



June 21, 2013

BY ELECTRONIC AND U.S. MAIL

Ms. Tina LePage
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
Waste Programs Division
1110 West Washington Street
Phoenix, Arizona 85007

**Re: Response to City of Phoenix and Fennemore Craig Comments, dated
May 6, 2013, on RID's Draft Feasibility Study Work Plan**

Dear Ms. LePage:

The Roosevelt Irrigation District (RID) has reviewed the May 6, 2013 comments submitted by the City of Phoenix, on behalf of a number of other parties (City of Phoenix and Other PRPs' Comments), and by Fennemore Craig, on behalf of Nucor Corporation and BNSF Railway, regarding RID's Draft Feasibility Study Work Plan (FSWP) for the West Van Buren Area (WVBA) Water Quality Assurance Revolving Fund (WQARF) Site. RID submitted the Draft FSWP on February 8, 2013 in accordance with the Agreement To Conduct Work entered into on October 8, 2009 between RID and the Arizona Department of Environmental Quality (ADEQ). RID's Draft FSWP is consistent with the WQARF rules and procedures adopted by ADEQ, which require ADEQ's approval pursuant to Ariz. Admin. Code (AAC) R18-16-407(J) and R18-16-413(E). In order to complete the administrative record on the RID Draft FSWP, this letter addresses some of the issues raised during the public comment period.

City of Phoenix and Other PRPs' Comments

Many of the issues raised in the City of Phoenix and Other PRPs' Comments are not relevant as to whether the Draft FSWP meets the criteria required for ADEQ's approval of the work plan. Although some of these irrelevant issues have been previously addressed by RID in prior submittals to ADEQ, some of those issues will be addressed in this letter in order, once again, to correct the administrative record. Consistent with its previous responses, RID will not address every misstatement and inaccuracy contained in the City of Phoenix and Other PRPs' Comments. Instead, RID will focus on substantive issues relevant to RID's Draft FSWP and address the more egregious misrepresentations of fact and law.

I. Non-Clerical Issues

RID's Draft FSWP Adequately Describes the Process of Conducting a Feasibility Study in Accordance with A.A.C. R18-16-407.

The City of Phoenix and Other PRPs' Comments state that "*insufficient information is provided*" in the Draft FSWP and "*must be revised to include the specific methods and procedures that will be used to conduct the FS.*" (emphasis added.) The standard sought by the City of Phoenix and Other PRPs is not required by ADEQ, which only requires that the work plan "shall demonstrate that the work performed will meet the requirements of [AAC] R18-16-407", "may be modified as appropriate" and "notify the Department in writing of the name of and address of the working party and a *general description of the work being performed.*"¹ (emphasis added.)

Contrary to the false claims in the City of Phoenix and Other PRPs' Comments, the RID Draft FSWP provides the requisite sufficient information to demonstrate that the feasibility study will develop a reference remedy and at least two alternative remedies and will conduct a comparative evaluation of the remedies pursuant to AAC R18-16-407. RID's Draft FSWP demonstrates that, upon completion of the evaluation, a proposed remedy will be selected that meets all of ADEQ's statutory and regulatory requirements for a WQARF selected remedy. RID strongly maintains that the lack of prescriptive detail in the Draft FSWP is not a shortcoming, but rather is a necessary aspect of the FS process, given that the RID's Draft FSWP, as required by the WQARF rules, allows for modifications to address issues raised during the feasibility study process or the community involvement activities that RID will be undertaking pursuant to AAC R18-16-404. RID's Draft FSWP should be approved by ADEQ because the Draft FSWP clearly demonstrates that the work "will comply with [AAC R18-16-407], community involvement activities will be performed in compliance with R18-16-404, and the work plan provides for modifications to comply with [R18-16-407]."²

One might presume that the City of Phoenix and Other PRPs' simply misapplied the applicable standard for a feasibility study report, which requires that the "reference remedy and other alternative remedies shall be developed and described in the feasibility study report in sufficient detail to allow evaluation using the comparison criteria,"³ to the feasibility study work plan approval process. However, this is not

¹ AAC R18-16-407(B); see also R18-16-413(A)(6) and R18-16-407(J).

² AACR18-16-407(J).

