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April 22, 2010

Ms. Jennifer Thies
Remedial Projects Unit
Arizona Department of Environmental Quality
WQARF Unit Manager 4415B-1
1110 West Washington Street
Phoenix, Arizona 85007

Re: West Van Buren WQARF Site
Salt River Project Agricultural Improvement and Power District's Comments on
Roosevelt Irrigation District Early Response Action Work Plan, dated February 3, 2010

Dear Ms. Thies:

The Salt River Project Agricultural Improvement and Power District ("SRP") appreciates the opportunity to comment on the February 3, 2010 Roosevelt Irrigation District ("RID") Early Response Action Work Plan ("Revised Work Plan"), prepared by Montgomery and Associates for Gallagher & Kennedy on behalf of RID. Pursuant to the Revised Work Plan, RID proposes to implement an Early Response Action ("ERA") within the West Van Buren ("WVB") Water Quality Assurance Revolving Fund ("WQARF") site ("Site"). SRP understands that the Revised Work Plan is a revision to a work plan submitted to the Arizona Department of Environmental Quality ("ADEQ" or the "Department") dated October 5, 2009 ("RID Original Work Plan"). SRP also understands that RID revised the Original Work Plan in response to comments provided by ADEQ in December 2009. SRP submitted comments on the Original Work Plan on December 4, 2009 and submitted verbal and written comments of Richard Hayslip of SRP at the Community Advisory Board meeting of March 23, 2010. SRP's December 4, 2009 comments are attached hereto as Exhibit A and the Statement of Richard Hayslip is attached as Exhibit B and are incorporated herein by reference.

SRP believes that the revised Work Plan suffers from the same flaws as the Original Work Plan to the extent the Revised Work Plan continues to propose a large, costly and unnecessary groundwater treatment system that, if approved and ultimately constructed, will enable RID to transform its current irrigation business to a potable water supply business. Accordingly, as set forth in detail below, SRP does not agree with, and is vehemently opposed to, RID's proposed ERA, and does not support implementation of the ERA. Instead, SRP believes there are better approaches for protecting public health and cleaning up groundwater in West Van Buren area. Indeed, SRP is currently working with other stakeholders to develop and implement those approaches. We therefore ask the Department to disapprove of RID's plan and to work with the stakeholder community in advancing more sustainable, efficient, and cost effective remedies.

General Comments:

SRP has unique interests in groundwater cleanup at this Site and has played a historical role in assisting ADEQ implement cost effective remedies in the metropolitan Phoenix area. Ever since the inception of the State's WQARF program, SRP has voluntarily collaborated with ADEQ to address groundwater contamination within SRP's Reservoir District. SRP and ADEQ partnered on a groundwater cleanup project at the South Mesa WQARF site. This project addressed volatile organic compound ("VOC") contamination from an orphan site that threatened several wells in the area. An early response pump-and-treat action quickly removed localized VOC groundwater contamination thus preventing a more expansive and costly cleanup. A similar effort was undertaken at the East Central Phoenix WQARF site. SRP and ADEQ are currently collaborating on a soil cleanup project associated with dry cleaner releases that threaten groundwater in the area. Further, in 1999, SRP and ADEQ signed an agreement to use Central Arizona Project ("CAP") water in lieu of groundwater pumping from wells within or near WQARF sites. When this agreement was signed, Arizona was in the midst of an extended dry cycle. SRP recognized that pumping wells in or near the WQARF sites could impact current and future source control efforts. To minimize this impact, SRP worked out an arrangement in which CAP water would be used instead of groundwater wells in or near WQARF sites. These are some examples of SRP's commitment to prudent and responsible groundwater cleanup measures. In all of these cases, SRP was not a potential responsible party. SRP voluntarily stepped forward to resolve localized contamination problems in a cost effective manner that reduced expenditures from the State's WQARF budget.

SRP is equally supportive of resolving groundwater contamination in the West Van Buren WQARF Site. However, RID's proposed ERA is neither prudent nor responsible from a water management and environmental cleanup perspective. In fact, it is a private water enterprise thinly veiled as a groundwater cleanup project. RID is proposing to take advantage of certain incentives for using remediated water and market the water to west side cities outside of SRP's Reservoir District. These incentives were developed to encourage use of remediated water when no current use existed. The fact is RID has sufficient irrigation demand to support a remedy based on existing irrigation uses. The only reason RID has proposed such a massive, disproportionate ERA is to leverage other businesses under Federal Superfund laws to pay for the costly drinking water infrastructure. Upon close examination, RID's ERA is predominantly a public works project as opposed to a groundwater remedy.

Specifically, RID is proposing to connect up to 13 irrigation wells to a new groundwater treatment system. Fewer wells are needed to implement effective remedy, focused on groundwater cleanup and sustaining existing water uses. RID's plan calls for installing several miles of new pipeline at a cost of $20 to $35 million to transport the groundwater to new west side municipal drinking water customers. RID's current conveyance system cannot be used to transport drinking water because it contains wastewater effluent. Any project to move groundwater to the West Valley for a drinking water use would require a separate pipeline irrespective of VOC contamination. Thus, most of the wells and all the pipeline components are not a necessary or appropriate component of an ERA. When judging the RID ERA as a private water enterprise, we question the prudency of planning growth in far West Valley cities around non-sustainable groundwater supplies. The state WQARF program was never intended to develop new groundwater supplies for cities many miles away from the actual WQARF site. RID's ERA would have significant negative consequences on many businesses and stakeholders.

