

**Regional Water Quality Control Board
Central Valley Region
Board Meeting – 8/9/10 June 2011**

**Response to Written Comments for the
Santa Fe Aggregates, Inc. and Walter John Seaborn
Sand and Gravel Plant
Tulare County
Tentative Waste Discharge Requirements/NPDES Permit**

At a public hearing scheduled for 8/9/10 June 2011, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of renewed Waste Discharge Requirements (WDRs) (NPDES No. CA0082708) for the Santa Fe Aggregates, Inc. and Walter John Seaborn, Sand and Gravel Plant. The final meeting agenda will be available at http://www.waterboards.ca.gov/centralvalley/board_info/meetings/#2011/ at least ten days before the meeting. The agenda will provide the date the proposed WDRs will be heard, indicate the anticipated order of agenda items, and may include staff revisions to the proposed WDRs.

This document contains responses to written comments received from interested parties regarding the tentative WDRs circulated on 15 September 2010. Written comments from interested parties were required by public notice to be submitted to the Central Valley Water Board by 5:00 pm on 18 October 2010 to receive full consideration. The comment period was extended twice at the request of Santa Fe Aggregates, Inc. to 5 January 2011 and finally to 12 January 2011. Written comments were received from:

- W. John Seaborn, 17 September 2010
- Santa Fe Aggregates, Inc., 12 January 2011 and supplemental data report on 14 February 2011

Written comments from the above interested parties are summarized below, followed by the response of the Central Valley Water Board staff.

W. JOHN SEABORN COMMENT

W. JOHN SEABORN COMMENT: Mr. Seaborn states that the land owner's contact information is out of date and provided Central Valley Water Board staff with the updated information.

RESPONSE: The land owner information has been updated in the proposed WDRs and the case file.

SANTA FE AGGREGATES, INC. (Discharger) COMMENTS

DISCHARGER COMMENT 1: The Discharger requests that Central Valley Water Board staff delete any reference to potential violations of receiving water limitations contained in Section

II.D, Attachment F (Fact Sheet) of the tentative WDRs, stating that the effluent could not have caused, or threatened to cause exceedances because the discharge flow is minimal compared to the flow in the receiving water.

The Discharger also states that there is no normal ambient pH of the receiving water, that the pH in the upstream receiving water has varied by up to 1.4 units over a period of seven weeks, and that the effluent pH has always been within the pH effluent limitations.

Additionally, the Discharger states that effluent monitoring data show that total suspended solids and settleable solids levels have been consistently low and could not have caused exceedances of turbidity receiving water limitations. The Discharger notes that it requested Central Valley Water Board staff identify the two exceedances of the turbidity receiving water limitations, but did not receive a response.

RESPONSE: The turbidity receiving water limitation exceedances have been removed. A review of the data show the discharge did not threaten to cause exceedances of Receiving Water Limitation C.18 contained in Order R5-2005-0058.

Section II.D.3, Attachment F (Fact Sheet) states the discharge “has sporadically caused or threatened to cause *potential* violations of” receiving water limitations (emphasis added). “Normal ambient pH” does not mean the ambient pH must be stable to be considered “normal ambient”. Ambient variability is expected, and the Discharger has not demonstrated that a change in pH of 1.4 units over a seven-week period is not part of the normal variability. Additionally, the Discharger has not conducted a mixing zone analysis to demonstrate that the effluent and receiving water are fully mixed at monitoring location RSW-002 (formerly identified as R-3). Central Valley Water Board staff notes that if the receiving water and the discharge were fully mixed, it does not appear that the discharge would have caused a change in pH of 0.3 units or greater.

DISCHARGER COMMENT 2: The Discharger requests that effluent and receiving water monitoring frequencies for settleable solids, electrical conductivity (EC), total suspended solids, pH, chloride, total iron, and total manganese be reduced to quarterly on the basis that extensive existing monitoring data show the discharge is stable.

RESPONSE:
Settleable Solids

The effluent monitoring frequency for settleable solids has not been changed. During several months, all samples collected had settleable solids at the average monthly effluent limitation. While the maximum settleable solids detected in the discharge was less than one-half of the maximum daily effluent limitation, the data suggest the discharge has come close to exceeding effluent limitations; therefore, weekly monitoring is being required.

