

Operation of Soil Treatment Facilities for the Bioremediation of Hydrocarbon Contaminated Soil

January 11, 2013

Document Section(s)	Issue	Stakeholder Comments/Recommendations	Ministry Response
Soil Management	Independent Remediation Requirements	Bioremediation activities are considered soil treatment per generally accepted principles and standards. While site remediation triggers a NIR, strictly speaking it is not the activity of bioremediating the soil that triggers the NIR. Although removal of contaminated soils from the ground may be complete within 90 days, the soil bioremediation may take longer. Clarify whether the “bioremediation activities” alone warrant notification of independent remediation.	Independent remediation includes any site activities initiated to improve the environmental quality of a site through the management, treatment or handling of contamination. As such, bioremediation activities would be considered a trigger for notification of independent remediation. Refer to the Land Remediation key topic “ Independent Remediation ” for more information.
Table 1	pH range	The pH range appears to be incorrect. Assume that recommended operating level is between pH 6 and 8.	Yes, this error was corrected.
Table 1	Microbial populations	Suggest wording change from “bioaugmentation is not always necessary” to “bioaugmentation is usually not necessary”.	The wording was changed to “bioaugmentation may not be necessary.”
Table 2	Final disposal	Regarding the final disposition options for treated soil, for reuse of treated soil on the land where the soil originated; are you able to clarify what is required in the form of authorization to do this? I’ve looked at the waste discharge regulation and I do not see how it applies to this situation.	Table 2 was removed from the document. This table attempted to cover off all possible situations, which is why it was quite vague indicating that a discharge authorization “may” be required. It comes down to the definition of “waste”. If the soil you are depositing is considered a “waste” then a permit or approval would be required, even if the soil is being deposited at the site the soil originated from. It is difficult to provide a blanket answer to when a discharge permit is required because each situation is unique and must be evaluated to determine if an authorization is required.
Table 2	Final disposal	If soil is treated at a site and then reused on the site where it originated, why would a waste discharge authorization be required? If remediated to numeric or risk based criteria, the bioremediated soil should not be considered a waste material. A waste discharge authorization should only be needed if the bioremediated soil left on the originating site does not meet the numeric or risk based criteria. This should be clarified in Table 2.	A discharge authorization would only be required to deposit treated soil on the originating site if the soil did not meet the numeric standards for that site. Table 2 was removed from the guidance. The document text includes general information regarding the possible need for a Contaminated Soil Relocation Agreement or a discharge authorization.
Table 2	Final disposal	Stating that a Waste Discharge Authorization or CSRA may be required does not provide sufficient guidance to be of use in practice. Clearly state the conditions under which authorizations are required for	See previous comments above. Table 2 was removed from the document.

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		waste discharge or CSRA either for each option in the table or as a more generic note at the bottom of the table.	