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## Central Valley Regional Water Quality Control Board

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**FROM:** Todd Del Frate and Howard Hold  
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**DATE:** 5 May 2014

**SUBJECT:** ***EVALUATION OF COMPLIANCE REGARDING CAO R5-2013-0704, ITEM #9:  
COMPOST AREA LEACHATE COLLECTION WORK PLAN, RECOLOGY  
YUBA SUTTER, YUBA COUNTY***

Cleanup and Abatement Order (CAO) R5-2013-0704 was issued to Recology Yuba Sutter (Discharger) to address groundwater impacts related to facility operations on the top surface of LF-1. The CAO requires the Discharger to develop multiple plans that will address the deficiencies of specific operations with respect to management of storm water and contact storm water (leachate). The Discharger submitted a "*Compost Area Leachate Collection Work Plan*" (work plan) dated 31 January 2014. Staff has reviewed the work plan to evaluate compliance with Item #9, and concludes that the submitted plan does not comply with the CAO.

The CAO required the Discharger to choose a containment system to contain contact storm water / leachate from the compost area. The workplan needed to show that the chosen system would have enough capacity using the design specifications outlined in the CAO. Furthermore, the work plan was to provide a construction schedule such that the new conveyance and containments structures would be in place by 1 October 2014. Staff has prepared this memorandum to explain the deficiencies with the submitted work plan.

Specifically, Item #9 required Recology to submit the following information.

9. ***By 1 February 2014, the Discharger shall submit a Compost Area Leachate Collection Work Plan. The work plan shall describe how contact storm water (leachate) generated at the compost (chip/grind) and green waste areas will be managed. In particular, the work plan shall describe:***
  - a. *The separation of leachate from facility storm water, and how the leachate will be collected and directed to containment and conveyance systems which are designed, constructed, operated, and maintained so that the leachate is separated, to the maximum extent possible, from the underlying closure cover of LF-1. These conveyance systems shall be made of a low permeability material such as asphalt, concrete, engineered compacted fill, or similar material and shall not rely on the properties of the existing closure cover to further impede percolation of liquids into the underlying waste mass.*

*The diversion and drainage structures shall meet the standards of Title 27, Section 20365 (a) and (c).*

Staff response: The plan complies with requirements.

- b. The type of containment system in which the leachate shall be stored. Leachate may be discharged to an above ground tank system or to surface impoundments (ponds) constructed with at least a single liner. The work plan shall include design specifications for the tanks or pond/liner, and shall propose monitoring of the unsaturated zone beneath the tanks or pond. Pond(s) shall not be constructed over waste or on top of a WMU, unless approved by the Board through revised WDRs. The work plan shall include a water balance to justify the size of the tanks or ponds. The minimum pond volume shall meet the capacity specifications of Table 4.1 of Title 27.*

Staff Response: Item b. requires the work plan to identify the type of containment system in which the leachate shall be stored. It provides two options: above ground tanks or construction of a surface impoundment and allows the Discharger to determine which system it would prefer. However, the Discharger's work plan only includes general design specifications for a lined surface impoundment that would be located within the "hog farm" area of the facility. However, the Discharger states that the hog farm is not part of the permitted compost area facility, and therefore, the Discharger believes there will be delays in order to obtain a permit, including the possible need to complete a full EIR. Board staff do not understand why installation of a pond in the "hog farm" area will require an update to the CalRecycle/LEA compost permit as it would be permitted by the Board through updated WDRs. The Discharger also evaluated the use of Baker Tanks to store leachate. However, the work plan provides no reason or discussion as to why tanks are not being chosen to meet compliance with the CAO. Nor does the Discharger combine these two options.

- c. The disposal of leachate in the containment system so that the tanks/ponds have adequate storage capacity at the beginning of each winter.*

Staff Response: The plan generally complies; however, a final containment system has not been chosen so the design requirements cannot be regarded as final. In addition, a water balance has been calculated for the site based off a 100-year/24-hour design storm. However, Table 4.1 of Title 27 specifies that impoundments be designed to hold the flows from a 1,000-year/24-hour design storm. Therefore the proposed design capacity for an impoundment does not meet the design criteria specified in the CAO.

The Discharger evaluated two potential containment systems: a surface impoundment and tank storage. Based on the water balance submitted, a surface impoundment of 4.3 acres is required to provide sufficient capacity while maintaining two feet of freeboard. If tank storage is the chosen containment system, then approximately 332 tanks would be needed, each of which would be 21,000-gallons. Staff believes that there may be methods to reduce the volume of contact stormwater and leachate generated, which would then reduce the size of the pond or the number of tanks. In addition, the Discharger should be able to reuse leachate on the compost piles, and could also truck waste off site to the sanitary sewer. The Discharger implements these methods at its Hay Road Landfill and should look for additional ways to reduce the storage volume at Yuba Sutter.