Specific Comments:

Rationale on the ERA

SRP does not believe that RID has adequately demonstrated why the proposed ERA is necessary and consistent with Arizona Statutes.

1. The second paragraph on page 6 of the Revised Work Plan states that RID has a 'long-standing right' to pump groundwater from the WVBA Site and that operations will continue in perpetuity. However, RID has failed to include all existing information and facts regarding the Site. Specifically, the proposed ERA violates SRP water rights and existing contracts between SRP and RID which expire in 2020.

   As mentioned in Richard Hayslip's March 23, 2010 comments, on behalf of its shareholders, SRP is responsible for managing surface water and groundwater rights for use within a geographic region known as the Salt River Reservoir District. In accordance with SRP's bylaws, any groundwater within the Salt River Reservoir District is reserved for use within the Reservoir District's boundaries. SRP has worked closely with the local municipalities to consistently and efficiently manage groundwater within the Reservoir District boundaries as a critical water supply during drought conditions. It has been the long standing practice of SRP to conserve groundwater to the maximum extent practicable in promoting long-term sustainability of the region's water supplies.

   Groundwater in the WVBA Site underlies the Salt River Reservoir District. In the late 1910s this area was experiencing significant groundwater mounding that threatened local farming operations. In 1920, SRP entered into an agreement with RID's predecessors to withdraw a limited amount of groundwater to relieve the localized water logging

conditions. It is SRP's position that all pertinent agreements with RID expire by 2020, after which time RID may not legally pump and transport groundwater from within the West Van Buren WQARF site. Given the apparent disagreement between SRP and RID on the water rights and contractual issues, it is inappropriate for ADEQ to approve of any proposed ERA until this critical issue is resolved.

2. On page 7, the Revised Work Plan says that 'the proposed ERA is not subject to the same degree of analysis or agency approval as the final remedy' and RID implies that a technical analysis of the ERA will be included in the Feasibility Study process after implementation of its ERA. Providing detailed information or technical analysis after the fact, especially for an ERA of this size and scope, is inappropriate, unacceptable and contrary to WQARF process and rules. Indeed, it is critical that RID undertake a technical analysis to evaluate the effectiveness of the plume capture and containment and to compare other reasonable alternatives to the alleged costs and benefits of RID's proposed ERA.

3. Under Section 2.0 of the Revised Work Plan, RID indicates in several places that the proposed ERA is necessary to mitigate current risk to public health from exposure to contaminants present in the groundwater, however, the Revised Work Plan does not address any specific exposures or concerns. For decades, RID has been pumping groundwater from the WVBA Site and delivering this water to its customers in the West Valley outside the WVBA Site via its conveyance system of pipelines and canals for non-potable purposes, primarily agricultural irrigation. The Revised Work Plan lacks any discussion of exposure pathways or comparative analysis of canal water quality to established Health Based Guidance Levels or Arizona Surface Water Quality Standards to determine whether there is currently an unacceptable public health risk as a result of delivering irrigation water. ADHS has performed health consultations for other superfund sites in Arizona, where there are irrigation water end uses. A cursory review of the available data suggests that a current, unacceptable public health risk that would warrant immediate approval and implementation of the RID ERA is not present. To SRP's knowledge, groundwater pumped from the WVBA Site is not currently and historically has not been used for drinking water. Therefore, this would not represent a complete exposure pathway.

   RID also indicates that the ERA will reduce VOC volatilization into air from the highest contaminated wells and that after implementation of the ERA, emission of thousands of pounds of VOCs will be eliminated. However, there is no discussion as to whether current conditions and emissions represent a significant or unacceptable public health risk. Reference is made to other Phoenix Superfund Sites regarding EPA's and ADEQ's position on the transfer of VOCs from one media to another. The issue of air treatment controls for approved groundwater treatment facilities that are part of a Record of Decision is not directly relevant to RID's current well pumping in WVB. SRP is unaware of any statutory or regulatory requirements to control incidental VOC air

emissions from groundwater or wells. While SRP is supportive of any necessary air treatment controls for a reasonable groundwater pump and treat remedy that may be implemented at the WVBA Site, the RID ERA fails to identify why such current emissions, at levels which have decreased over the years, represent a level of unacceptable risk to public health and the environment.

In summary, SRP does not believe the proposed ERA is necessary to address any current, unacceptable public health risks. Prudent cost effective steps can be taken to reduce public health exposures, if there are any. These could include environmental monitoring and better coordination of RID pumping. SRP is prepared to assist RID and other stakeholders in evaluating and implementing appropriate and necessary measures to reduce any unacceptable public health exposure. SRP believes that a health consultation for the WVBA Site should be performed prior to costly measures which could later prove to be unnecessary.

4. According to the Revised Work Plan on page 9 in Section 2.2, the ERA 'will provide unrestricted use of the treated groundwater and enable it to be used for all beneficial uses'. In 1997, the Arizona legislature passed legislation to provide incentives for the beneficial use of groundwater withdrawn pursuant to approved remedial action projects. On June 14, 1999, the Arizona Department of Water Resources ("ADWR") published a substantive policy statement, setting forth criteria for determining whether a groundwater remedial action project is consistent with Title 45, Arizona Revised Statutes, and would be accounted for as surface water. Comparison of the ADWR policy statement demonstrates that the drinking water component of RID's proposal is inconsistent with several of the factors listed in the policy statement. Most notably, the policy encourages the ***least*** amount of groundwater necessary to facilitate a project's remedial goal. The ADWR policy also scrutinizes the end use to which groundwater will be put. Specifically, the policy states that ADWR will seek to prevent new permanent uses that would not have occurred without the incentive to use remediated groundwater. RID's proposal to treat groundwater to drinking water standards and then transport that water for sale to unnamed West Valley cities is therefore in direct conflict with ADWR's policy statement.

