory wording instead of discretionary.
2. Be specific about when actions are to be implemented.
3. Clearly define potentially ambiguous or unclear phrases/statements that could result in misinterpretation.
4. Avoid using terms that are inherently subjective.
5. Use tables, figures, charts and diagrams to clarify the action items within the plan.
6. Use well-annotated maps and diagrams to clearly identify areas of the site that apply to the specifics of the plan.
7. Use symbols and measurement units in a consistent manner throughout the plan document.
8. Ensure all abbreviations are clearly defined in the plan.
9. Ensure consistent use of terminology.
10. Ensure the plan does not include recommendations or advice.
11. Ensure any applicable ENV guidance is incorporated into the plan.

In the event a plan is submitted without adhering to these principles, the plan may be considered unacceptable, and submission of an amended plan may be required.

REVISION HISTORY			
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