California Regional Water Quality Control Board

Los Angeles Region

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

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Arnold Schwarzenegger
Governor

June 24, 2008

Dr. Mark Gold, President
Heal the Bay
1444 9th Street
Santa Monica, CA 90401

Dear Dr. Gold:

RESPONSE TO COMMENTS ON THE TENTATIVE AMENDMENTS TO WASTE DISCHARGE REQUIREMENTS (WATER RECYCLING REQUIREMENTS) FOR CITY OF LOS ANGELES AND NOTICE OF CHANGE IN VENUE – LOS ANGELES-GLENDALE WATER RECLAMATION PLANT (FILE NO. 68-085) AND DONALD C. TILLMAN WATER RECLAMATION PLANT (FILE NO. 70-117)

Thank you for submitting comments on the above-referenced tentative amendment to Waste Discharge Requirements and Water Recycling Requirements. We have provided below summary of your comments (italicized) and our responses to the comments.

Comment:

The Regional Board should require a nutrient management plan.

Attachment 1 of the Amendments requires the development of a San Fernando Basin Salt Management Plan by 2012. In addition, the Amendments should also require that the plan should include a nutrient management component. The nutrient management component of the plan should include a characterization of nutrient loadings to groundwater and potential sources such as sewage discharges. Irrigation projects using recycled water have been known to cause impacts to receiving waters. Heal the Bay's historical monitoring of nitrates in Malibu Creek found that concentrations below Tapia's spray field irrigation fields were higher than upstream concentrations. The sources of high nitrate levels were not limited to surface flows. In fact, groundwater played a significant role in nutrient loading.

Regional Water Board Response:

The situation at Tapia is not applicable to this discharge. Loading of nutrients in the groundwater beneath the spray irrigation fields at Tapia was caused by many years of subsurface injection of sludge, along with the widespread application recycled water on the fields which effectively caused downward migration of nutrients to underlying groundwater. This groundwater eventually discharges into, and may impact, water quality in Las Virgenes Creek.

At issue on this amendment for both Plants is the impact of chloride and total dissolved solids (TDS) loadings in the San Fernando Groundwater Basin (Basin). Therefore, it is appropriate for the workplan, submitted by the City of Los Angeles (City), to address only the issues related to salts, because the City requested to discharge chloride at up to 190 mg/L, in excess of the chloride Groundwater Basin Plan Objective of 150 and 100 mg/L, respectively. In addition, the Basin's ambient groundwater quality for chloride is in the range of 31-81 mg/L, well below the groundwater Basin Plan Objective. Thus, preventing antidegradation of the groundwater was at issue, as well as the fact that chloride is a conservative pollutant which accumulates both in soil and in groundwater, and does not naturally attenuate.

The WDRs/WRRs for both Plants (LAG and DCT) contain an effluent limitation of 10 mg/L for nitrate-nitrogen and 1 mg/L for nitrite-nitrogen, which are the Basin Plan Objectives for groundwater in the Basin. Since both Plants have Nitrification-Denitrification (NDN) processes currently in place, these limitations can be met consistently. In the past, even before the NDN processes were in place, concentrations of nitrate-nitrogen in the recycled water have been in the range of only 0.02 to 5.4 mg/L, and 0.05 to 5.6 mg/L, respectively. Concentrations of nitrite-nitrogen in the recycled water have been in the range of 0.2 to 1.7 mg/L, and 0.1 to 2.7 mg/L, respectively. A review of data from over 3,800 groundwater samples obtained from 53 wells in six well fields between 1999 and 2008, downgradient of where recycled water is being applied, indicate that the ambient groundwater concentration of nitrate is in the range of 0.94 to 10.62 mg/L, with an average concentration of 5.50 mg/L. The high occurrence of nitrates in the Verdugo Basin and eastern portions of the Basin have been linked to legacy discharges from septic tanks and former agricultural practices, unrelated to the application of recycled water in the area where the Plants distribute recycled water. Since nutrients are actively attenuated in both soil and groundwater, unlike chloride, there is no data to support Basin-wide concern on increasing nutrient loading as a result of the application of recycled water from the Plants. In addition, nutrient management plans are more appropriately prepared under the conditions where there is wide-spread onsite treatment facilities or application of fertilizers on cropland, or, there is wide-spread occurrence of raising cattle or dairy animals, and manure management is a problem.

Comment:

The salt mass balance should address the potential loss of assimilative capacity in the Basin.

Section 3 of Attachment 1, page 1 requires a salt mass balance analysis. This analysis must address the potential loss of assimilative capacity in the San Fernando Basin. In other words, the salt mass balance should provide an analysis of the impacts of the project on chloride and TDS on the Basin. This analysis is necessary to address State Board Resolution No. 68-16, which states that waste discharge requirements must "assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained." Also,

the mass balance should include all sources of salt to the basin and sources of water (stormwater recharge in particular) to the basin which may reduce salt concentrations.

Regional Water Board Response:

A salt mass balance analysis will be used to address the predicted impact to groundwater quality as a result of the chloride applied. Thus, if there is a predicted loss of assimilative capacity greater than 10%, it is staff's intent that an antidegradation analysis must absolutely be conducted. In addition, the existing permit has already built-in language that states (on page 4), "In the event that the groundwater monitoring data show any degradation of groundwater quality, the City will be required to conduct the Antidegradation Analysis in accordance with the Antidegradation Policy." Thus, this requirement is not limiting, and an Antidegradation Analysis may be required after **any** indication of groundwater degradation.

Comment:

Salt and nutrient management plans should include an assessment of all sources.

Section 2 of Attachment 1, page 2 specifies that a component of the salt management plans is to "identify the various activities and the parties responsible for salinity contributions." The Regional Board should specify that the sources may include industrial facilities, water softeners, and water supplies, for example. Heal the Bay has been a strong proponent of water reuse for over twenty years, but a strong salt and nutrient management plan and groundwater monitoring program is necessary to prevent any future water quality degradation from these discharges. We urge you to make the critical additions to the Amendments.

Regional Water Board Response:

Section 2 of Attachment 1 also requires the formation of San Fernando Salt Management Committee. It will be part of this Committee's charge to determine all of the major salinity contributors in the Basin.

Change in venue:

Please be aware that the venue has changed for the July 10, 2008 Board hearing where this matter will be considered by the Regional Board. The new venue is:

County Government Center
Hall of Administration
Board of Supervisors Hearing Room
800 South Victoria Avenue
Ventura, CA 93009.

Thank you for your interest in this matter. If you have any questions please contact Raul Medina at (213) 620-2160 or the undersigned at (213) 576-6720.

Sincerely,

Blythe Ponek-Bacharowski
Unit Chief, Municipal Permitting Unit (NPDES)

cc: Mr. Michael Levy, State Water Resources Control Board, Office of Chief Counsel
Mr. Enrique Zaldivar, Department of Public Works, City of Los Angeles
Mr. Gus Dembegiotes, Bureau of Sanitation, City of Los Angeles