Proposed Rosemont Copper Project

Hydrology Meeting
August 30, 2010
Attendees:

Forest Service	SWCA	MWH	Errol Montgomery	RCC
Roger Congdon	Melissa Reichard	Toby Leeson	Hale Barter	Kathy Arnold
Reta Laford	Dale Ortman	Nathan Haws	Jim Davis	
			Mark Cross	
			Marla Odom	

Topics Discussed:

- Review of EIS Significant Issues 3a and 3b
- Objectives of Groundwater Supply model
- Information needed for NEPA process

Agreements Made:

- Additional modeling work and model explanations will be documented in an addendum to the modeling report.
- Water level changes at the Rosemont Wellfield from potential Community Water CAP recharge and potential Sierrita Mitigation pumping will be discussed, based on published data for these projects:
    - Water level changes from potential Community Water CAP recharge will be estimated from the results of simulations reported in Technical Memorandum: Modeling Results for Proposed Community Water Company of Green Valley Recharge (Montgomery & Associates, 2010).
    - Water level changes from potential Sierrita Mitigation pumping will be estimated from results of simulations reported in Sierrita Mitigation Feasibility Study (Hydro Geo Chem, 2008).
    - The effects of potential CAP recharge and Sierrita Mitigation Pumping will be explained in a separate section of the addendum.
- Conduct a predictive sensitivity simulation where simulated aquifer parameters and layers thicknesses at the Rosemont RC-2 and E-1 well locations, which were modified for this current EIS model, are changed back to how they are originally specified in the ADWR model. The simulation will be from steady-state through 2032. Projected drawdown at 2032 from Rosemont pumping for the EIS model will be compared to projected drawdown using the original ADWR aquifer parameters.
- Things to clarify in report:
    - The hydrogeology of the Santa Cruz Fault in the vicinity of the Rosemont Wellfield and its effects, or lack-thereof, on the flow system
    - The base model for the simulations was the ADWR TAMA model, which is an accepted, calibrated model. Corrections were made to historic stresses in the model, as documented in the Montgomery & Associates April 27, 2009 Technical Memorandum: "Second Update to ADWR Model in Sahuarita/Green Valley Area", and discrete changes

were made to hydraulic conductivity and model layer thicknesses to bring the model into conformity with data obtained at Rosemont wells RC-2 and E-1. The model grid was refined in the Rosemont pumping area to provide a higher precision in the predictions. The model report shall explain that the changes made to the ADWR model did not bring the model out of calibration – i.e. the calibration was insensitive to or improved by the changes, and therefore the current revised model is in calibration.

- Provide a map of the EIS model calibration based on the most recent observed groundwater level data set.
- Clearly and thoroughly state the objectives of the model. Demonstrate that the model meets the objectives and that these objectives are suitable for the EIS.
- Review the uncertainties in: 1) the future model stresses such as ASLD land and Town of Sahuarita committed demand pumping, Sierrita Mitigation pumping, and Community Water CAP recharge; and 2) aquifer parameters.
- Demonstrate that the model results are insensitive to the southern constant head boundary. This can be done by showing that the influence of drawdown from the Rosemont pumping does not extend to the southern boundary.
- Provide cross-section plots that show projected water level changes at different times at critical locations.

Action Items/Assignments:

- Montgomery - write report Addendum
- MWH - review Addendum and prepare response that states that the Addendum does or does not resolve outstanding issues.
- The addendum will be published along with the original report.