



California Regional Water Quality Control Board Lahontan Region



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DESIGN PLAN, NURSERY PRODUCTS HAWES COMPOSTING FACILITY, SAN BERNARDINO COUNTY

On May 26, 2011, California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received a Final Design Plan (Plan), which was prepared by Geosyntec and submitted on behalf of Nursery Products. The Plan was submitted to satisfy Waste Discharge Requirements, Board Order No. R6V-2010-0010 (Board Order), and was submitted in response to Water Board staff comments (letter dated April 21, 2011) on the prior submittals of the Plan submitted to the Water Board between May 2010 and March 2011. On August 22, 2011, Water Board staff received a letter. (Letter) revising the Plan.

The outstanding issue with the Design Plan concerns the areas between the concrete aprons, located at the base of the surface impoundment diversion berms, and the edge of the liner of the surface impoundments. The following is a description of the sequence of proposed designs submitted by Nursery Products and the concerns raised by the Water Board staff.

Initial Design: The initial design proposed to have compacted soils between the aprons and the surface impoundments. Water Board staff's concern with this proposal was that the berm openings channelize runoff from the Facility to the surface impoundments, thereby increasing velocities and the likelihood of erosion of the soil between the concrete aprons and surface impoundments. This eroded soil may end up in the surface impoundments, resulting in reduced volume available for runoff retention and increased maintenance (repair of area between the apron and surface impoundment and need to remove soil buildup in the impoundment). Additionally, this erosion may lead to undermining of the anchor for the surface impoundment liner.

Second Design: Nursery Products proposed a geoweb between the concrete aprons and the surface impoundments to address the erosion. The concern with this design was that, according to the website for the geoweb manufacturer, while reducing erosion, a geoweb would also promote infiltration. Runoff that infiltrates would then likely move laterally along the interface between the geoweb and the compacted soils beneath the geoweb until it

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reached the surface impoundment liner which is anchored in this area. The compacted soil – liner interface would promote movement of liquid in a diagonal direction downward and away from the surface impoundment.

Latest Design: Nursery Products proposed to replace the geoweb with a concrete extension of the concrete apron. A metal plate would be attached to the concrete extension that would cover most of the one-foot gap between the end of the extended concrete aprons and the surface impoundment liners. However, this would still leave a small gap, expected to be about one inch, between the metal plates and the surface impoundment liners. Contrary to the inference in the Letter, the Water Board did not request this metal plate but suggested it along with other means to eliminate the gap between the concrete extensions and the surface impoundment liners. Furthermore, this design is not consistent with the suggestion made by Water Board staff in that the metal plate provides a gap as mentioned above rather than being designed to act as a spillway allowing runoff to flow directly into the surface impoundments. Therefore, it was not “verbally approved” as indicated in the Letter. The concern with this design is that the gap may allow runoff to move in a diagonal direction downward and away from the surface impoundments along the compacted soil – liner interface, similar, but to a lesser extent than in the second design.

As describe above, I believe all of the designs proposed by Nursery Products may result in problems leading to threatened or actual violations of Board Order No. R6V-2010-0010. However, Nursery Products is now aware of my concerns and has the burden of complying with the Board Order which includes maintaining design volume retention and preventing degradation of groundwater. Therefore, I am prepared to accept any of the three designs. I am also open to considering other alternatives that may negate the need for additional monitoring. If Nursery Products proceeds with any of these designs, I intend to impose additional monitoring requirements that may include visual, photographic documentation, or vadose zone monitoring to address the above-mentioned concerns. Please advise me in writing as to how Nursery Products intends to proceed. If Nursery Products wishes to propose another alternative, please submit design plans for this alternative.

We look forward to working with you in a manner that protects water quality. If you have any questions, please contact Brianna Bergen at (760) 241-7305 (bbergen@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).



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cc: Mailing List