   As discussed, SRP believes that RID's proposed pumping volumes are substantially greater than those needed to facilitate plume capture. Without the remediated groundwater incentives, the interest of the West Valley cities would be substantially reduced. Since adequate irrigation demand for the remediated groundwater exists, RID's plan to market the treated groundwater as "remediated groundwater" as an incentive for prospective drinking water customers is inconsistent with ADWR policies for sustainable water supplies and is inappropriate for incorporation into an early response action.

5. Also in Section 2.2 of the Revised Work Plan, RID states that the ERA would be effective at controlling the migration of contaminated groundwater from source areas through containment that results from pumping its wells. No analysis is provided in the

Revised Work Plan to support this statement or to evaluate whether the proposed ERA would provide significant additional benefit than RID's current pumping regimen.

6. RID claims in Section 2.3 of the Revised Work Plan that the ERA is reasonable because the scale of the ERA is 'modest' compared to the final remedy and that it is cost effective because it predominantly uses existing RID wells, conveyances, and easements. According to the Revised Work Plan, the ERA would include treatment of up to 13 RID wells at a rate of 20,000 gpm. Like the Original Work Plan, the Revised Work Plan contains no information as to support the anticipated drinking water demand or the basis for the 20,000 gpm treatment facility. The "basis" for the 20,000 gpm capacity appears arbitrary, based upon the apparent capacity of the RID Salt Canal and less on what is needed to efficiently and effectively capture and contain the groundwater plumes. As noted below, based on a limited review of the data, it does not appear that the majority of wells are strategically located in relation to the plumes to capture and remove contaminant mass in a cost efficient manner. More than half of the wells proposed for treatment have TCE concentrations of less than 20 ug/l and most of the wells have PCE concentrations of less than 15 ug/l. Thus, under the RID ERA, the lower concentration water would be blended with the higher concentration water, thereby requiring the treatment of unreasonable large volumes of water. Further, as noted in Comment #1 above, RID's right to use groundwater from within the Salt River Reservoir District terminates in 2020. Therefore, a 10 year amortization period for RID's ERA would render the proposal economically infeasible.

Groundwater Conditions/Hydrologic Implications

RID indicates on page 6 of its Revised Work Plan that current annual pumping levels will continue and that groundwater levels in the WVBA will be unaffected by the ERA. Once again, the Revised Work Plan lacks any meaningful, detailed analysis and information to support this claim.

As noted in the comments above, the reason that SRP entered into the contract with RID in the 1920s was to control a high water table due in part to infiltration of excess irrigation water from agricultural land. However, the agricultural lands in the area have gradually diminished and are being urbanized; it is expected that this trend will continue. With this changing land use, the incidental recharge of excess irrigation water also is being reduced. Thus, continued pumping at the current annual rates likely will result in future negative impacts to groundwater levels and availability of drought supplies for existing water users in and around the WVBA Site, such as the City of Phoenix and other SRP shareholders. Current groundwater levels in the area are approximately 110 to 150 feet below ground surface.

Early Response Action Conceptual Design and Implementation

1. According to Section 4.3 of the Revised Work Plan, 13 RID wells: 105, 106, 107, 108, 109, 110, 112, 113, and 114 (Phase I) and 89, 92, 95, and 100 (Phase 2) would be connected to a new central groundwater treatment plant. While the Revised Work Plan presents water quality data for the individual WVBA Site monitor wells and RID wells, there is no presentation of the groundwater plume dimensions (other than what appears to be the 1 ug/l concentration contour) in relation to the location of RID wells proposed for treatment.

   Based on the October 2008 ADEQ Draft RI Report, there are several areas with VOC contamination within the WVBA Site, with the largest area of TCE occurring in the eastern region of the WVB area. Based on the data for the first quarter of 2008, the highest detected TCE concentration in the regional plume area was approximately 160 ug/l. The Draft RI also indicates that more localized areas of PCE contamination occur in generally the southeastern and western areas of the Site. The highest detected PCE concentration during the first quarter of 2008 was approximately 390 ug/l, located in the southeastern section of the WVB area. Most of the contamination occurs within the Upper Alluival Unit (UAU), within sublayers UAU1 and UAU2.

   Comparison of the TCE and PCE plume maps for the UAU1 and UAU2 for the first quarter of 2008 with the locations of the 13 RID wells proposed for treatment shows that only three of the 13 RID wells are located within the regional TCE plume area and contain TCE concentrations greater than 50 ug/l. As mentioned, most of the wells have TCE or PCE concentrations less than 20 ug/l. Several of the RID wells are completed into the deeper aquifer units and any potential conduit issues should be addressed.

   We recommend that ADEQ work with interested stakeholders to evaluate additional alternatives to the RID ERA to determine the most cost effective approach. The localized areas of PCE contamination may be more effectively addressed through source control programs rather than relying on regional scale pumping. Additional source control measures, strategically located, may be effective for the areas of TCE contamination and would reduce the overall scope of any final remedy.