³ AAC R18-16-407(E)(1). However, ADEQ clearly distinguishes between a FSWP and a feasibility study report when setting forth the different standards for approval in AAC R18-16-407(J) (requiring that a FSWP "will comply with this Section" and that a feasibility study report "complies with this Section.") (emphasis added)

the first time, and likely will not be the last time, that the City of Phoenix and Other PRPs have misrepresented the legal requirements set forth in the relevant ADEQ WQARF statutes and regulations. This was not simply a misapplication of the law because the FSWP submitted by Haley & Aldrich, on behalf of a Working Group that includes the City of Phoenix and Other PRPs (March, 2013), similarly lacks information⁴ on the “specific methods and procedures,” which is falsely argued by the City of Phoenix and Other PRPs to be a new mandatory condition for ADEQ’s approval of a FSWP.⁵ It would appear that the City of Phoenix and Other PRPs do not require their own work product to meet the new standards they claim are required for ADEQ’s approval of any FSWP.

Contingent Strategies and Measures are not Required nor Relevant for ADEQ’s Approval of RID’s Draft FSWP.

The City of Phoenix and Other PRPs continue to misrepresent the legal requirements specifically set forth in the applicable WQARF statute and implementing regulations and to raise issues that are not relevant in ADEQ’s licensing decision to approve RID’s Draft FSWP. They state that “*the [FS] Work Plan must include an evaluation of contingent remedial strategies and contingent well measures to account for ... uncertainties associated with the future use of any remediated groundwater from the WVB Site.*” (emphasis added) They falsely advance this new and alleged mandatory condition because they then falsely argue that “*significant legal obstacles exist that must be overcome for RID to implement a regional remedy that involves pumping and treating groundwater for a new potable end use.*”

In fact, the argument regarding contingent strategies and measures raised by the City of Phoenix and Other PRPs is not applicable to FSWPs and would constitute unauthorized conditions if considered by ADEQ in issuing its licensing decision on RID’s Draft FSWP. Pursuant to AAC R18-16-407(E)(1), the reference remedy and other alternative remedies “shall be developed and described in the feasibility study report” (not the feasibility study work plan), and it is the feasibility study report (not the feasibility study work plan) that “may include contingent remedial strategies or remedial measures to address reasonable uncertainties regarding the

⁴ For example, the Working Group indicated they would prepare a groundwater flow model as part of the FS but failed to provide further information on how the model would be developed, validated, and calibrated and applied to the FS process. Given the significance and level of effort associated with the development and applied use of a groundwater flow model, the lack of any substantive information on the modeling activity in the FSWP would be inconsistent with the new and alleged mandatory standard falsely argued by the City of Phoenix and Other PRPs.

⁵ Pursuant to Ariz. Rev. Stat. (ARS) § 41-1030, “an agency shall not base a licensing decision in whole or in part on a licensing requirement or condition that is not specifically authorized by statute, rule or state tribal gaming compact.” The approval of a FSWP constitutes a licensing decision under ARS § 41-1001.

achievement of remedial objectives or uncertain time frames in which remedial objectives will be achieved.”⁶

Furthermore, RID’s Draft FSWP demonstrates that the feasibility study process, as required by WQARF rules, will evaluate all reasonable remediation strategies and remediation measures to ensure that the “reference remedy and alternative remedies shall be capable of achieving all of the remedial objectives.”⁷ Equally significant, there currently is no need for any contingency strategies or measures under AAC R18-16-407(E)(1) because there is no reasonable uncertainty regarding the achievement of remedial objectives or uncertain timeframes in which the remedial objectives will be achieved. This is substantiated by the final remedial objectives established by ADEQ for the WVBA WQARF Site that are relevant to the scope of RID’s Draft FSWP, the successful results of RID’s Well-95 Pilot Wellhead Treatment Systems Initiative, and ADEQ’s approval of RID’s Modified Early Response Action (ERA).

According to ADEQ’s Final Remedial Objectives Report for the WVBA WQARF Site, the City of Phoenix has independently concurred with RID and another water provider that the reasonable foreseeable end use of the groundwater at the WVBA WQARF Site is a drinking water supply.⁸ Consistent with this unanimous declaration by these water providers and the final remedial objectives established by ADEQ for the WVBA WQARF Site that are relevant to the scope of RID’s Draft FSWP, state law requires that:

the selected remedial action shall address, at a minimum, any well that at the time of selection of the remedial action either supplies water for municipal, domestic, industrial, irrigation or agricultural uses or is part of a public water system if the well would now or in the reasonably foreseeable future produce water that would not be fit for its current or reasonably foreseeable end uses without treatment due to the release of hazardous substances. The specific measures to address any such well shall not reduce the supply of water available to the owner of the well.⁹

Treating wells within the WVBA WQARF Site that are impacted by the release of certain hazardous volatile organic compounds (VOCs) to meet applicable drinking water standards can certainly be achieved to meet the remedial objective that any well within the WVBA WQARF Site will “be fit for its ... reasonably foreseeable end use.” In fact, RID is currently treating four impacted RID wells in the WVBA WQARF Site to meet applicable drinking water standards for the released VOCs pursuant to

⁶ AAC R18-16-407(E)(1). (emphasis added.)

