

Paul Pak

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the facility owner/operator to prove that the alternative design will provide a level of performance that is at least equivalent to that of the cover system described in the guidance document."

If you have any further questions regarding this matter, please contact me at (509) 376-8665.

Sincerely



Paul R. Beaver
Unit Manager

Enclosure

cc: Mark Buckmaster, WHC
Rich Carlson, WHC
Julie Erickson, DOE
Doug Sherwood, EPA
Darci Teel, WDOE
Nancy Uziemblo, WDOE

Recommended guidance has been developed for meeting these five regulatory requirements although alternative designs could also meet the five regulatory requirements. The ability of alternative designs to meet the five regulatory requirements would have to be demonstrated with more detail than the recommended design.

The RCRA guidance for covers specifies that the cover should consist of the following as minimum:

- Vegetated top cover
- Middle drainage layer
- Low permeability bottom layer
 - > 20 mil synthetic - upper component (may be optional)
 - > 2 ft clay layer - lower component

Detailed guidance on each component is as follows:

A) Vegetated Top Cover

- o minimum 24 in. thick
- o should support vegetation that minimizes erosion without continued maintenance
- o planted with persistent species - no roots that will penetrate beyond the vegetative and drainage layers
- o top slope, after settling and subsidence, of between 3-5% - if > 5% use USDA Universal Soil Loss Equation to demonstrate a soil loss of < 2.0 tons/acre/yr.
- o surface drainage system capable of conducting runoff across cap with no problems.

B) Middle Drainage Layer

- o minimum 12 in. thick
- o saturated conductivity not less than 1×10^{-3} cm/sec
- o bottom slope of at least 2 percent
- o designed to prevent clogging - overlain by a graded granular or synthetic fabric filter
- o discharge flows freely
- The granular or fabric filter is used to prevent plugging of the porous media with fine earth particles carried down from the vegetated layer.
- To prevent fluid from backing up into the drainage layer, the discharge at the site should flow freely (the edge of the unit should drain freely, e.g., into surface runoff ditch).

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B

C) Low Permeability Bottom Layer

- upper component

- o at least 20 mil synthetic (may be optional)
- o bedding layer at least 6 ft thick - no coarser than unified soil classification system sand (sp)
- o final upper slope at least 2%
- o be located wholly below the average depth of frost penetration in the area of interest

- lower component

- o at least 2 ft of soil recompacted to a saturated conductivity of not more than 1×10^{-7} cm/sec
- o soil emplaced in lifts not exceeding 6 inches before compaction.

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CORRESPONDENCE DISTRIBUTION COVERSHEET

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Incoming: 9307487

Subject: RECORD OF DECISION REQUIREMENTS FOR 200-BP-1 OPERABLE UNIT

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