Poor Quality Groundwater Withdrawal Permit

Without any explanation or demonstration that it can meet the requirements, RID states on page 35 of its Revised Work Plan that it may obtain a Poor Quality Groundwater Withdrawal Permit ("PQGWP"). A review of the applicable statutes, however, demonstrates that such a permit would not be appropriate for implementing the ERA.

First A.R.S. § 45-491 precludes irrigation districts (such as RID) from obtaining a PQGWP for use within their service area. Even if RID could get past that preclusion, RID cannot meet the requirements of A.R.S. § 45-516(A).

Pursuant to that section, ADWR may issue a PQGWP upon a determination that:

a. The groundwater has *no other beneficial use* at the present time due to its poor quality; and

b. Withdrawal of the groundwater is *consistent with the management plan.* (emphasis added)

Because RID cannot meet either condition; ADWR may not issue a PQGWP to RID for implementation of the ERA. Although there are no rules for implementing the applicable statute, ADWR guidance supports such a finding. Specifically, ADWR's application for Permit to Withdraw Poor Quality Groundwater within an Active Management Area requires the applicant (RID) to attach (i) test results [showing that the] water is of such poor quality that is cannot be used for another beneficial use without treatment," and (ii) the results of an economic feasibility study ... to show it is not economically feasible to treat water and transport it for another beneficial use." *See* Application at General Data, question 10-11. In this case, RID already can use the groundwater for irrigation purposes without further treatment, just as it has been doing for many years. Moreover, the ERA would be *inconsistent* with the goal of safe-yield established for the Active Management Area.

Pending Litigation

In early February 2010, RID initiated a CERCLA Section 107 cost recovery action against almost 85 parties, alleging that releases of hazardous substances from those parties' facilities have contaminated RID wells. Through this federal litigation, RID is manipulating the state WQARF process and rules in an effort to have those parties pay for the cost associated with the installation of its proposed ERA and to transform its irrigation business into a potable water business. It is well known that RID is seeking ADEQ approval of its ERA so that it can argue in court that ADEQ approved its plan and that the court should provide deference to the Agency's decision.

In summary, as indicated above, the RID proposed ERA has substantial technical and legal problems and should not be approved by ADEQ. Also, in light of the litigation initiated by RID, ADEQ should not approve the proposed RID since such approval would be placing the Agency in a position of "taking sides" in a pending litigation matter.

Thank you for your consideration. We look forward to hearing from you on this matter.

Sincerely,

W. R. Powell
Manager, Risk Management and Environmental Services

cc: B. Grumbles, ADEQ
H. Guenther, ADWR

EXHIBIT A

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VIA EMAIL AND U.S. MAIL

December 4, 2009

Ms. Julie Riemenschneider
Remedial Projects Section, Office of Waste Programs
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, Arizona 85007

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

Dear Ms. Riemenschneider:

The Salt River Project Agricultural Improvement and Power District (SRP) has reviewed the Roosevelt Irrigation District (RID) Groundwater Response Action Implementation Plan (GRA) prepared by Montgomery and Associates for Gallagher & Kennedy on behalf of RID to address groundwater contamination of RID's production wells in the West Van Buren (WVB) Water Quality Assurance Revolving Fund (WQARF) site. SRP appreciates the invitation by the Arizona Department of Environmental Quality (ADEQ) for SRP and others to provide comments as ADEQ evaluates RID's proposal. Because SRP believes that the GRA is both inconsistent with applicable state and federal law and fails to adequately take into account all existing facts, SRP is providing initial, high-level comments at this time. SRP contemplates that it will provide additional comments to ADEQ as a remedy is developed for the WVB WQARF area.

According to the GRA, RID is proposing to construct in Phase 1 a new 20,000 gallon per minute (gpm) treatment plant on RID property located outside the WVB WQARF area to treat its contaminated wells in the WVB WQARF area. Treated water from this proposed treatment system would be marketed and conveyed via four miles of new pipeline to municipalities in western metropolitan Phoenix for a new drinking water end use. Phase 2 of RID's proposed plan is to construct a second treatment system to treat wells with capacity totaling approximately 12,000 gpm. Treated water from this second treatment system would be discharged to RID's Main Canal and would be conveyed for use as irrigation water by RID's customers in southwest Phoenix. A total of 17 RID wells would be connected to these two treatment systems.

While SRP supports resolution of groundwater contamination in the WVB WQARF area, SRP would like to bring to ADEQ's attention several significant concerns it has with RID's proposed plan and to express SRP's belief that the proposal is not a reasonable approach for the WVB WQARF area.

POTENTIAL LEGAL CONCERNS AND HISTORICAL BACKGROUND

Pursuant to existing agreements between SRP and RID, RID's right to pump groundwater from wells located within the Salt River Reservoir District (SRRD) boundaries, which include the WVB WQARF area, terminates in 2026. Thus, any proposed remedy that contemplates RID's pumping of groundwater within the SRRD after that time necessarily violates those agreements.

As background, the groundwater in the WVB area underlies SRP's water service area and is an integral component of the water rights of SRP shareholders. SRP and its shareholders hold long-standing rights to the groundwater within SRP's water service area that were initiated and perfected under federal and state laws beginning in 1903 when the area was set aside to establish the Salt River Federal Reclamation Project. Beginning in 1903 landowners in the Salt River Valley established the Salt River Valley Water Users' Association (Association) and agreed through its articles of incorporation, and later its bylaws, to set aside the water underlying the Association's SRRD (SRP's present day water service area) for the use and benefit of the shareholders of the Association. In accordance with the Association's articles of incorporation and bylaws, any groundwater withdrawn from within the SRRD must be used within the SRRD boundaries. Since 1903, except for shallow groundwater that threatened the economic viability of some of the farmlands within the SRRD, SRP shareholders have consistently and continuously used groundwater from within the SRRD as a water supply for their lands.