⁷ AAC R18-16-407(E)(1). (emphasis added.)

⁸ ADEQ, *Remedial Objectives Report, West Van Buren Area WQARF Registry Site*, 3-2 (August 8, 2012).

⁹ ARS § 49-282.06(B)(4)(b). (emphasis added.)

the ADEQ-approved Modified ERA. RID also is preparing to implement additional treatment systems on four more impacted RID wells in the WVBA WQARF Site pursuant to the ADEQ-approved Modified ERA. Similar treatment of VOC-contaminated groundwater to meet applicable drinking water standards is currently being performed at other state and federal contamination sites in Arizona; thus confirming that the remedial objectives relevant to RID's Draft FSWP at the WVBA WQARF Site are achievable.

Also, there is little or no uncertainty in the timeframe in which the remedial objectives, established by ADEQ for the WVBA WQARF VOC-contaminated groundwater and RID wells, will be achieved given RID's success in implementing the ADEQ-approved Modified ERA and RID's commitment to implement the ADEQ-approved groundwater remedy selected after the feasibility study process as soon as possible, and clearly within the 100 year regulatory timeframe for reasonably foreseeable uses.¹⁰ RID is committed to implement the ADEQ-approved remedies as quickly as possible in order to ensure protection of RID's water supply that has been impacted by the release of hazardous VOCs, to address "contamination that may present an imminent and substantial endangerment to the public health, welfare or the environment at the [WVBA WQARF] Site,"¹¹ and to benefit west valley water providers who have noted an interest "in the utilization of treated water ... in the future."¹²

RID's Draft FSWP could be Modified to Address Issues Beyond the Proposed Scope.

The City of Phoenix and Other PRPs object to the scope of RID's Draft FSWP, falsely claiming that "*the FS must identify areas of the regional groundwater adversely impacted by known or suspected continuing sources*" and that "*the FS must evaluate the potential impacts of continuing sources ... to ensure that the selected remedy will achieve the [remedial objectives].*" (emphasis added.)

Once again, the argument raised by the City of Phoenix and Other PRPs is inconsistent with ADEQ's WQARF regulations. Pursuant to AAC R18-16-407(B)(3), "a work plan shall be developed and implemented for all *or any portion of a feasibility study for a site or a portion of a site.*"¹³ As noted in RID's Draft FSWP, the scope of the Draft FSWP "is intended to specify the process that will identify the proposed groundwater remedy for the WVBA WQARF Site" because "the primary issue of concern at the WVBA Site is groundwater contamination by chlorinated

¹⁰ R18-16-406(D).

¹¹ See Agreement to Conduct Work between ADEQ and the Working Group (January 15, 2013) and Agreement to Conduct Work between ADEQ and the Roosevelt Irrigation District (October 8, 2009).

¹² ADEQ, *Remedial Objectives Report, West Van Buren Area WQARF Registry Site, 3-2* (August 8, 2012) (noting letters of interest to ADEQ from the Town of Buckeye and the City of Goodyear).

¹³ R18-16-407(B).

volatile organic compounds (VOCs).” Therefore, RID’s Draft FSWP will develop and evaluate remedies to meet the groundwater remedial objectives established by ADEQ. Issues beyond the VOC-contaminated groundwater remedy, including source control and other non-VOC groundwater contaminants, are beyond the scope of the portion of the feasibility study addressed by RID’s Draft FSWP. The new and alleged mandatory condition for FSWP approval as falsely argued by the City of Phoenix and Other PRPs would constitute an unauthorized condition if considered by ADEQ in issuing its licensing decision on RID’s Draft FSWP.

