



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

Office of the General Manager

June 3, 2011

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Dear Mr. Yue and Ms. Innis:

Topock Corrective Measures Implementation/Remedial Design Work Plan

The Metropolitan Water District of Southern California (Metropolitan), a member of the Topock Consultative Workgroup and critical stakeholder, has reviewed the Draft Corrective Measures Implementation (CMI)/Remedial Design (RD) Work Plan (WP). Metropolitan's concerns have been and continue to be the potential risk to a major water supply (i.e., Colorado River), providing its service area of 5,200 square miles and 19 million people with high quality water. Metropolitan has some specific comments that should be addressed.

**Specific Comments:**

*Page 1-6: 1.2.2 Remedial Action Objectives (#2).* It states that this objective is to ensure that chromium does not migrate to the Colorado River. It lists the water quality standard for beneficial use as 11 µg/L for chromium VI. River monitoring to date has shown the levels of chromium VI and total chromium to be non detect (< 1.0 µg/L). All the Applicable or Relevant and Appropriate Requirements (ARARs) are listed in Appendix B of the Final Groundwater Corrective Measures Study/Feasibility Study.

*RAO #101: State Water Resources Control Board Resolution No. 68-16 ("Antidegradation Policy") Statement of Policy with respect to Maintaining High Quality of Waters in California. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be*

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*required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to 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.*

Therefore, the objective should include a non degradation objective to not exceed current conditions (i.e., <1.0 µg/L) in the Colorado River.

*Page 2-6: East Ravine Wells.* It states that each well will be connected to a groundwater conveyance header that will be connected to the Embayment extraction well network. Will this be routed to the MW-20 Bench?

*Page 2-12: Monitored Natural Attenuation (MNA).* It is not clear how the geochemical conditions that provide the reducing zone in the fluvial sediments will be monitored with respect to MNA and the potential loss of the reducing zone, such as during a period of river scour.

*Page 2-14 & 2-15: Disposal/Reuse of Treated Wastewater.* The quality of the Remedy Wastewater after treatment is not clear from the work plan, although presumably the wastewater would meet Waste Discharge Requirements. Options 3 and 5 involve discharge of the wastewater to ponds or galleries that allow the water to percolate back to the groundwater and subsequently to the Colorado River. Due to the uncertainty of the quality of the Remedy Wastewater, these two options (3 & 5) plus any other that would involve either a direct or indirect discharge to the Colorado River should be eliminated from the work plan.

*Section 3.1: Hydrogeology and Plume Dimensions.* In this section, recognition should be made to the saline plume that occurs on the alluvium/bedrock interface within the chromium plume as it may impose recalcitrant characteristics with respect to the planned remedy.

*Pages 5-3 to 5-6: Section 5.2 and 5.3.* This section discusses the transition from the Interim Measures to the Groundwater Remedy. Currently the WP does not include specific criteria for evaluating the protection of the Colorado River water during the transitioning from the IM to the final groundwater remedy. Specific criteria must be delineated during the remedial design process.

*Section 6.3.3: Fate and Transport Evaluation.* This section describes that “various in-situ remedial scenarios” will be developed and used to “provide detailed information to guide the engineering design task while serving as a platform to evaluate the effects of design decisions on the by-product footprint.” This section should include some conceptual examples or the criteria base for the various in-situ remedial scenarios that will be developed for the purpose of engineering design.

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*Figure 2-1a - Conceptual Remedy Site Plan California Portion.* This figure includes similar symbols for freshwater injection wells and injection wells for carbon amended water. It is difficult to discern the difference between these wells on the figure because of the close similarity in symbols. It is suggested to use dissimilar symbols for these wells.

Metropolitan appreciates the opportunity to comment on the CMI/RD WP. We find the WP to be a good strategy document for the remedial design process and ultimately the final remedial design. We believe the implementation of the Groundwater Remedy is necessary to protect the Colorado River and its users. We look forward to working with you towards the expedient implementation of the groundwater remedy. If you have any questions, please contact me at 213-217-5646 or [bkoch@mwdh2o.com](mailto:bkoch@mwdh2o.com).

Sincerely,



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