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REQUEST FOR CLARIFICATION AND ADDITIONAL INFORMATION REGARDING THE PROPOSED CLEANUP AND ABATEMENT ORDER REQUIRING ACTIONS TO CLEAN UP AND ABATE THE EFFECTS OF DISCHARGES FROM THE PALMDALE WATER RECLAMATION PLANT FOR LACSD NO. 20, LOS ANGELES COUNTY

The Lahontan Water Board's Advisory Team (Lauri Kemper, Alan Miller and Kim Niemeyer) reviewed the March 22, 2012 Proposed Cleanup and Abatement Order (Order), which has been withdrawn by the prosecution team. The review raised a number of questions for the advisory team that we believe need to be addressed if another Order is to be issued for the Lahontan Water Board's consideration.

Questions concerning the Findings in the Proposed Order

One of the primary concerns that we had was how the Findings support the conclusion that an interim cleanup goal of 7 mg/L is reasonable and justified. Although the 7 mg/l interim goal is below the current established Maximum Contaminant Level of 10 mg/l, it is above what may be considered ambient or background levels for the affected aquifers, estimated at 3 mg/l or less (Order Finding 10.b). The Order should compare or describe the impacts on groundwater supply and overdraft from the remediation alternatives evaluated, in addition to laying out the comparative costs. For example, Resolution No. R6V-2005-0010 (the excerpts included in the Attachment to this letter) required the discharger to consider the feasibility and costs of other alternatives to clean up the groundwater that would not exacerbate the overdraft condition of the basin, but it is not clear what additional information has been gathered and evaluated since the 2004 Containment and Remediation Plan. Did LACSD in Supplement No. 4 or any

supplemental material evaluate the impacts on groundwater supply and overdraft from implementing the cleanup alternatives? How does the proposed operation of the existing extraction wells affect groundwater overdraft conditions in the area? What is the predicted impact to groundwater overdraft conditions to achieve 7 mg/L nitrate concentrations as compared to the impact from achieving background nitrate concentrations?

Additionally, why is there no discussion of the impacts of the past discharges on Total Dissolved Solids (TDS), both existing and anticipated during the remediation time frame? What are the concentrations of TDS found in the area and how will proposed cleanup actions affect TDS concentrations? What are the anticipated increases? Will the cleanup actions ensure groundwater affected by past waste discharges will achieve the secondary Maximum Contaminant Level for TDS (500 mg/l)?

The advisory team also requests that the Findings should include more information about the extraction and monitoring wells. Finding 10 d. describes the Interim Measure implemented in 2006. Where are the six extraction wells located? Please provide a figure showing the locations. What are the monthly extraction rates for each well and what is the total volume of groundwater extracted annually? Where would the row crops be located under the third alternative, "Interim Measures with Row Crops"?

Why were monitoring wells MW-22 and 52 not sampled in the July to December 2011 period as shown on Attachment B? Do the data in Table 2 for MW-52 in 2011 represent samples taken early in 2011? Can the data from Table 2 for MW-52 be shown in a revised Attachment B? The figure in Attachment B could reflect all data collected in 2011, for example.

Finally, in regards to Finding No 13 - How will the effects of the ongoing extraction system be evaluated and modified over time? What are the criteria for the evaluation? Will additional extraction wells be proposed for areas of groundwater contamination above 7 mg/L, such as MW-28?

Questions concerning the Orders

The advisory team also has several questions regarding the requirements of the Proposed Order. What portions of the Proposed Order, if any, contain a requirement to perform a specific cleanup action or plume abatement/containment action in compliance with a specific schedule? Does the Order require continued operation of the six current extraction wells? At what volumes, rates, and time periods?

Under Plume Delineation, Order A.2., will the March 31, 2013 (first annual report) contain the results of the plume delineation plan required by Order A.2.a.? If not, when is it anticipated that plume delineation of the northern and western portions of the plume will be complete?

How is plume containment defined? Is it based on the current shape of the nitrate contamination at 5 and 10 mg/L? If the hearing is postponed until September, will the Dischargers complete the evaluation plan by August 1, 2012 and can it then be incorporated into the proposed Order.

In Order A.4. what are the scope and contents of the plan to evaluate increasing trends in the vicinity of MW-23? What about increasing concentrations in MW-28? What actions and outcomes are required to address increasing nitrate concentrations? Is increased monitoring acceptable? Is increased extraction required? Are additional extraction wells anticipated or required?

Order No. A.5 what does the term "reuse options" mean? Is this only applicable to the extracted groundwater for purposes of reducing nitrate concentrations in the groundwater? Again, what is the volume proposed?

We understand that the Order as proposed on March 22, 2012 has been withdrawn. If the Prosecution Team decides to revise and issue the order, the advisory team would suggest that the issues raised above are addressed in the revised order.

Lauri Kemper
Assistant Executive Officer

Attachment: Excerpts of Resolution No. R6V-2005-0010

cc: Laura Drabandt, Staff Counsel, State Water Board Office of Enforcement
Mike Sullivan, LACSD
Robert Freeman, Environmental Management Division, LAWA

Attachment - Excerpts of Resolution No. R6V-2005-0010

"11. The application of pumped groundwater to the effluent disposal area (as contemplated in alternatives 2, 3 or 5) in the short term will provide combined benefits. It will remediate the polluted groundwater while also providing additional water to allow the District to maintain more cropland need to provide nitrogen uptake of the District's wastewater effluent until the District implements its facilities plan. However, once this facilities plan is implemented, the Regional Board is concerned that, given the overdraft situation in the area, additional disposal of pumped groundwater in this manner (consumptive use established specifically for disposal of this water) may not be the highest and best use of this pumped groundwater considering the current overdraft condition. In the long run, there may be other disposal options for this pumped groundwater (e.g. substituting existing consumptive uses with this pumped groundwater) that would not result in exacerbating the overdraft condition, while still achieving groundwater cleanup consistent with State policies. At this time, the Regional Board has no information on the feasibility or cost associated with these options since the Dischargers did not evaluate them.

12. It is premature to establish a cleanup standard consistent with State policies given the rather limited range of alternatives proposed, the costs, and the possible consumptive use of pumped groundwater associated with the alternatives considered by the Dischargers. The Regional Board expects the dischargers to evaluate additional options for more suitable disposal of the pumped groundwater that will not contribute to the overdraft situation before it establishes a final cleanup standard."

And, in the items Resolved:

"B. The Dischargers must evaluate additional options for the remediation of the degraded groundwater that will remain after the actions described in A. above are complete. The options should focus on reducing nitrate concentrations in affected groundwater to background levels (approximately 2 mg/L nitrate – as N) or to levels consistent with State cleanup policies (State Water Resources Control Board Resolution 92-49). Furthermore, these options should consider uses of the pumped groundwater that do not exacerbate the overdraft condition. The Dischargers should submit this evaluation within 12 months of the date of adoption of this resolution; thereby allowing sufficient time to establish a final cleanup standard, and implementation of any additional actions by 2009, the time when the facilities plan referred to in Finding No. 8 should be implemented."