

ITEM: 28

SUBJECT: Royal Mountain King Mine, Groundwater Regulatory Framework

BOARD ACTION: Consideration of Proposed Basin Plan Amendment

BACKGROUND: The Royal Mountain King Mine Site (Site) is located in Calaveras County. In 1988, the Central Valley Water Board (Board) issued waste discharge requirements to regulate Meridian Beartrack Company's (Meridian) gold mining operations at the Site. In 2001, as Meridian was closing the Site, the Board reversed a prior decision regarding the threat posed by the mining waste and issued orders that applied more stringent closure criteria. Meridian petitioned these orders to the State Water Board. One of Meridian's contentions was that the groundwater that underlies much of the RMKM Site is already of poor quality, and therefore the more stringent closure criteria were unwarranted.

In the *RMKM Remand Order*, the State Water Board determined that the additional expense that would result from the closure of the Site under more stringent closure criteria was unjustifiable, because it would provide only limited water quality benefits. The State Water Board directed the Board to explore other alternatives for regulating closure activities at the Site. In 2010, Meridian and the State Water Board entered into a contract under which Board staff would explore closure alternatives that would include amending the Basin Plan to de-designate groundwater beneficial uses at portions of the Site. The Proposed Amendment is a product of that contract, and contains the following elements:

1. Site-specific Basin Plan implementation provisions that will require Meridian to continue to implement a groundwater management strategy designed to ensure that existing groundwater impacts do not spread.
2. The de-designation of the municipal and domestic supply (MUN) and agricultural supply (AGR) groundwater beneficial uses in certain areas of the RMKM Site where levels of total dissolved solids (TDS) exceed 3,000 mg/L, and in areas underneath and immediately downgradient of the waste management units that have not yet been closed. While the de-designation of some areas beneath and downgradient of the waste management units is inconsistent with the *Sources of Drinking Water Policy*, the Board will request that the State Water Board make a site-specific modification to the *Sources of Drinking Water Policy* to resolve this inconsistency. This de-designation will allow the groundwater management strategy to be implemented consistent with the Board's Basin Plan.
3. The establishment of groundwater variances for the industrial service supply (IND) and industrial process supply (PRO) groundwater beneficial uses for certain constituents in the same area as the MUN and AGR de-designation.

ISSUES: In an initial version (October 2012) of the Staff Report, de-designation of the MUN groundwater beneficial use was proposed solely based on the *Sources of Drinking Water Policy* exception criterion of TDS above 3,000 mg/L. The October 2012 draft Staff Report also included de-designation of the AGR groundwater beneficial use where TDS levels were above 5,000 mg/L and a variance for the IND and PRO groundwater beneficial uses for the entire Site. When this Staff Report underwent scientific peer review, one reviewer commented that the portions of the Site where TDS exceeds 3,000 mg/L were more limited than the area proposed for groundwater de-designation. In response, Board staff revised the draft Staff Report (dated November 2013) to address the peer reviewer's comments and delineated a smaller area for de-designation, substantially revised the justification for de-designating the MUN and AGR groundwater beneficial uses, and reduced the areal extent of the variances for the IND and PRO groundwater uses.

On 8 November 2013, Board staff released a Notice that announced that the Board would be conducting a Public Hearing and that draft Environmental Documents were available for public review. The Board provided a comment deadline of 10 January 2014. Mr. Victor Izzo, the now-retired former Chief of the Board's Mining Unit, provided the only comments from the public. Meridian also submitted responses to Mr. Izzo's comments.

Staff developed responses to Mr. Izzo's comments and revised the draft Staff Report (dated March 2014) to address Mr. Izzo's comments, to make clarifications, and to correct grammatical errors. A summary of Mr. Izzo's issues and staff's responses follow:

1. Mr. Izzo commented that de-designation should be based strictly on the *Sources of Drinking Water Policy* exception criterion of TDS above 3,000 mg/L.

Staff had initially delineated the groundwater de-designation area using TDS levels alone, but then determined that including areas of potentially better quality beneath unclosed WMUs at the Site was necessary to allow Meridian to implement a closure plan in accordance with the *RMKM Remand Order*. Groundwater beneath and immediately downgradient of the WMUs at the Site is not currently being utilized for MUN or AGR purposes, nor is it likely to be used for these purposes in the future, either due to the poor quality of the groundwater or due to the presence of the units themselves. Furthermore, Title 27 requirements prohibit land uses on the WMUs that might impair their physical integrity. This requirement will preclude well installations on the WMUs.

2. Mr. Izzo commented that more effort should be put to differentiate between mining-related impacts and naturally poor-quality groundwater at the RMKM Site.

Given that the WMUs will not be reconstructed (a clear directive of the *RMKM Remand Order*), that the capture and treatment of the leachate is not feasible, and that the cost of extracting and treating affected groundwater would be greatly disproportionate to the environmental benefit that it would bring, the most reasonable way of managing groundwater at the Site is to ensure that impacts from the WMUs will not spread. This does not require a more extensive differentiation than that which has already been done.

3. Mr. Izzo commented that the Board should address mine-related impacts to surface waters at the RMKM Site and should direct Meridian to more rigorously investigate the feasibility of treating surface water discharges using enhanced wetlands.

The Proposed Amendment addresses only groundwater at the RMKM Site, and is one part of a comprehensive closure strategy that will focus Meridian's efforts on preventing the migration of impacts beyond the Site boundaries. Staff amended the draft Staff Report to clarify and reiterate that the scope of the Proposed Amendment is limited to protecting existing groundwater beneficial uses and to preventing poor-quality groundwater from spreading in the subsurface. Meridian will be required to comply with waste discharge requirements issued to regulate closure of the Site (Closure WDRs) and with an NPDES permit. These two permits must address all discharges to surface waters.

RECOMMENDATION: Adopt the Proposed Amendment.

Mgmt. Review _____

Legal Review PEP

27/28 March 2014

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