In contrast to SRP's rights to the groundwater within the SRRD, RID's authorization to utilize the drainage groundwater from within the SRRD began in the early 1920s and that authorization was intended to be only temporary, as limited by contract. That authorization expires in 2026. As noted above, SRP faced a serious water logging problem in the late 1910s. At the time, the vast majority of the lands within the SRRD were under cultivation. Due to regional hydrogeologic conditions and irrigation return flows, groundwater in the regional aquifer rose to levels that were too high to sustain agriculture. In 1920, SRP entered into an agreement with Carrick and Mangham Agua Fria Lands and Irrigation Company (Carrick-Mangham), the predecessor to RID. That agreement authorized RID to withdraw a limited amount of groundwater within a portion of the SRRD to relieve water logging conditions in the area. The 1920 agreement and subsequent supplemental agreements with Carrick-Mangham and RID (the "SRP-RID agreements") collectively provide RID with the privilege to withdraw water from the water logged lands for a period of 99 years. The SRP-RID agreements were approved by the Secretary of the Interior in accordance with the Secretary's responsibilities to the Salt River Federal Reclamation Project and expire in 2026. In short, after the expiration of the SRP-RID agreements in 2026, RID may not legally pump and transport groundwater from

the wells within the WVB WQARF area for use outside the SRRD. Thus, ADEQ should not approve any proposed regional remedy that contemplates the pumping of groundwater in violation of existing agreements and that impedes upon the rights of SRP and its shareholders.

Under the SRP-RID agreements, RID operates approximately 50 wells within the SRRD (32 of these wells are located in the WVB area) to relieve water logging conditions. RID then transports the groundwater to the RID irrigation service area. Since 1928, RID has pumped approximately 135,000 acre feet per year. Slightly more than half of this pumping is from wells in the WVB area. SRP is performing an evaluation of the need to continue pumping for drainage purposes beyond 2026 given the continued conversion of agricultural lands to municipal, industrial and other uses. Over the last 80-plus years, groundwater levels have dropped approximately 150 feet. Based on SRP's preliminary assessments, RID's continued level of pumping will cause further mining of resources. SRP believes that groundwater levels in the area can be maintained at appropriate levels with substantially less pumping. SRP, in conjunction with municipalities that are located within the SRRD, is committed to managing and preserving this groundwater supply for long-term beneficial uses within the SRRD.

CURRENT ENVIRONMENTAL CONDITIONS AND END USES

SRP has several concerns with the GRA in light of current environmental conditions and end uses for the water.

Existing data show that groundwater in the WVB WQARF area is contaminated with several volatile organic compounds (VOCs), principally TCE and PCE. Of the 32 RID wells in the WVB WQARF area, approximately 17 have been contaminated to various levels from the VOCs, which RID proposes to connect to treatment systems. RID has been pumping groundwater from the WVB WQARF area for decades and delivering this water for irrigation use via its conveyance system of pipelines and canals. Any groundwater pumped from impacted wells is blended with treated effluent, which is also discharged to the RID Main Canal from the City of Phoenix 23rd Avenue Wastewater Treatment Plant, as well as with groundwater pumped from RID's wells that have not been impacted by VOCs (up to 38,000 gpm) and from the other 18 or so RID wells outside the WVB WQARF area. In addition, RID has wells located on the west side of the Agua Fria River, outside of the SRRD. Based on RID's current operational practices of blending groundwater from the WVB impacted wells with effluent and other clean wells, it appears unlikely that any VOCs would be detected in the irrigation water at the first point of delivery in the RID system.

The primary use of water delivered by RID from the SRRD is for agricultural irrigation. There are some parks and large residential lots within the RID service area that use the water for irrigation of landscaping. To SRP's knowledge, no groundwater pumped from within the area of known contamination currently is being (or historically has been) used for drinking water. The RID canal is not specifically listed in the Arizona Water Quality Standards. However, if the RID canal were listed, the relevant applicable water uses would likely include partial body contact and agricultural irrigation/livestock watering. With respect to partial body contact,

Arizona water quality standards specify the following water quality criteria for the chemicals of concern:

TCE – 280 ug/l (Partial Body Contact)
PCE - 14,000 ug/l (Partial Body Contact)

There are no numeric water quality criteria associated with agricultural irrigation/livestock watering for TCE or PCE.

SRP is unaware of any RID canal deliveries that have ever exceeded the above water quality criteria. According to the October 2008 ADEQ Draft Remedial Investigation Report (Draft RI), the current detected levels of these chemicals in the groundwater in the WVB WQARF area meet these current end use standards and in fact are significantly below the water quality standards.

Other constituents that have been detected in the groundwater within the WVB WQARF area include chromium and MTBE. According to the GRA, total chromium levels detected in two of RID's wells were significantly less than the AWQS level of 100 ug/l. The agricultural irrigation/livestock watering for total chromium is 1000 ug/l. RID has two wells that have been contaminated with MTBE. The GRA indicates that the current levels of MTBE in those two wells are within or only slightly above EPA's health advisory levels of 20 to 40 ug/l. There are no numeric water quality criteria associated with agricultural irrigation/livestock watering for MTBE.

