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April 22, 2010

VIA E-MAIL AND U.S. MAIL

Julie J. Riemenschneider
Remedial Projects Section, Manager
Arizona Department of Environmental Quality
ADEQ Central Office
1110 W Washington St.
Phoenix, AZ 85007

Re: West Van Buren WQARF Site
Roosevelt Irrigation District's Proposed Early Response Action

Dear Ms. Riemenschneider:

Univar USA Inc. (Univar) has worked cooperatively and responsibly for many years with the Arizona Department of Environmental Quality (ADEQ) since identification of volatile organic compounds (VOCs) in groundwater in the West Van Buren (WVB) Water Quality Assurance Revolving Fund (WQARF) Site. As you know, Univar completed source control activities in 2000 and ADEQ made a no further action determination for source area soils in August, 2002. ADEQ terminated Consent Order W-109-96, noting that Univar's groundwater investigation was complete and also granted approval to discontinue groundwater monitoring in 2002. ADEQ's determinations, actions and correspondence support the conclusion that the Univar facility does not pose a continuing threat to groundwater. Univar will continue to be responsible and cooperative as ADEQ moves forward to finalize the Remedial Investigation (RI) Report and prepare Remedial Objectives (ROs) for the WVB Site. Univar will also support performance of the WVB Feasibility Study as proposed by various stakeholders.

On December 21, 2009, Univar submitted comments on the Roosevelt Irrigation District (RID) October 5, 2009, Groundwater Response Action Implementation Plan (GRA) and Early Response Action Work Plan (ERA). RID has submitted a revised February 3, 2010 ERA Work Plan. Because there are minimal changes in the revised ERA, the majority of Univar's December 21, 2009 comments continue to apply. This letter provides comments on the February 3, 2010 ERA. In addition, Univar generally supports the numerous technical and legal

comments presented at the March 23, 2010 WVB Citizen Advisory Board Meeting, which opposed the RID ERA.

General Comments

RID has proposed, as an ERA, a poorly documented, expensive, complex and incomplete regional approach to address relatively minor amounts of VOCs solely in groundwater produced by RID wells located within the WVB WQARF Site. Phase I of the ERA remedy proposes to pump and treat 20,000 gallons per minute (gpm) of groundwater containing relatively small amounts of VOCs extracted from the WVB Site. The remedy proposed by RID would result in one of the largest, if not the largest, groundwater remediation pumping systems in Arizona. The use of an ERA process to implement a regional groundwater remedy of this size that affects numerous parties, multiple water providers, several municipalities, other state agencies and the public is completely inappropriate. The ERA process was set up to allow relatively quick, short-term remedial actions to address contaminated source areas and to address current risk to public health, welfare and the environment. Despite 25 years of operations and the completion of the draft RI, no risk to the environment or the public health has been documented for the WVB Site. Moreover, the very limited requirements of the ERA process provide no real comparison of remedial alternatives, no detailed evaluation of cost effectiveness and a very limited procedure for stakeholder and community input. Clearly, the ERA process was never intended to support very long-term regional remedies of this size and nature. The ERA process should not be used to approve implementation of the RID ERA.

The ERA lacks numerous critical details necessary for a responsible evaluation of a proposal of this size, complexity and significance. Details that are lacking include, but are not limited to, a detailed site conceptual model, analysis of past and current water quality and contaminant concentration trends, analysis of contaminant distribution both vertically and laterally, detailed evaluation of other alternatives including assessment/optimization of pumping regimens to maximize contaminant removal and containment, unbiased cost comparisons of other remedial options and technologies, evaluation of the cost effectiveness of the proposed remedy, documentation to support a drinking water end-use demand, and substantiation that RID has the legal authority to pump groundwater for a "non-irrigation" use. Each of these items of information and analysis are considered absolutely necessary for reasoned decision making under any accepted remedial action/remedial design structure of which we are aware, be it federal, e.g. under CERCLA or for RCRA corrective actions, or state or local remediation, including WQARF.

The ERA repeatedly claims RID operations have been impacted by the presence of VOCs in groundwater withdrawn from some of their wells. RID has provided no demonstration of adverse impact to current or past operation of RID wells in the WVB Site. Data available in the Draft RI Report indicate that the water quality within the RID canals is suitable for its intended end use. Data regarding VOCs in some RID wells has been publicly available since at least 1984 and RID has operated these wells for at least 25 years under these conditions with the same end

use, non-potable irrigation for non-edible crops. No documentation or discussion regarding the proposed ERA describes or substantiates any past or future impacts to operations. The ERA claims threats and risks exist for RID wells that are not impacted. No specific at risk wells are noted and there is no analysis section which demonstrates even potential threats to such wells.

Finally, the ERA is not authorized by Arizona Administrative Code (A.A.C.) R18-16-405A because:

- The ERA is not necessary to address a current risk to public health, welfare, in the environment. As stated above, no documented risk exists.
- The ERA is not necessary to protect or provide a supply of water. Nothing prevents or even threatens to prevent RID from continuing with its historic and existing use of its wells within the WVB Site.
- The ERA is not necessary to address sources of contamination within the WVB Site. Indeed, the ERA says nothing about site specific source control.
- The ERA is not necessary to control or contain contamination in a manner that is expected to reduce the scope or cost of the remedy needed at the WVB Site. Indeed, as discussed herein, the ERA undoubtedly will have the opposite effect and will increase both the scope and the cost of a final remedy selected through the appropriate WQARF process.

Because the ERA does not satisfy any of the threshold legal requirements of A.A.C. R18-16-405A, it must not be approved.

