

**Central Valley Regional Water Quality Control Board
Board Meeting – 7/8 August 2014**

**Response to Written Comments for
San Andreas Sanitary District
Wastewater Treatment Plant
NPDES Permit Renewal (CA0079464)**

The following are Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit No. CA0079464) renewal for the San Andreas Sanitary District (Discharger), Wastewater Treatment Plant (Facility), Calaveras County.

The tentative NPDES Permit (tentative Order) was issued for a 30-day public comment period on 27 May 2014 with comments due by 30 June 2014. The Central Valley Water Board received public comments regarding the tentative Permit by the due date from the Discharger. Some changes were made to the proposed Permit based on public comments received.

The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses.

San Andreas Sanitary District (Discharger)

Discharger Comment # 1. Discharge Prohibition III.H. Holding Ponds B and C.

Discharge Prohibition III.H of the tentative Order includes language that prohibits the discharge of wastewater to Holding Ponds B and C. The Discharger commented that the ability to discharge disinfected wastewater to Holding Ponds B and C is necessary in order to perform certain maintenance operations. The Facility is designed to only discharge disinfected wastewater to Holding Ponds B and C.

Response. Central Valley Water Board staff concurs that Ponds B and C are needed for maintenance purposes and only disinfected secondary or disinfected tertiary wastewater is discharged to the ponds. The Facility description in Section II of the Fact Sheet has been updated to properly describe the operation of Ponds B and C. The proposed Order includes Discharge Prohibition III.A, which states, "Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II, in a manner different from that described in this Order is prohibited." With the changes to the Fact Sheet, the subject Discharge Prohibition is unnecessary. Therefore, Discharge Prohibition III.H has been removed.

Discharger Comment # 2. Special Provision VI.C.2.a.ii. - Numeric Toxicity Trigger.

Special Provision VI.C.2.a.ii of the tentative Order contains a numeric toxicity monitoring trigger to initiate a Toxicity Reduction Evaluation (TRE) of >1 chronic toxicity units (TUc). The Discharger has commented that the tentative Order contains a discharge prohibition against discharges to surface waters that do not receive 20:1 dilution, therefore, the numeric chronic toxicity monitoring trigger of >1TUc seems inappropriate to the intent of the chronic bioassay. With the current dilution requirement being met, there exists no chronic, 4-day exposure of aquatic life to undiluted effluent in the North Fork Calaveras River. Thus, the Discharger has requested that the numeric toxicity monitoring trigger be adjusted to account for some minimum level of dilution. The Discharger believes that a numeric chronic toxicity monitoring trigger of >4 TUc is supported by the results of field dilution studies conducted as part of the Discharger's outfall diffuser project.

Response. Central Valley Water Board staff concurs and have modified the numeric toxicity trigger to 4 TUc. The Fact Sheet (section IV.C.5.b) has also been revised to provide the rationale for the revised toxicity trigger.

Discharger Comment # 3. Special Provision VI.C.4.a.xiii. Dedicated Land Disposal Area (DLDA) Operating Requirements.

Special Provision VI.C.4.a.xiii of the tentative Order requires that irrigation runoff (tailwater) and storm water runoff be contained within the DLDA or be returned to the Facility, and shall not enter any surface water drainage course. The Discharger commented that it is not reasonable for the Central Valley Water Board to require that storm water runoff from the DLDA be contained, as historically, the Central Valley Water Board has recognized that storm water runoff from land discharge facilities can occur. The Discharger also feels that since wastewater that is applied to the DLDA is disinfected to the 23 MPN/100ml standard, any runoff from the DLDA poses no threat to adjacent water bodies. The Discharger requests that the language in Special Provision VI.C.4.a.xiii be modified to remove the prohibition of storm water runoff as follows or equal "Irrigation runoff (tailwater) shall be contained completely within the DLDA or be returned to the Facility, and shall not enter any surface water drainage course." The Discharger further states that the suggested language is further supported by Special Provision VI.C.4.a.xvii.

Response. Central Valley Water Board staff concurs. Special Provision VI.C.4.a.xiii has been modified as follows in underline/strikeout format below:

"xiii. Irrigation runoff (tailwater) ~~and storm water runoff~~ shall be completely contained within the DLDA or be returned to the Facility, and shall not enter any surface water drainage course."

Discharger Comment # 4. Special Provision VI.C.4.a.xv. Agronomic Application to DLDA.