As noted in the Draft FSWP, RID explained why the FSWP is limited to the VOC-contaminated groundwater remedy. Three principal VOCs are detected in groundwater at concentrations in excess of Arizona’s aquifer water quality standards throughout large parts of the WVBA WQARF Site. RID is best suited to address this contamination because RID is the only water provider whose operating wells are impacted by the groundwater contamination in the WVBA WQARF Site. The non-VOC groundwater contaminants are limited to localized areas in the groundwater attributed to specific facilities that have or currently are working with ADEQ to monitor and address the contamination. Similarly, source control issues are limited to localized areas within the WVBA WQARF Site. ADEQ’s Final RI Report (Terranext, 2012) provides a comprehensive summary of various site-specific investigations and source control remedial actions within the WVBA WQARF Site throughout the past 25 years.¹⁴ RID does not want to see the feasibility study process bog down in continuing RI-focused work.¹⁵ During the feasibility study process, RID will use “best engineering, geological, or hydrological judgment following engineering, geological and hydrogeological standards of practice” and consider “the information in the remedial investigation.”¹⁶

Unlike the VOC-contaminated groundwater remedy, RID is not best suited to investigate and evaluate these other issues. RID has no legal authority to access other people’s private property to perform such work. As noted in RID’s comments on the Working Group-Proposed FSWP, dated May 6, 2013, the Working Group, which consists of the City of Phoenix and other PRPs, are best suited to address

¹⁴ Contrary to the City of Phoenix and Other PRPs Comments, the Fennemore Craig Comment letter, dated May 6, 2013, argues that it is the purpose of the Final RI Report, not an FSWP, to “collect the data necessary to adequately characterize the site” and “establish the nature and extent of the contamination and the sources thereof.”

¹⁵ It is telling that the City of Phoenix and Other PRPs Comments want RID to perform source control activities similar to the Working Group-Proposed FSWP (which includes a review of soil and groundwater remediation performed to date) but then state that it “is not necessary and would be an inefficient use of time and resources” to re-evaluate site characterization data for sources that have already been remediated despite the potential presence of dense non-aqueous phase liquids, which are particularly challenging to address because of complex contaminant distribution in the subsurface. Such inconsistency in the demands made of RID’s FSWP versus what the Working Group dismisses in its Proposed FSWP strains the credibility and legitimacy of any comments or submittals from the PRPs.

¹⁶ AAC R18-16-407(E)(2).

these issues given that these PRPs are owners or operators of the facilities where there have been identified releases of hazardous substances based on public records available to ADEQ and the United States Environmental Protection Agency (EPA). In fact, the Working Group-Proposed FSWP, dated March 1, 2013, proposes to address these issues (“potential continuing VOC source(s) to WVBA groundwater” and “an evaluation of chromium in soil and groundwater originating from the source at the ChemResearch facility and potential impacts”). Although the Working Group-Proposed FSWP failed to meet the legal requirements necessary for a “request for approval” under AAC R18-16-413(A) prior to its submittal for public comments,¹⁷ the Working Group could provide the necessary information and resubmit for public comment to facilitate ADEQ’s approval. In addition to there not being a legal requirement for RID to expand the scope of its portion of the feasibility study, it makes little sense that RID’s Draft FSWP should duplicate¹⁸ the efforts outlined by the Working Groups-Proposed FSWP.

However, as noted before, RID’s Draft FSWP is always capable of being appropriately modified. RID remains willing to discuss with ADEQ whether there is any appropriate need to modify RID’s Draft FSWP in case the Working Group-Proposed FSWP or feasibility study report never come to fruition for a number of reasons. For example, the Working Group may refuse to provide the legally required information for a “request for approval” under AAC R18-16-413(A). The Working Group also may refuse to modify its Agreement to Conduct Work between ADEQ and the Working Group, dated January 15, 2013, to allow for a FSWP other than the one dated September 6, 2011. Regardless, the Working Group’s FSWP or feasibility study report cannot be approved by ADEQ do to its continued failure to meet all applicable WQARF statutes and regulations.

RID’s Draft FSWP Demonstrates that an Appropriate Comparative Evaluation of the Remedies Will be Performed in Compliance with AAC R18-16-407.

The City of Phoenix and Other PRPs assert that *“a risk assessment must be conducted as part of the FS ” in “accordance with USEPA and ADHS methodology and guidance” in order “to determine the risks to public health, welfare, and the environment.”* (emphasis added). It appears that the PRPs are asserting that a quantitative risk assessment is required to characterize the magnitude of public health risks.

Once again, the argument raised by the City of Phoenix and Other PRPs is inconsistent with ADEQ’s WQARF regulations. There is no requirement that a FSWP must include a risk assessment prior to ADEQ’s approval under AAC R18-16-413. In fact, the WQARF regulations do not require a risk assessment to be conducted as

¹⁷ The Fennemore Craig Comments to the Working Group FSWP, dated May 6, 2013, concur with RID’s comments, stating that “failure to comply with [AAC R18-16-413(A)(7)] all but eliminates the opportunity to provide meaningful comments on the Work Plan.”