Specific Comments

1. The proposed RID remedy, with no regard for cost, appears to have been designed to maximize the economic benefit to RID by providing new delivery systems and infrastructure for an undocumented and unsubstantiated possible future end use, involving the transport of potable water to the west valley for apparent use outside of its service area. Although the revised ERA "conceptually" identifies and evaluates alternative remedies to address groundwater contamination, the ERA does not provide a substantive comparison of remedial technologies and remedial alternatives. In addition there is no evaluation of the costs of other remedial technologies and alternatives to comply with the requirement of A.A.C. R18-16-405.B that the ERA be selected based on the best professional judgment of whether the technologies or methods could increase the scope or costs of possible future remedies for the Site. There is no meaningful comparison of remedial alternatives or associated costs in the RID documents. It is professionally obvious that other alternatives, approaches and technologies exist to effectively address the contamination in the WVB Site.

2. The revised ERA now provides the VOC compound-specific analytical results from one sampling event for each RID well. However, a complete RID data set including all sampling events and a water quality trend analysis are not presented. Based on the data available, one well proposed for treatment in Phase 1, RID-105, does not exceed drinking water standards or Aquifer Water Quality Standards for tetrachloroethene (PCE) or trichloroethene (TCE), the primary VOCs of concern in the WVB Site. Other wells have low, stable, and/or declining concentrations of PCE and TCE. Nineteen out of 29 RID wells sampled in 2008 have declining or low and stable concentrations of PCE and TCE. Based on simple data projections, if treatment is necessary for a potable water end use at some future point based on demonstrated actual need, several of these wells may not require the level of treatment proposed by the ERA action (or any) treatment to bring them to applicable end use standards.

3. The ERA implies an immediate need for pumping and treating 20,000 gpm for the highest end use as a potable water supply. However, the implicit conclusion ignores the fact that there are no known users, buyers, lessees or legally authorized distributors for this significant amount of water.

4. The Land and Water Use Report notes the COP and RID have applied for approval of a water banking agreement. In exchange for reduced groundwater pumpage by RID, the City will give RID treated effluent from the 23rd Avenue treatment plant. The agreement, when implemented, effectively reduces groundwater use by 20,000 acre-feet/year or 12,000 gpm. No mention of that agreement or its potential affect on the proposed remedy is found in the ERA.

5. The ERA does not discuss the legal authority that would give RID (an irrigation district) the right to pump groundwater for a "non-irrigation" use. Univar questions whether such authority exists under Arizona law. The ERA also does not discuss the legal authority for the presumed use of treated groundwater outside the RID service area. Again, Univar questions whether such authority exists under Arizona law.

6. The ERA puts forth an "abbreviated" Site Conceptual Model (SCM) that does not meet ASTM or CERCLA standards. ASTM and EPA guidance requires "...*identification and characterization of potential environmental receptors (human and ecological).*" The ERA SCM doesn't contain any risk analysis, including a description of current or possible future sources, pathways and receptors. The plan postulates risk exists through various possible pathways (groundwater, surface water, off gassing to atmosphere) but no data or analyses are presented to sustain the simplest part of the risk analysis, that of defining any completed pathway and/or naming potential receptors.

An SCM that meets accepted standards would note that: 1) ADEQ driven individual source control efforts have been completed and were successful; 2) historical pumping has significantly reduced VOC concentrations over large parts of the WVB area while creating no additional risk and will continue to do so in future as current agricultural water uses continue; 3) many areas that remain slightly above standards are now localized and well understood and with

time, may not even justify treatment; 4) most historical VOC concentrations from within WVB area are rapidly declining; and 5) risk has not been documented. The ADEQ Draft RI notes there is "...no threat to flora/fauna, species or habitats..." i.e., the environment. There are no known human receptors of water above current standards for human contact and/or drinking water standards. While risk is mentioned in the ERA, a case is never made for using risk as a basis for a remedy. Based on available data and 25 plus years of successful operation by RID, including pumping and distributing water containing much higher concentrations in the 80s and 90s, no actual harm or completed risk pathway has been documented.

7. The ERA incorrectly identifies the five individual and distinct WQARF sites within the West Central Phoenix area as Operable Units. Rather, the West Central Phoenix WQARF Site was established in 1987 and was split into five separate and distinct WQARF sites in 1998. This information is widely available and well known. Further, in previous presentations, RID has modified the ADEQ-identified plumes associated with the five individual sites to indicate that the plumes comingle. This appears to be an attempt by RID to mislead some observers and artificially expand the number of parties that may have some future potential to possibly contribute to the WVB regional plume. In addition, RID leaves the impression that all five of these WQARF sites are actually just one, and that collectively they all somehow threaten the WVB area, with no technical analysis or justification for this assumption.

Summary

In summary, the ERA must be rejected for the following reasons:

- The ERA Work Plan is not a technical support document that justifies the proposed remedy.
- There is no indication any other remedy was even technically considered from a realistic, detailed, unbiased, state-of-the-practice standpoint.
- There is a significant lack of original data and a significant lack of any accepted industry standard analysis of the data.
- Data appear to be selectively used to justify predetermined conclusion(s) and data and/or data analysis which may call portions of the plan into question are not used or acknowledged.
- No demonstration of actual exposure risk by individual substance and no evidence of a completed exposure pathway are presented.
- There is no demonstrated adverse impact to RID wells or operations over the last 25 years, or any discussion of how future operations would be impaired.

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- The alleged future water needs are not supported nor explained in sufficient detail to be analyzed.
- Future water needs, and the rights to use the water, may be seriously overstated and/or unaddressed.
- The ERA does not meet the threshold legal requirements of A.A.C. R18-16-405A.

Univar appreciates the opportunity to provide these comments to ADEQ and looks forward to continuing to work with ADEQ and other interested stakeholders to identify a suitable and effective remedy through a Feasibility Study for the WVB Site.

Sincerely,



Michael Gaudette
Senior Project Manager

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