

SAN ANDREAS SANITARY DISTRICT

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GENERAL MANAGER
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June 27, 2014

Mr. James Marshall

California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Ranch Cordova, CA 95670

Subject: San Andreas Sanitary District Tentative Order Comments/Suggestions

Dear Mr. Marshall:

The purpose of this submittal is to provide the Regional Water Board with comments and suggestions regarding the San Andreas Sanitary District (District) Tentative Order (TO). The District's comments and suggestions are as follows:

1. Discharge Prohibition III.H – “The discharge of wastewater to Holding Ponds B and C is prohibited.” The District needs the ability to discharge disinfected wastewater to Ponds B and C under certain emergency and/or facility maintenance conditions. The District requests that the prohibition apply to “non-disinfected wastewater” rather than “wastewater”. The facility design allows for all wastewater discharged to Ponds B and C to be disinfected.
2. Special Provision VI.C.2.a.ii – Since the District is only permitted to discharge to the surface water when there is a minimum daily average dilution ratio of 20:1 (receiving water : effluent), the restrictive numeric chronic toxicity monitoring trigger of >1 TUc seems inappropriate to the intent of the chronic bioassay, which to our understanding is to verify compliance with the narrative requirement that the effluent discharge shall not cause chronic toxicity in a receiving water regardless of whether the effluent complies with all effluent limitations. There is no chronic, 4-day exposure of aquatic life to undiluted effluent in North Fork Calaveras River. Thus, the District requests that the numeric toxicity monitoring trigger be adjusted to account for some minimum level of dilution. The District is not requesting a numeric chronic toxicity monitoring trigger of >20 TUc because 1) it is not needed, and 2) water quality objectives are based on toxicity (i.e., some impairment of function), not

lethability, stunted growth, or impaired reproduction (the various endpoints of the chronic bioassay test). The District is requesting a numeric chronic toxicity monitoring trigger of >4 TUC which we believe is supported by the results of field dilution studies conducted as part of the outfall diffuser project (as summarized in the Fact Sheet of the District's current Order), and we believe covers most "false positive" results inherent to the chronic bioassay test because the individual organisms in the effluent sample and control are different.

3. Special Provision VI.C.4.a.xiii – "Irrigation runoff (tailwater) and stormwater runoff shall be completely contained within the DLDA or be returned to the Facility, and shall not enter any surface water drainage course." It is not reasonable for the District to be required to contain all stormwater runoff from the DLDA, particularly considering that the DLDA effluent is disinfected to the 23 MPN/100mL standard. Historically, the Water Board has recognized that stormwater runoff from land disposal facilities can occur. For consistency with historical language, the District recommends the following 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." This is further supported by Special Provision VI.C.4.a.xvii.
4. Special Provision VI.C.4.a.xv – "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 District operates a land disposal system, not an effluent reclamation system. There is nothing "agronomic" about this pure disposal process in the normal sense of the term. Yet, we recognize the need to protect groundwater quality, particularly from nitrate degradation. Our conversion from disposal trenches (limited soil treatment) to sprinkler application should improve vegetative uptake of nitrate and soil treatment, and thereby reduce effluent nitrogen impacts on area groundwater. Because the nitrogen uptake rate of volunteer foothill vegetation is unknown, the District believes the approach taken by the Regional Water Board in R5-2013-0065-001 would be appropriate for the District's situation, as well. That 2013 Order sets an annual average total nitrogen effluent limitation of 35 mg/L, and a groundwater limitation that prohibits an exceedance of the water quality objective.
5. Special Provision VI.C.4.a.xvi – "The discharge of treated wastewater to the DLDA shall be at reasonable agronomic rates designed to minimize the percolation of waste constituents below the root zone." This language is contrary to the land disposal design and the District's Water Balance prepared as a part of the ROWD. The purpose of the DLDA is to maximize land disposal to the extent practicable, not beneficial re-use of the effluent. We recommend modifying this language to read: "The discharge of treated wastewater to the DLDA shall be at reasonable irrigation application rates designed to minimize the potential for irrigation runoff."
6. Tables E-2 & E-3 – The flow-proportional composite sampling requirement is new. The District currently collects time-based composite samples, which the District

believes are representative since neither the influent nor effluent diurnal flows fluctuate significantly. Additionally, there are no significant industrial dischargers in the service area. Neither of these two sampling locations is configured in a way that allows easy conversion from time-based to flow-based composite sampling. Such conversion would require significant expense and time. Thus, the District requests that the footnote requiring flow-proportional composite sampling be removed from the TO. If this requirement remains, the District will need time to engineer and construct improvements that will allow for the collection of flow-proportional composite samples.

7. Attachment E, Section V.B.2 – 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, as noted in the Discharge Prohibitions section of the Order, it seems more appropriate to conduct chronic toxicity testing on a worst-case blend of 20 parts receiving water and 1 part effluent.
This is because aquatic organisms will never be exposed to 100% effluent under chronic (i.e., long term) conditions as noted previously. Ideally, the current language needs revision to reflect this suggested change in chronic toxicity testing protocol; however, the District recognizes that such a change complicates the statistics developed to evaluate the results. Because of these complications, the more appropriate solution may 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. This change in trigger has the same net effect as diluting the effluent samples to reflect the dilution effect of the 20:1 dilution requirement, without giving the District all of the 20:1 dilution benefits without conducting a full and formal mixing zone study on the diffuser and ford.
8. Attachment E, Section V.B.7 – It is stated that “The test may be performed using 100% effluent and one control.” Does this imply we may perform the test using an appropriate blend of receiving water and effluent (i.e., 20 parts receiving water : 1 part effluent)? This would be our intent under this current language if the numeric chronic toxicity monitoring trigger is not increased to >4 TUc to reflect that a minimum dilution ration is mandated by the TO.
9. Table E-4 – Because of the 20:1 dilution requirement, 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 District recognizes the complications the change has 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.
10. Attachment E, Section X.B.8.a – “...including quarterly data for the new background well for a period of two years following installation” This language can be removed since all groundwater wells are monitored quarterly per Table E-8.

11. Attachment F, Section II.A – In the second paragraph it is stated that “...the District owns a 102 acre parcel of land adjacent to the existing DLDA...”. The Nielsen property is actually made up of three parcels (4, 7, and 102 acres). So the total is 113 acres, not 102 acres.
12. Attachment F, Section II.B.3 – We suggest that the last sentence in this paragraph be replaced with the following: “The Order incorporates the Nielsen 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 Attachment B figure is included as an enclosure with this submittal.

Please feel free to contact me, or Eric Zeigler with Stantec Consulting Services (916.773.8100), with any questions you might have regarding this submittal.
Sincerely,

Humberto M. Molina



Chief Plant Operator Grade III/ Manager

c. Eric Zeigler, Stantec Consulting Services
enclosure: Updated Attachment B Figure