Special Provision VI.C.4.a.xv of the tentative Order states the following "The volume of treated wastewater applied to the DLDA on any single day shall not exceed reasonable agronomic rates based on the vegetation grown, pre-discharge soil moisture conditions, and weather conditions." The Discharger commented that the Facility's DLDA is operated as a land disposal system and not an effluent reclamation system. Therefore, it is not appropriate for agronomic application rate requirements to be applied to the discharge to the DLDA. The Discharger recognizes the need to protect groundwater and recommends that the proposed Order set an annual average total nitrogen effluent limitation of 35 mg/L and a groundwater limitation that prohibits an exceedance of the water quality objective.

Response. Central Valley Water Board staff concurs. Special Provision VI.4.a.xv has been removed. An annual average nitrogen effluent limitation to Pond D of 34 mg/L (as N), based on Facility performance, and a groundwater limitation that prohibits the exceedance of the water quality objectives have been included to the proposed Order.

Discharger Comment # 5. Special Provision VI.C.4.a.xvi. Agronomic Application to DLDA.

Special Provision VI.C.4.a.xvi states “The discharge of treated wastewater to the DLDA shall be at reasonable agronomic rates designed to maximize uptake and breakdown of waste constituents in the root zone and minimize the percolation of waste constituents below the root zone.” The Discharger commented that this language is contrary to the land disposal design and the District’s Water Balance that was prepared as part of the Discharger’s Report of Waste Discharge (ROWD). The Discharger added that the purpose of the DLDA is to maximize land disposal to the extent practicable, not beneficial reuse of the effluent. The Discharger requested that the language be modified as follows “The discharge of treated wastewater to the DLDA shall be at reasonable irrigation application rates designed to minimize irrigation runoff.”

Response. Central Valley Water Board staff concurs. The existing language of Special Provision VI.C.4.a.xvi has been modified per the Discharger’s request.

Discharger Comment # 6. Tables E-2 Influent Monitoring and Table E-3 Effluent Monitoring.

Tables E-2 and E-3 of the tentative Order detail the monitoring requirements for influent and effluent, respectively. The Discharger commented that the flow-proportional composite sampling requirement is new to the WDR’s for the Facility. The Discharger currently collects time based composite samples, which the Discharger believes are representative since neither the influent nor effluent diurnal flows fluctuate significantly, and there are no significant industrial users in the Discharger’s service area. Furthermore, the Discharger stated that neither influent nor effluent sampling locations are configured in such a way that allows for easy conversion from time-based composite sampling to flow-based composite sampling. The Discharger has requested that the footnote requiring flow-proportional composite sampling be removed from the tentative Order. If the requirement for flow-proportional composite sampling remains in the tentative Order the Discharger would incur a significant expense and need time to engineer and construct improvements that will allow for flow-proportional composite samples.

Response. Central Valley Water Board staff concurs. The footnotes in tables E-2 and E-3, requiring flow-proportional composite sampling, have been removed.

Discharger Comment # 7. Attachment E, Section V.B.2. Chronic Toxicity Testing.

Attachment E, Section V.B.2 requires effluent samples for chronic toxicity testing to be representative of the volume and quality of the discharge. The Discharger commented that because effluent can only be discharged to the receiving water when a dilution ratio of 20:1 (receiving water flow : effluent flow) or greater is available (Section III.F), it seems more appropriate to conduct chronic toxicity testing on a worst-case blend of 20 parts receiving water and 1 part effluent. The Discharger added that an acceptable solution would be to continue to use conventional chronic toxicity testing and analysis protocols, but set the numeric chronic toxicity monitoring trigger at >4 TUc, as discussed above.

Response. See Response to Discharger Comment #2, above.

Discharger Comment # 8. Attachment E, Section V.B.7. Chronic Toxicity Testing

Attachment E, Section VI.B.7 states “For routine and accelerated chronic toxicity monitoring, it is not necessary to perform the test using a dilution series. The test may be performed using 100% effluent and one control. For TRE monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-5, below, unless an alternative dilution series is detailed in the submitted TRE Action Plan. A receiving water control or laboratory water control may be used as the diluent.” The Discharger commented in question of the language contained in Attachment E, Section VI.B.7. The Discharger has interpreted the language to mean that the routine and accelerated chronic toxicity monitoring may be performed using a blend of 20 parts receiving water and 1 part effluent to match the dilution requirements of the tentative Order.