EC

The effluent monitoring frequency for EC has been reduced to quarterly. However, if the quarterly monitoring detects EC at or above the maximum daily effluent limitation, the proposed WDRs will require the Discharger to increase monitoring to monthly for at least three months or until EC in the effluent is detected below the maximum daily effluent limitation, whichever is longer.

Total Suspended Solids

The effluent monitoring frequency for total suspended solids has been reduced to monthly. Monitoring data show that total suspended solids in the discharge were detected at a maximum concentration of 40 mg/L (8/11/2009), which is below the maximum daily effluent limitation. While the Discharger noted in its self-monitoring report that the result was not consistent with field observations, the Discharger failed to provide adequate evidence that a sampling and/or testing error occurred. The next highest total suspended solids concentration was 21 mg/L (7/10/2006 and 8/29/2007). The data suggest the discharge has come close to exceeding effluent limitations; therefore, monthly monitoring is being required.

pH

The pH monitoring frequency in the effluent has not been changed, and the pH monitoring frequency in the receiving water has been reduced to monthly. Monitoring data show that the pH in the discharge was near the upper range of the pH effluent limitations (instantaneous maximum effluent limitation is 8.3 and the highest pH effluent reading was 8.2). Quarterly monitoring for pH would not allow Central Valley Water Board staff to determine if and when exceedances occur due to seasonal variations or otherwise.

Chloride

The chloride monitoring frequency has been reduced to quarterly. However, if the quarterly monitoring detects chloride at or above the maximum daily effluent limitation, the proposed WDRs will require the Discharger to increase monitoring to monthly for at least three months or until chloride in the effluent is detected below the maximum daily effluent limitation, whichever is longer.

Total Iron and Total Manganese

Monitoring frequencies for total iron and total manganese have been kept at monthly for the first two years of the permit term and quarterly thereafter. Dissolved iron and dissolved manganese monitoring is being required on a monthly basis for the first two years of the permit term. This is to allow Central Valley Water Board staff to determine what percent of iron and manganese concentrations are in total vs. dissolved form, and whether reasonable potential exists for the discharge to cause exceedances above Maximum Contaminant Levels for iron and manganese in groundwater, which has a beneficial use of municipal and domestic water supply.

DISCHARGER COMMENT 3: The Discharger requests that boron monitoring be removed due to boron not having reasonable potential.

RESPONSE: The boron monitoring frequency has been reduced to annually. Boron monitoring was not removed because the *Water Quality Control Plan for the Tulare Lake Basin*, Second Edition, revised January 2004 (Basin Plan) requires that all discharges to navigable waters comply with a boron limitation of 1.0 mg/L. While the monitoring data show that boron in the discharge does not have reasonable potential to exceed this limitation at this time, the Discharger is still required to monitor for boron in the effluent to ensure compliance with the Basin Plan boron limitation.

DISCHARGER COMMENT 4: The Discharger requests that the effluent limitation and monitoring requirement for oil and grease be removed. The Discharger states that backsliding in this case is allowed under 40 CFR 122.44(l)(2)(i)(B), contending that new information is available (four samples showing oil and grease were not detected above 1.0 mg/L), and that Central Valley Water Board staff mistakenly interpreted federal law by applying a technology-based oil and grease effluent limitation based on best professional judgment where effluent limitation guidelines apply for pH only.

RESPONSE: While Central Valley Water Board staff believes it has the legal authority to establish a technology-based oil and grease effluent limitation based on best professional judgment, the oil and grease effluent limitation has been removed. The oil and grease effluent limitation has been applicable to the discharge since the first NPDES permit was issued for the facility in 1993. The 1993 NPDES permit does not specify whether the oil and grease effluent limitation is a technology-based effluent limitation and also does not include an explanation of what the 35 mg/L is based on. Federal regulations, 40 CFR 122.44(l) prohibit backsliding of effluent limitations in NPDES permits, with certain exceptions. Central Valley Water Board staff determined that the basis for inclusion of the oil and grease effluent limitation was not clear in the case file; therefore, the oil and grease effluent limitation is removed as allowed under 40 CFR 122.44(l)(2)(i)(B)(2). Effluent monitoring of oil and grease has been removed. Data from the past five years show oil and grease was detected in one sample out of five at a concentration of 1.3 mg/L.

