



Separatory Liner/Leachate Collection Systems

Applicable Rules

MSW: OAC 3745-27-08(B)(2)(f)
OAC 3745-27-08(C)(2)
OAC 3745-27-08(D)
ISW: OAC 3745-29-08(B)(2)(f)
OAC 3745-29-08(C)(2)
OAC 3745-29-08(D)
RSW: NA
Tires: NA

Purpose

This educational guideline provides information about the separatory liner/leachate collection system (SL/LCS) requirements.

Applicability

This document applies to municipal (MSW) and industrial (ISW) solid waste landfills.

Frequently Asked Questions

- Q1. When is the SL/LCS required?
- A1. The SL/LCS is a supplemental engineered component according to paragraph (B)(2)(f) of the rules and is required only for permit applications proposing a vertical expansion over an unlined area or an area without a leachate collection system submitted after August 15, 2004.
- Q2. Would a facility with an existing liner which does not meet current liner requirements be considered unlined?
- A2. No, any engineered liner previously approved by the director is acceptable.
- Q3. If there is a vertical expansion over an existing SL/LCS, does it need to meet current rule requirements?
- A3. If an application proposes a vertical expansion over a previously approved SL/LCS (either existing or to be constructed), the SL/LCS below the vertical expansion and above unlined area must meet the rule requirements. Existing cap converted to a separatory liner may be acceptable if it meets current rule requirements. If the existing SL/LCS does not meet rule requirements, it does not have to be removed, but a new SL/LCS will be necessary.
- Q4. Is an SL/LCS required as part of the ten-year design demonstration?
- A4. Only if an SL/LCS is already incorporated into the landfill design and there are unconstructed portions, then it needs to be analyzed for compliance with current rule standards. If a facility does not have an SL/LCS, it is not required to add one as part of a ten-year design demonstration.
- Q5. Paragraph (B)(2)(f) lists SL/LCS components, are all these components required?
- A5. Components for the SL/LCS may be selected from this list. Other components may be proposed. Selection of components will depend on their ability to meet the design criteria established in paragraph (C)(2) of the rules.

¹ Note: This document was originally published on the date noted above. DMWM re-issued the document to make it consistent with current formatting and publication standards after evaluating the content and determining it is still relevant and appropriate. No substantive changes were made to the document.

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- Q6. What design, construction and testing specifications apply to the components?
- A6. Components selected from (B)(2)(f) must meet the design, construction and testing specifications established in paragraph (D) of the rules.
- Q7. Is the SL/LCS to be a barrier against infiltration of leachate from new waste into old waste?
- A7. The general design criterion in (C)(2)(a) is the SL/LCS is to serve as a barrier in order to direct leachate from new waste to the leachate collection system, not to prohibit all infiltration.
- Q8. How should explosive gas generated beneath the SL/LCS be managed?
- A8. Flexible membrane liners and recompacted soil liners can both be disrupted by gas trapped underneath. If gas generation rates are high, it is not likely that the owner or operator will be able to fill waste on the SL/LCS quickly enough to provide sufficient overburden. Therefore, gas collection layers, vents, and/or trenches should be part of the SL/LCS design.
- Q9. What other minimum slope will be acceptable to the director?
- A9. To maintain drainage of leachate to the leachate collection system after expected settlement, a minimum slope of 10% was established. Although a steeper slope may be necessary for certain situations (e.g., over trench fills). A flatter slope may be acceptable to the director, if it can be demonstrated that after construction and settlement, positive drainage is maintained.
- Q10. Where does the SL/LCS have to be placed?
- A10. The SL/LCS is required to be placed above unlined areas and should be placed so that the amount of waste below the SL/LCS is minimized, thus maximizing the amount of leachate diverted from the unlined area to the leachate collection system associated with the vertical expansion.
- Q11. Can the SL/LCS be placed above new waste?
- A11. Yes, it can. To attain the required minimum slope, waste may be used. The placement of the SL/LCS should be such that the amount of waste used to attain the slope is minimized.

Contact

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