Response. As discussed in Response to Discharger Comment #2, above, the chronic toxicity trigger has been changed to 4 TUc, which coincides with an effluent concentration of 25 percent. Consequently, to evaluate compliance with the trigger, the chronic whole effluent toxicity testing must be performed at an effluent concentration of 25 percent. The Monitoring and Reporting Program has been revised to require regular chronic toxicity testing using an effluent concentration of 25 percent.

Discharger Comment # 9. Table E-4. Chronic Toxicity Testing Dilution Series for TRE Investigation.

Attachment E, Section VI.B.7 Table E-4 (as seen below) details the dilution series that is required for the Discharger to follow when conducting a Toxicity Reduction Evaluation (TRE). The Discharger commented that because of the 20:1 dilution requirement (Section III.F), the dilutions listed in this table will never occur and have no bearing on chronic exposure conditions in the receiving water. The maximum dilution will never be greater than 5% effluent. The dilution series should start at 5% and go down from there under the current Order’s minimum dilution requirement. However, the Discharger recognizes the complications the change would have on statistical analysis of the results, and supports staying with the conventional effluent dilution series if the numeric chronic toxicity monitoring trigger is increased to >4 TUc to reflect that some minimum dilution occurs right at the effluent diffuser and across the immediately downstream concrete ford.

Table E-1. Chronic Toxicity Testing Dilution Series for TRE Investigation

Sample	Dilutions ^a (%)					Control
	100	75	50	25	12.5	
% Effluent	100	75	50	25	12.5	0
% Control Water	0	25	50	75	87.5	100

Response. The purpose of the dilution series is to allow calculation of the chronic toxic units (TUc). The dilution series required in the proposed Order is the standard dilution series that laboratories use for this purpose. The proposed Order only requires a dilution series when a Toxicity Reduction Evaluation is underway and allows the Discharger to use an alternative dilution series per the Discharger’s TRE Action Plan, which considers site-specific circumstances. Therefore, no changes to the proposed Order are necessary.

Discharger Comment # 10. Attachment E, Section X.B.8.a. Self Monitoring Reports.

Attachment E, Section X.B.8.a states “Results of groundwater monitoring, including quarterly data for the new background well for a period of two years following installation,” The Discharger commented that the language contained in Attachment E, Section X.B.8.a should be removed since all groundwater wells are to be monitored quarterly per Table E-8 in Section VIII.B.2 of Attachment E.

Response. Central Valley Water Board staff concurs. The language included in Attachment E, Section X.B.8.a is repetitive of language contained in Section VIII.B.2 of Attachment E, and has been removed from the tentative Order.

Discharger Comment # 11. Attachment F, Section II.A. Description of Wastewater and Biosolids Treatment and Controls.

The second paragraph of Attachment F, Section II.A states “ the District owns a 102 acre parcel of land adjacent to the existing DLDA...” The Discharger commented that the Neilson Property is actually made up of three parcels (4, 7, and 102 acres). Therefore, the total should be 113 acres, not 102 acres.

Response. Central Valley Water Board staff concurs. The second paragraph in Attachment F, Section II.A has been changed to reflect the Discharger’s correction.

Discharger Comment # 12. Attachment F, Section II.B.3. Discharge points and Receiving Water.

Attachment F, Section II.B.3 states “Treated municipal wastewater is discharged to the DLDA through the use of spray irrigation. This Order incorporates the Neilson Property into the approved DLDA, which adds approximately 43 acres suitable for effluent disposal use to the existing 19 acres of the DLDA (See Attachment B for a map of the Facility).” The Discharger commented that the last sentence in this paragraph should be replaced with the following: “The Order incorporates the Neilson Property into the approved DLDA. With this incorporation, the DLDA has at least 88 acres of land suitable for sprinkler effluent application that may be used in rotation, which are distributed roughly as shown in Attachment B of this Order.” An updated schematic detailing the existing and proposed DLDA area, and the proposed locations of containment ditches was also included with the Discharger’s comments.

Response. Central Valley Water Board staff concur that this section could be clarified. The section has been revised as follows in underline/strikeout format:

- “2. Treated municipal wastewater is discharged to the DLDA through the use of spray irrigation. ~~This Order incorporates the Neilson Property into the approved DLDA, which adds approximately 43 acres suitable for effluent disposal use to the existing 19 acres of the DLDA (See Attachment B for a map of the DLDA.)~~”