DISCHARGER COMMENT 5: The Discharger requests that hardness monitoring in the effluent and receiving water be required only when monitoring for California Toxics Rule constituents, instead of monthly.

RESPONSE: The hardness monitoring frequencies in the effluent and receiving water have been changed to quarterly. Hardness data is needed to allow Central Valley Water Board staff to determine appropriate criteria for CTR hardness-dependent metals. It is also to the Discharger's advantage to collect additional hardness data to allow Central Valley Water Board staff to gauge the variability of hardness in the receiving water. Under the current procedures used by Central Valley Water Board staff to determine appropriate criteria for hardness-dependent metals, the uncertainty

associated with insufficient effluent hardness data requires staff to take a more conservative approach when calculating the criteria and subsequent effluent limitations, if necessary. In this situation, staff often relies on the lowest hardness value, usually the lowest receiving water hardness, which can result in very stringent effluent limitations. More effluent hardness data will likely result in higher effluent limitations, if limits are ever required.

DISCHARGER COMMENT 6: The Discharger requests that annual copper monitoring be removed because copper shows no reasonable potential, and that the Discharger only be required to monitor for copper when monitoring for California Toxics Rule constituents.

RESPONSE: The copper monitoring frequencies in the effluent and receiving water have not been changed. Sampling data show copper was detected in the effluent and receiving water. The lowest applicable copper criterion, using the lowest upstream receiving water hardness of 14 mg/L (as CaCO₃), was calculated as 1.74 µg/L, while the highest receiving water concentration was 1.92 µg/L as an estimated concentration. The highest effluent copper concentration was 0.80 µg/L as an estimated concentration. The SIP at section 1.3 states that effluent limitations are required when a constituent is detected in the receiving water above the lowest criterion and it is also detected in the effluent in any concentration. While the receiving water copper concentration was above the chronic criterion, the result was an estimated concentration which does not provide an adequate level of certainty; therefore, additional monitoring data is required.

DISCHARGER COMMENT 7: The Discharger requests that total and dissolved iron monitoring in the effluent and receiving water be removed because the tentative WDRs acknowledge the discharge does not have reasonable potential for iron.

RESPONSE: The requested change has not been made. See response to comment regarding total iron and total manganese monitoring (Comment 2).

DISCHARGER COMMENT 8: The Discharger contends that the SIP only mandates California Toxics Rule monitoring once per permit cycle and also allows the Central Valley Water Board to waive the California Toxics Rule monitoring requirement for insignificant discharges. The Discharger requests that if not granted a waiver, it be required to monitor for California Toxics Rule total recoverable metals once per permit cycle as opposed to three times per permit cycle, and to monitor for California Toxics Rule non-metals once per permit cycle as opposed to twice per permit cycle.

RESPONSE: The California Toxics Rule total recoverable metals monitoring has been retained for both the effluent and receiving water. California Toxics Rule non-metals monitoring has been reduced to once per permit cycle and will consist of monitoring during the first year and additional sampling for any constituents that are detected. Monitoring for California Toxics Rule total recoverable metals has been retained because the Discharger's single California Toxics Rule monitoring event conducted during the term of Order R5-2005-0058 showed several metals were detected in both

the effluent and receiving water. Contrary to the Discharger's statement, the SIP does not limit the Regional Water Boards to require California Toxics Rule monitoring only once per permit cycle. The SIP states that the Regional Water Boards must require California Toxics Rule monitoring, at minimum, once prior to the reissuance of a permit. The SIP also states that the Regional Water Boards may exempt low volume discharges from this requirement. Discharges such as those allowed under General Order R5-2008-0081, which are considered low threat and are limited to four months or less in duration and/or a maximum discharge of 0.25 millions gallons per day (mgd), are not allowed an exemption; therefore, the Discharger will not be allowed an exemption to the California Toxics Rule monitoring requirement.

DISCHARGER COMMENT 9: The Discharger contends that there is no reason to expect whole effluent toxicity. It also states that toxicity tests show the discharge has not exhibited toxicity, and that given the lack of reasonable potential, the frequency of acute and chronic toxicity testing should be reduced from once per year to once per permit cycle.