While the groundwater contamination levels in WVB area are currently below the State's water quality standards for the existing end uses of RID water, it may be prudent to perform an early response action that is reasonable and cost effective in minimizing the relocation or transfer of VOCs from groundwater to the environment and in containing and controlling the plume for the existing and reasonable foreseeable future uses of the aquifer.

SPECIFIC COMMENTS ON RID'S EARLY RESPONSE ACTION PROPOSAL

1. RID's proposed pumping plan is excessive and not effective in plume containment. According to ADEQ's Draft RI, there are several areas with VOCs within the WVB WAQRF area, with the largest area of TCE contamination being the regional plume that has migrated into the eastern WVB WQARF area. The Draft RI also indicates that more localized areas of PCE contamination occur in generally the southeastern and western areas of the Site. The Draft RI reports that, in 2008, the highest detected TCE concentration in the regional plume area was 160 ug/l; the highest detected PCE concentration was approximately 390 ug/l, located in the southeastern section of the WVB area. As previously mentioned, RID's plan is to treat its 17 contaminated wells. However, only 3 of the 17 wells are located in the regional plume area and contain TCE concentrations greater than 50 ug/l. Most of the wells proposed for treatment have TCE concentrations of generally less than 20 ug/l and PCE concentrations of less than 15

ug/l. Under RID's proposal, the lower concentration water would be blended with the higher concentration water, thereby requiring the treatment of unreasonable large volumes of water.

2. SRP believes a more effective early response action would be to immediately contain the regional plume presently located in the eastern portion of the WVB WQARF area and prevent further VOC mass migration into the WVB area. Localized areas of PCE contamination may be more effectively addressed through source control programs rather than relying on regional scale pumping. It also may be beneficial for RID to shut off some of its wells that are located near the PCE and TCE plumes and such an option should be evaluated. RID could meet the balance of its irrigation demand by using wells outside the WVB WQARF area.

3. RID's proposed drinking water end use, which increases public health exposure and risk, is not an appropriate or necessary element of an early response action for the WVB WQARF area given the existing irrigation end use. As an early response action, RID has proposed to pump and treat up to 20,000 gpm for a new drinking water end use. RID further intends to classify this water as remediated water under the State's water code to exempt this water from municipal groundwater pumping restrictions. SRP believes this component of RID's proposal is inconsistent with prudent water management and, as discussed below, applicable law, and imposes unnecessary risks and liabilities to both municipal water users and parties that might contribute to funding of the remedy. It is unlikely that the necessary agreements for water quality liability could be executed by all the involved stakeholders in a timely manner, which would further delay the implementation of an early response action.

4. RID is proposing to market 20,000 gpm of the treated groundwater under the early response action as "remediated groundwater" to provide further incentive to municipalities in the western metropolitan Phoenix area to contract for the water. In 1997, the Arizona Legislature passed legislation to provide incentives to encourage the beneficial use of groundwater withdrawn pursuant to approved remedial action projects. On June 14, 1999, the Arizona Department of Water Resources (ADWR) published a substantive policy statement, setting forth the various factors to be considered in determining whether a groundwater remedial action project is consistent with Title 45, Arizona Revised Statutes, and would be accounted for as surface water. The drinking water component of RID's proposal is inconsistent with several of the factors listed in ADWR's substantive policy statement. Most notably, the policy encourages the *least* amount of groundwater necessary to facilitate a project's remedial goal. The ADWR policy also scrutinizes the end uses to which groundwater will be put. Specifically, the policy states that ADWR will encourage preventing new permanent uses that would not have occurred without the incentive to use remediated groundwater. SRP believes that RID's proposed pumping volumes are substantially greater than those needed to facilitate plume capture. Without the remediated groundwater incentives, the west side cities interest in treated groundwater from the WVB area would be substantially

reduced. As there is adequate long-term irrigation demand for the remediated groundwater, RID's plan to market the treated groundwater as "remediated groundwater" as an incentive for prospective drinking water customers is inconsistent with the ADWR policies and is inappropriate for incorporation into an early response plan.

5. RID's proposed drinking water end use unnecessarily increases the overall cost of an early response action in WVB. Higher levels of treatment technology and safeguards would be necessary for drinking water end use. A new separate pipeline constructed to Safe Drinking Water Act standards would be required to convey the water to a proposed new treatment plant (rather than using the existing infrastructure of irrigation pipeline and ditches to convey the water for irrigation uses). Such treatment requirements would substantially increase costs over an early response action based on maintaining the existing irrigation end use. Because groundwater pumped from RID wells already meets relevant current end use standards, an irrigation end use early response action likely would require the application of less costly treatment and monitoring. At a minimum, an early response action based on an irrigation end use should be thoroughly considered before RID's proposal proceeds any further.

6. RID's proposed early response action plan entailing drinking water end use also would add substantial complexities and delays to a public involvement program. Because RID has not specified any municipalities that might contract for the treated water, the necessary public outreach program likely would need to include all the potential new drinking water consumers in several cities. Each municipality would want to (and should) be engaged in any communication process to convey necessary information to their customers, further increasing the time and cost of a public outreach program. RID's proposal to classify the water as remediated water also would require engaging ADWR and other stakeholders. In contrast, an early response action directed at current end uses would facilitate timely implementation because it would streamline the community involvement process and reduce concerns about water quality liability.