It should be noted that a surface impoundment, if constructed, would reside within the 100-year flood elevation and as discussed in the plan would require a design that would protect it from washout or inundation during a flood event. Board staff are aware that the Discharger operates another landfill / composting facility within a 100-year flood plain. Consequently, staff believes the Discharger has the resources and expertise to propose an acceptable flood protection design.

- d. *A construction schedule such that the conveyance and containment systems are installed and operational by 1 October 2014.*

Staff Response: Item d. requires the work plan to submit a construction schedule and to be operational by 1 October 2014. Since a final containment system has not been chosen, it does not appear that the Discharger will meet the CAO schedule. The work plan proposes the following schedule as an alternative:

1. Submittal of work plan	31 January 2014
2. Board review and approval of work plan	17 March 2014
3. Prepare preliminary feasibility design report for permitting	30 May 2014
4. Permitting through other regulatory agencies	2 January 2015
5. Submit preliminary final design report, construction Plans, technical specs, and CQA Plan	27 March 2015
6. Board review and approval of the design	1 June 2015
7. Construction bids and contractor selection	17 July 2015
8. Complete construction of leachate collection system	1 October 2015

Other Concerns:

According to the Discharger, temporary measures installed prior to the 2013/2014 wet season remain in place. Staff is unclear how these measures worked during precipitation events. The work plan does propose using vacuum lysimeters for monitoring either containment system evaluated. However, the design of the lysimeters has not been finalized, thus staff is unable to approve this component of the work plan.

Requirement 15 of the CAO requires the Discharger to submit monthly status updates for each item in the CAO. On 30 April 2014, the Discharger submitted their update and included a paragraph on Item 9 which reads:

*“As required by CAO Requirement #9, on January 31, 2014 RYS submitted the Compost Leachate Collection Work Plan; this plan described how stormwater generated at the compost facility will be managed. CVRWQCB has not commented on, or approved, the January 2014 Compost Leachate Collection Work Plan.*

*As Noted above, RYS implemented its proposed temporary system and it worked well during the first quarter of calendar year 2014. The work on the compost pad is about 40% complete at this time and will be completed prior to the next (2014-2015) rainy season. As noted in the January 31, 2014 transmittal letter, given the low rainfall this wet season, and the determination that a 4.3 acre retention basin would be required to address a 100 year flood event, RYS feels that the performance of the temporary system is not fully known and that an evaluation of alternative options will be needed prior to implementation of any permanent solution for control of runoff from the compost system.*

*Should a retention basin be deemed feasible, additional time beyond the above noted date in the CAO will be required to obtain necessary permits and approval for its construction in the hog farm portion of RYS. The evaluation of alternative leachate containment systems as described in the "Compost Leachate Collection Work Plan" will continue into 2<sup>nd</sup> Quarter of 2014. Until then, the temporary system will remain in place".*

### **Conclusions:**

Recology has submitted an incomplete plan that does not meet the intent of the CAO and therefore they are in violation of the CAO.

- The information requested in Item 9 of the CAO was to be used to prepare Waste Discharge Requirements. Failure to submit the information has limited staff's ability to update the WDRs in a timely manner. The fact that this was a dry year should not play into the compliance schedule. Standard engineering practices should be used for calculating runoff volumes, as well as containment structure siting and capacity.
- Both the *Compost Leachate Collection Work Plan* and the *Update* make reference to the need to secure permits for building a lined basin within the "hog farm". Compliance and Enforcement staff asked the Regional Board's permitting group if the Discharger has made any contact regarding securing a permit for construction of a contact storm water / leachate pond. Permitting staff was unaware of any contact by the Discharger regarding a permit.
- The new schedule, proposed by the Discharger, contradicts the compliance date in the CAO. Staff has no authority to extend these dates. Recology must be informed of the potential liability of submitting incomplete reports as well as failing to meet the deadlines in the Order.
- The Discharger should strongly consider combining the proposed options in the work plan. By first using aboveground storage tanks as an interim measure, the Discharger could have the tanks in place prior to the 2014/2015 wet season. Meanwhile, on a parallel track, the Discharger could be designing and permitting an impoundment and monitoring network that meets the design criteria specified in the CAO. Staff believes this solution would protect water quality both in the short and long term, as well as comply with the CAO.