RESPONSE: The acute toxicity testing has been retained at once per year, allowing the Discharger to request approval from the Executive Officer to reduce monitoring after two years. Acute toxicity testing is retained because Order R5-2005-0058 required the Discharger to conduct acute and chronic toxicity testing once per permit cycle, but the Discharger never conducted the acute toxicity testing. The chronic toxicity testing conducted once during Order R5-2005-0058 showed the discharge did not exhibit toxicity; therefore, the chronic toxicity testing has been reduced to once per permit cycle in the proposed WDRs, as requested. However, if the discharge exhibits toxicity during the single chronic toxicity testing event, the Discharger is required to commence accelerated chronic toxicity testing using the species that exhibited toxicity and complete a toxicity reduction evaluation and toxicity identification evaluation, if necessary.

DISCHARGER COMMENT 10: The Discharger requests that the flow effluent limitation be revised from a maximum daily to an average monthly and that the Monitoring and Reporting Program be revised to require monthly, rather than daily, flow measurements.

RESPONSE: The averaging period for the effluent flow limitation has been changed from daily to monthly. The effluent monitoring frequency for flow has not been changed. While a monthly average flow limit may apply, Central Valley Water Board staff needs to know what days there is a discharge to the receiving water. In a conversation with the Discharger, the Discharger stated the capacity of the discharge pump is slightly above the current flow limit of 1.99 mgd. The Discharger also stated that it will likely not discharge at the pump's capacity because its Conditional Use Permit requires it to pump water to the groundwater recharge area, thereby reducing the amount of water than can be discharged to the receiving water.

DISCHARGER COMMENT 11: The Discharger requests that the provision requiring a technical report pertaining to the possibility of groundwater degradation caused by facility

operations, and the groundwater monitoring requirements be removed. The Discharger claims that effluent monitoring data is representative of groundwater conditions in the area because the effluent consists mostly of groundwater that infiltrates the mining areas. The Discharger states it sampled one downgradient and one upgradient well and concludes the data show that the groundwater in both wells and the discharge water are of the same type. Additionally, the Discharger notes that concentrations of major ions and metals were lower in the downgradient well compared to the upgradient well and reports that the data demonstrate facility operations have not influenced groundwater quality downgradient of its location. In its supplemental data report, the Discharger also presents iron and manganese data for two wells located in the groundwater recharge area, as well as analytical data for samples collected in December 2010 from its office well and the effluent. The Discharger points out that the December 2010 data show that the office well has higher concentrations of chloride, sulfate, magnesium, and zinc, resulting in a higher electrical conductivity compared to the effluent. The Discharger also requests that anecdotal comments regarding groundwater conditions at similar facilities be removed from the tentative WDRs.

RESPONSE: The Discharger's supplemental data report does not provide Central Valley Water Board staff adequate information regarding the groundwater quality in the area of the facility. While it is possible that the effluent is representative of groundwater quality, the effluent consists of infiltrated groundwater that has had time to re-aerate and, therefore, would not allow Central Valley Water Board staff to properly determine whether reducing conditions have occurred in the groundwater as a result of facility operations. Additionally, the supplemental data report suggests that the iron and manganese data provided for the two wells in the groundwater recharge area are presented as total results. Similarly, the samples collected in December 2010 for the office well and the effluent were not filtered. Central Valley Water Board staff informed the Discharger during its 25 October 2010 meeting that dissolved metals data would most help with determining the groundwater conditions beneath the facility. Given the Discharger stated at a 5 January 2011 meeting with Central Valley Water Board staff that within the next 5-10 years the facility will be completely mined and will cease operations, the Special Provision requiring the installation of a groundwater monitoring well network has been removed from the proposed WDRs. However, the proposed WDRs will include a Special Provision requiring the Discharger to provide well construction information for the office well, including additional groundwater quality data. The proposed WDRs will also request the Discharger provide more recent iron and manganese data for the two groundwater recharge wells for which it provided data in the supplemental data report, if available, and clarify whether the results provided are in total or dissolved form. The anecdotal comments have been removed from the proposed WDRs.