7. As mentioned above, RID's proposal for an early response action involving long-term off-project end use is not reasonable or appropriate given the expiration of the SRP-RID agreements in 2026. Any proposal by RID to continue pumping beyond 2026 would at a minimum require a new agreement with SRP and approval by the Secretary of the Interior.

8. Because early response actions may be used as the starting point for the development of a reference remedy for a feasibility study, any early response action should be evaluated in light of Arizona Administrative Code (A.A.C.) R18-16-407(H), which requires "[a]n evaluation of consistency with the water management plans of affected water providers...." RID's proposed early response action does not meet that standard because it is not consistent with all current and potential future water uses in the WVB area and does not effectively contain the plume.

ELEMENTS OF A MORE EFFECTIVE EARLY RESPONSE ACTION

SRP believes that an effective early response action would consider, at a minimum, the following elements:

- **Locate wells to intercept the plume and enhance mass removal**: Experience with the Motorola 52nd Street Operable Unit 2 groundwater extraction system has shown that pumping in the main plume area has been very effective in narrowing the regional plume. A similar groundwater extraction system should be evaluated for the regional plume in the WVB WQARF area, supplemented with pumping at the leading downgradient edge of the plume.

- **Maintain current agricultural and urban irrigation end uses**: While SRP believes that properly treated groundwater is safe for human consumption, a more prudent risk management approach would be to first pursue alternative end uses of remediated groundwater. Past experience in other superfund sites has shown the public sensitivity to domestic water use of remediated groundwater. As previously mentioned, the legal and other complexities of directing this water for drinking water use would eliminate any "timely response" to the early response action. Adequate irrigation demand within the RID service area exists to sustain pumping levels needed for an early response action in WVB through 2025. Furthermore, other industrial users within the WVB area may be able to use a portion of the required groundwater pumping.

- **Groundwater Treatment Standards**: Although not required to meet water quality standards associated with RID's current irrigation end use, some or all of the groundwater could be treated to reduce the transfer of VOCs from the current plume to the air. Any standards established for the discharge of remediated groundwater to the irrigation system should be based on proper management of installed treatment technology rather than meeting specific numeric criteria. Since groundwater already meets applicable irrigation end use standards, the environmental goal of reducing public health exposure and contaminant transfer would be achieved by meeting applicable Maricopa County Air Quality Regulations and ensuring the technology is operating consistent with vendor recommendations.

- **Integration with the Final Remedy**: An alternative early response action based on strategically located capture wells for containing the regional plume and maintaining the current agricultural and urban irrigation end uses could be efficiently integrated with a final remedy that adequately addresses the needs of all water resource providers, including SRP and the Cities of Glendale, Tolleson, and Phoenix, in the WVB area. The groundwater extraction and treatment system could be transitioned to other alternate end uses to accommodate a final remedy.

- **Collaboration with interested stakeholders**: Given the current economic conditions, which impact both private and public entities, ADEQ should only consider an early response action that is focused on the highest priority environmental goals and that is fiscally prudent. Parties that may be asked to help fund an early response action will want assurances that the plan is both necessary for public health protection and appropriate in scope. Water resource stakeholders, such as SRP, ADWR, and the Cities of Phoenix, Glendale, and Tolleson will be supportive of an early response plan that is consistent with water rights laws, water conservation policies, and prudent groundwater management practices. RID's proposal has several key elements that directly conflict with the interests of many stakeholders. Greater stakeholder collaboration would be accomplished with an early response action that reduces cost and mitigates legal impediments while still achieving the goals of an early response action.

CONCLUSION

Groundwater beneath the WVB WQARF area is an important resource for SRP and its shareholders as we plan for long-term sustainable water supplies. SRP is committed to working with all involved stakeholders to develop and implement an appropriately scaled and targeted early response action in WVB that would sustain and be fully protective of current water uses, provide for plume containment, and satisfy all applicable water rights and environmental requirements.

As noted above, SRP does not believe that RID's proposal meets those goals and therefore is not a reasonable approach for the WVB WQARF area. RID's authorization to withdraw groundwater from within the WVB area is based upon agreements with SRP and the United States. Those agreements expire in 2026, at which time RID no longer will be authorized to pump such water and transport it for use outside of the SRRD.

Because RID's proposal is not reasonable, is technically complex, costly and would impose significant (and unnecessary) consequences on many stakeholders, SRP requests that ADEQ initiate a WVB technical working group to fully evaluate early action strategies in the WVB WQARF area, and that notice of the formation of that group be provided to other potentially interested parties outside of the area. The formation of such a technical working group would provide for a measured and thoughtful process in formulating a remedial strategy that fully considers stakeholder and community input.

Thank you for your consideration of our comments. We would be happy to meet with ADEQ and discuss these comments in greater detail. If you have any questions, please call Karol Wolf at 602-236-5767.

Cordially,

William R. Powell

W.R. Powell
Manager, Risk Management and Environmental Services

cc: B. Grumbles, ADEQ
H. Guenther, ADWR

EXHIBIT B

Statement of Richard Hayslip

Associate General Manager, Salt River Project

In Opposition to Roosevelt Irrigation District's Proposed Early Response Action

ADEQ West Van Buren WQARF Public Meeting

March 23, 2010

Good evening. My name is Richard Hayslip and I am an Associate General Manager at SRP responsible for environmental matters. SRP appreciates the opportunity to provide comments on Roosevelt Irrigation District's (RID's) proposal to implement an Early Response Action within the West Van Buren state superfund site. Before commenting directly on RID's proposal, I would like to address SRP's unique interests in groundwater cleanup at this site, and SRP's historical role in helping ADEQ implement cost effective remedies in the metropolitan Phoenix area.

