



April 22, 2010
EARTH DAY

Arizona Department of Environmental Quality
Waste Programs Division - Remedial Projects Section
1110 West Washington Street; Mail Stop No 4415B-1
Phoenix, Arizona 85007-2952

Attention: Ms. Jennifer Edwards Thies, WQARF Unit Manager

SUBJECT: ROOSEVELT IRRIGATION DISTRICT EARLY RESPONSE ACTION IMPLEMENTATION PLAN AND GROUNDWATER RESPONSE ACTION PLAN FOR THE WEST VAN BUREN WATER QUALITY ASSURANCE REVOLVING FUND (WQARF) SITE - - RID'S WORK PLAN DATED FEBUARY 3, 2010.

Comments regarding RID's Proposed Early Response Action in the West Van Buren WQARF Study Area and Request for Creation of a West Van Buren WQARF Study Area Technical Working Group

Dear Ms. Thies:

BASIN & RANGE HYDROGEOLOGISTS, INC. has prepared the following comments and requests on behalf of the Air Liquide America Specialty Gases Fill Plant (Air Liquide), which are related to the Roosevelt Irrigation District's (RID's) February 3, 2010, proposed Early Response Action (ERA) and Work Plan for the West Van Buren Water Quality Assurance Fund Study Area (WVB WQARF Site).

Specifically, Air Liquide's comments have been submitted in direct response to ADEQ's March 8, and April 2, 2010, Public Notice of Solicitation of Remedial Objectives for the WVB WQARF Site, and are in addition to the enclosed comments, which Air Liquide submitted on January 4, 2010, in connection with RID's draft ERA proposal.

Arizona Department of Environmental Quality (ADEQ) should not approve the proposed ERA and its associated Work Plan, because they suffer from significant technical and substantive inadequacies. The ERA document does not include any meaningful justifications for its proposed

actions, nor does it provide defensible technical analyses to support its performance claims. The proposed ERA Work Plan does not meet the standards of care of the hydrogeological and environmental engineering professions, and it does not adhere to Arizona's WQARF statute and related and applicable regulations and policies. RID's proposal is neither cost-effective nor is it consistent with a long-term remedial strategy, should such a strategy ever become necessary. The gist of its proposal is to arrange for other parties to fund RID's operation of a long-term and expensive pump-and-treat system, as opposed to implementation of reasonable and cost-effective source control measures. In other words, RID's revised ERA proposal remains an ill-conceived and unreasonable plan for groundwater remediation in the WVB WQARF Site.

There does not appear to be compelling evidence to show that current groundwater conditions constitute an imminent and substantial endangerment to human health or to the environment, or that there is an imminent impact on RID's ability to deliver non-potable irrigation water to its customers. Therefore, without having such evidence, ADEQ should not approve RID's February 3, 2010, proposed ERA Work Plan.

Because there is no evidence of exceedances of health-based action levels applicable to RID's non-potable irrigation groundwater, Air Liquide recommends that ADEQ methodically analyze the technical facts regarding the Site's groundwater. Such analysis should be done in a manner that is compliant with applicable or relevant and appropriate laws and ADEQ laws and regulatory requirements, which is precisely what would occur as part of a legally-compliant FS investigation.

In addition, consistent with a legally-compliant remedial action approach, ADEQ should seek technical and legal input from the numerous parties and stakeholders associated with the Site (or potentially associated with the Site), which parties and stakeholders would include owners of properties that could be adversely impacted by RID's proposed approach. As stated previously, RID's proposal does not contemplate meaningful public participation, nor does the legal basis for it require such participation. Notwithstanding RID's claims that, subsequent to the implementation of the proposed ERA and its Work Plan, it will implement a long-term remedy that will require it to engage in a legally-compliant FS process, it in fact has no intention of employing any long-term strategy that would effectively address regional groundwater conditions. Instead, it regards its proposed ERA and associated Work Plan as cornerstones of a final remedy for the alleged contamination of its non-potable water wells.

While our enclosed comment letter of January 4, 2010, addressed specific limitations and shortcomings in the draft ERA, we wish to emphasize the following points:

The February 3, 2010, RID proposal indicated that RID would plan to utilize some of the poorly designed wells in its existing network of aged irrigation supply wells to serve as contaminant capture wells. To the extent that a pump and treat system would be a component of a long-term remedy, a more effective system could be comprised of newly-installed wells that would be specifically designed and strategically installed within the WVB WQARF Site for such purposes.

In addition to the glaringly obvious problem, that is, pumping unnecessarily huge volumes of groundwater, and extracting it from "the wrong" hydrostratigraphic units, the extensive pumping system that RID has proposed is likely to induce hydraulic gradients that could mobilize contaminated groundwater that is not currently associated with the WVB WQARF Site. In fact, Air Liquide and others doubt that RID has performed sufficient hydrogeological analyses to be

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able to reliably predict the impacts of its pump and treat scheme. Thus, RID's proposal, if implemented, could result in the transportation of contaminated groundwater to unimpacted groundwater zones.

Instead, Air Liquide recommends that ADEQ consider working with the greater community and stakeholders to organize and convene a technical working group comprised of qualified professionals who can also represent the views of a broad spectrum of affected or potentially-affected stakeholders. ADEQ's establishment of such a working group, which it has done successfully in the past for other groundwater contamination sites, would help to elicit meaningful input from community leaders, municipalities, state agencies, and the numerous other stakeholders within and nearby the Site. More significantly, were ADEQ to disapprove RID's ERA proposal in favor of a privately-funded FS approach, ADEQ would give such affected parties legal standing to participate in the evaluation of site conditions and potential long-term remedies.

Air Liquide respectfully requests that ADEQ conduct a stakeholder group-led feasibility investigation (FS), that could be funded by various private parties and the scope of which would include a broader spectrum of the affected community. Such an approach would allow technical input (which input the WQARF statute would not require if ADEQ allowed RID to perform an ERA) from the WVB community and its stakeholders and ensure that a more comprehensive analysis of viable long-term remediation options occur.

As stated previously, such a measured approach is entirely consistent with applicable laws and regulations and ADEQ's commitment to solicit stakeholder input and community involvement. RID's proposed early action approach would accomplish none of those elements, and in fact is inapposite to complex regional groundwater conditions at play here. Conversely, the FS approach Air Liquide and others recommend would ensure that a fully protective and cost-effective *regional* long term remedy is developed, which long term remedy could then effectively be implemented.

Please contact me if you have any questions or care to discuss these matters.

Sincerely,



David L. Kirchner,
for BASIN & RANGE HYDROGEOLOGISTS, INC.,
on behalf of Air Liquide America Specialty Gases, L.P.

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Enclosure: January 4, 2010, letter regarding RID's draft ERA from BASIN & RANGE HYDROGEOLOGISTS, INC. to Ms. Jennifer Thies Edwards of ADEQ

cc: Mr. Benjamin Grumbles (ADEQ) (w/ enclosure)
Ms. Julie Riemenschneider (ADEQ) (w/ enclosure)
Mr. Kevin C. Snyder (ADEQ) (w/ enclosure)
Ms. Donna Smith (Air Liquide USA LLC) (w/ enclosure)
Mr. John Dugdale (Gordon & Rees LLP) (w/ enclosure)
Mr. Herb Guenther (Arizona Department of Water Resources) (w/ enclosure)
Mr. Will Humble (Arizona Department of Health Services) (w/ enclosure)
Mr. Ernest G. Johnson (Arizona Corporation Commission) (w/ enclosure)
Ms. Kristin Mayes (Arizona Corporation Commission) (w/ enclosure)