From: Stephen Ellis
To: Miller, Garyg
Subject: San Jac groundwater issues
Date: Friday, March 21, 2014 4:39:20 PM
Attachments: Potential_MW_sites_west_of_impoundments.pdf

Gary,

GWBU contamination is likely confined to the impoundments; however, we need to be certain of this. The depth of the San Jacinto River channel likely eliminates the possibility of hydraulic connection to the east. However, the jut of land under I-10, and possibly the shallow slough immediately to the west of the southern impoundment do not pose the same apparent barrier to groundwater movement. Do we have an existing cross-section diagram which might demonstrate that that the GWBU is cut off from the mainland to the east and west by the river channel and slough? If not, we should have the PRP provide a series of cross sections through the area from west of the shallow sough, through impoundment and river channel illustrating the depth of the GWBU. Even if the groundwater under the impoundment is hydraulically connected with the shallow groundwater on either side of the channel, a demonstration could be made that based on the local controls on the groundwater gradient, such as surface water recharge to groundwater creating a potentiometric high that isolates the groundwater under the impoundment, there is little potential for migration of the affected groundwater. This would require a sufficient network of monitoring points to verify that there have been no impacts to the groundwater in this area and that there exists a relatively steep groundwater gradient with flow from the mainland toward the river. Long-term monitoring of these points would be required to confirm there are no significant changes in the groundwater gradient and that groundwater concentrations remain below MCLs at the mainland. To support this demonstration, the TCEQ would require the PRP to install ~6 shallow monitor wells (see attached map) to confirm that GWBU-A is confined to the impoundment area.

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