On behalf of its shareholders, SRP is responsible for managing surface water and groundwater rights for use within a geographic region known as the Salt River Reservoir District. In accordance with SRP's bylaws, any groundwater within the Salt River Reservoir District is reserved for use within the Reservoir District's boundaries. SRP has worked closely with the local municipalities to consistently and efficiently manage groundwater within the Reservoir District boundaries as a critical water supply during drought conditions. It has been the long standing practice of SRP to conserve groundwater to the maximum extent practicable in promoting long-term sustainability of the region's water supplies.

Groundwater in the West Van Buren WQARF site underlies the Salt River Reservoir District. In the late 1910s this area was experiencing significant groundwater mounding that threatened local farming operations. In 1920, SRP entered into an agreement with RID's predecessors to withdraw a limited amount of groundwater to relieve the localized water logging conditions. It is SRP's position that all pertinent agreements with RID expire by no later than 2026, after which time RID may not legally pump and transport groundwater from within the West Van Buren WQARF site.

Ever since the inception of the State's Water Quality Assurance Revolving Fund program, SRP has voluntarily collaborated with ADEQ to address groundwater contamination within the Reservoir District. SRP and ADEQ partnered on a groundwater cleanup project in the South Mesa WQARF site. This project addressed VOC contamination from an orphan site that threatened several wells in the area. An early response pump-and-treat action quickly removed localized VOC contamination thus preventing a more expansive and costly cleanup. A similar

effort was undertaken at the East Central Phoenix WQARF site. SRP and ADEQ are currently collaborating on a soil cleanup project associated with dry cleaner releases that threaten groundwater in the area. In 1999, SRP and ADEQ signed an agreement to use CAP water in lieu of groundwater pumping from wells within or near WQARF sites. When this agreement was signed SRP was in the midst of an extended dry cycle. SRP recognized that pumping wells in or near the WQARF sites could impact current and future source control efforts. To minimize this impact, SRP worked out an arrangement in which CAP water would be used instead of groundwater wells in or near WQARF sites. These are some examples of SRP's commitment to prudent and responsible groundwater cleanup measures. In all of these cases, SRP was not a potential responsible party. SRP voluntarily stepped forward to resolve localized contamination problems in a cost effective manner that reduced expenditures from the State's WQARF budget.

SRP is equally supportive of resolving groundwater contamination in the West Van Buren WQARF site. However, RID's proposed Early Response Action is neither prudent nor responsible from a water management and environmental cleanup perspective. In fact, it is a private water enterprise thinly veiled as a groundwater cleanup project. RID is proposing to take advantage of certain incentives for using remediated water and market water to west side cities outside of SRP's Reservoir District. These incentives were developed to encourage use of remediated water when no current use existed. The fact is RID has sufficient long-term irrigation demand to support a remedy based on existing uses. The only reason RID has proposed such a massive, disproportionate Early Response Action is to leverage other businesses under Federal Superfund laws to pay for the costly drinking water infrastructure. Upon close examination, RID's Early Response Action is predominantly a public works project and very little groundwater remedy.

RID is proposing to connect up to 14 irrigation wells to new treatment system. Only a few wells are needed for an effective remedy focused on groundwater cleanup and sustaining existing water uses. RID's plan calls for installing several miles of new pipeline at a cost of $20 to $35 million dollars to transport the groundwater to new west side municipal drinking water customers. RID's current conveyance system can not be used to transport drinking water because it contains wastewater effluent. Any project to move groundwater to the west for a drinking water use would require a separate pipeline irrespective of VOC contamination. Thus, most of the wells and all the pipeline components are not a necessary or appropriate component of an Early Response Action. When judging the RID Early Response Action as a private water enterprise, we question the prudency of planning growth in far west valley cities around nonsustainable groundwater supplies.

As I previously mentioned, RID's right to use groundwater from within the Salt River Reservoir District terminates by no later than 2026. Therefore, a 10 to 14 year amortization period for RID's Early Response Action would render the proposal economically infeasible.

RID is claiming that existing public health exposures warrant immediate approval of its Early Response Action. We disagree. There is no evidence that water quality delivered to its customers have exceeded applicable standards. There are no County air quality requirements for controlling incidental air emissions associated with pumping VOC contaminated groundwater to canals and laterals. Prudent cost effective steps can be taken to reduce public health exposures, if there are any. These could include environmental monitoring and coordination of RID pumping. SRP is prepared to assist RID and other stakeholders in evaluating and implementing appropriate and necessary measures to reduce public health exposure.

In summary, RID's Early Action Proposal is not reasonable, appropriate, cost effective or necessary. It is inconsistent with the State's policies for sustainable water supplies and violates SRP water rights and contracts. It would have significant negative consequences on many businesses and stakeholders. The state WQARF program was never intended to develop new groundwater supplies for cities many miles away from the actual WQARF site. There are better approaches for protecting public health and cleaning up groundwater in West Van Buren. SRP is working with other stakeholders to develop and implement those approaches. We therefore ask the Department to disapprove of RID's plan and work with the stakeholder community in advancing more effective remedies. Thank you for your consideration.