



Mr. Benjamin H. Grumbles, Director  
Arizona Department of Environmental Quality  
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Subject:

Comments Regarding the Well Investigation Work Plan prepared by Montgomery & Associates for Gallagher & Kennedy, P.A., and the Roosevelt Irrigation District

ENVIRONMENT

Dear Director Grumbles:

Date:  
September 07, 2010

ARCADIS, on behalf of ArvinMeritor, Inc. and Cooper Industries, Inc., has reviewed the Well Investigation Work Plan prepared by Montgomery & Associates for Gallagher & Kennedy P.A., and the Roosevelt Irrigation District (RID), dated August 9, 2010, in response to the Arizona Department of Environmental Quality's (ADEQ) Conditional Approval of RID's February 3, 2010 Early Response Action (ERA) Work Plan. While the steps outlined in the Work Plan are appropriate, as written, the Work Plan is not likely to provide sufficient data to address the ADEQ's requirement in their Conditional Approval to "...conduct well testing and modeling to insure that changes in pumping will not adversely affect groundwater quality and levels within the WVBA beyond what would be expected with the current pumping conditions...". Based on our review of the Work Plan, the following comments are provided.

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Our ref:  
AZ001042.0004.00001

### **General Comment**

The plan focuses on spinner logging in the four deepest wells within the most highly impacted areas of the plume. This is designed to establish the yield and water quality of the Lower Alluvial Unit (LAU) and Middle Alluvial Unit (MAU) in those wells to determine if sealing those zones would be beneficial to the remedy. Four other impacted wells screened in the Upper Alluvial Unit (UAU) and MAU may be designated for logging, if the initial work shows the MAU is a productive unit. This strategy does not account for the potential for geographic variability (heterogeneity) across the plume's extent and the possibility that production wells behave differently based on spatial location in addition to screened interval. When reviewing the locations of the wells to be tested in the first phase and then adding those in the second phase, large areas within the plume will not be characterized by the current plan. Adding wells in strategic locations to be fully tested (e.g., RID Wells 109 or 110

Imagine the result

and 88 or 91) would also provide a broader area of coverage that would account for potential lateral variability and may be valuable for future groundwater modeling purposes. Additionally, depending on the pumping rates and duration of the spinner logging tests, short term “aquifer tests” may be possible using nearby monitor wells, or well nests, as observation wells. This would provide additional data for aquifer characterization.

### **Specific Comment**

RID's Work Plan Section 3.4, page 5 states, “The contaminated groundwater in the WVBA Site impairs RID's wells, its operations, and restricts the use of this water supply.”

We understand that David P. Kimball, Esq., counsel for RID, publically stated in the initial RID meeting on September 16, 2009 with all identified parties and again responded to a question by Jerry D. Worsham II, Esq. , counsel for ArvinMeritor, Inc. and Cooper Industries, Inc., on this point at the ADEQ Meeting/Public Hearing on March 23, 2010 that the current use of RID's water is not restricted and that RID has not changed or altered RID's production of irrigation water to RID's customers based upon the identified groundwater contamination. As such, this statement in Section 3.4, page 5 should be deleted based upon RID's public statements.

Based on our review, the Work Plan should be revised to more broadly address these issues prior to its approval. CH2M HILL, on behalf of Honeywell International, Inc. has also submitted comments on this particular Work Plan to your attention in a letter dated September 6, 2010. Their comments describe in detail the shortcomings of the Work Plan, and it should be noted that we generally concur with their findings. If you have questions or need further information regarding the comments provided herein, please contact the undersigned.

Sincerely,

ARCADIS U.S., Inc.



Robert A. Mongrain, RG  
Associate Vice President

Copies:

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