¹⁸ Hayley & Aldrich, Feasibility Study Work Plan – Draft Final, 1-4 (March 2013).

part of the Remedial Investigation or the feasibility study report. Although the Remedial Investigation shall “*identify current and potential impacts to public health, welfare, and the environment,*”¹⁹ the WQARF rules state that “*a site-specific risk evaluation may be conducted to characterize the current risk to public health, welfare, and the environment.*”²⁰ The WQARF rules also require that the comparative evaluation of the reference remedy and alternative remedies:

*shall be reported in a feasibility study report and shall include ... an evaluation of risk, including the overall protectiveness of public health and aquatic and terrestrial biota ... that shall address: fate and transport of contaminants and concentrations of toxicity over the life of the remediation; current and future land and resource use; exposure pathways, duration of exposure, and changes in risk over the life of the remediation; protection of public health and aquatic and terrestrial biota while implementing the remedial action and after the remedial action; and residual risk in the aquifer at the end of remediation.*²¹

Not only is there no requirement that the FSWP include a quantitative risk assessment, but there is no legal requirement that a quantitative risk assessment be conducted in accordance with USEPA and ADHS procedures and guidance. These new and alleged mandatory conditions as falsely argued by the City of Phoenix and Other PRPs for a FSWP approval would constitute unauthorized conditions if considered by ADEQ in issuing its licensing decision on RID’s Draft FSWP.

RID’s Draft FSWP demonstrates that the evaluation of risk, required by AAC R18-16-407(H)(3)(b), will be conducted as part of the remedial alternatives comparison criteria. RID believes that this comparative risk evaluation can be properly conducted, in compliance with the feasibility study requirements and guidelines, without the significant time delay and expense of a quantitative risk assessment.

RID always has emphasized the importance of protecting the public health, welfare and the environment. RID’s ADEQ-approved Modified ERA assures protection of public health, welfare and the environment by treating and removing hazardous substances that would otherwise be released into the local community. The potential impacts to public health and welfare from the transfer of groundwater contaminants into the air has been well documented by both ADEQ (2001 Canal Characterization Study) and by RID (Public Health Exposure Assessment and Mitigation Report). With approximately 3,000 pounds of hazardous contaminants annually being released into the local community, RID believes that the most prudent path forward is to implement a remedy to actually prevent these releases instead of merely assessing the magnitude of the risk.

¹⁹ AAC R18-16-406(A)(2).

²⁰ AAC R18-16-406(E). [emphasis added].

²¹ AAC R18-16-407(H)(3)(b). [emphasis added].

In the comment letter dated May 6, 2013, the City of Phoenix and Other PRPs also mischaracterize the RID Public Health Exposure and Mitigation Assessment Report. The City of Phoenix and Other PRPs conclude that *“no current unacceptable public exposure exists.”* Once again, RID must correct the blatant misrepresentation. The RID Public Health Exposure and Mitigation Assessment Report specifically concludes that:

The results of this assessment suggest that there is not an imminent (acute) risk to the public ... The results of this study also confirmed, however, that many breathing-zone air samples exceed screening-level guidance for chronic exposure to TCE and PCE ... While there does not appear to be any imminent (acute) exposure risk to the public from these contaminants, the long-term effects from exposure to volatilized COCs in the air are uncertain.

According to ADEQ’s approval of RID’s Modified ERA, dated February 1, 2013, “data also show that significant volatilization and transfer of contaminants, from the water into the air, is occurring and is ongoing.” Neither ADEQ nor EPA tolerates the uncontrolled release of hazardous VOCs at other WQARF and federal Superfund sites in Arizona. In fact, as previously documented by RID, it is ADEQ’s policy to prevent the transfer of contaminants from one environmental media to another. As a result, ADEQ noted in the February 1, 2013 approval of RID’s Modified ERA that “RID intends to implement measures to limit these exposures.”

Finally, it is worth noting that the Working Group-Proposed FSWP does not mention the need to conduct a human health risk assessment following USEPA and ADHS procedures.

RID’s Draft FSWP Will Conduct the Screening of Remediation Technologies as Stated in Section 5.2

The City of Phoenix and Other PRPs have stated that RID’s Draft FSWP *“limits the number of treatment technologies that will be screened in the FS based on ‘similar work at other sites and consideration of presumptive technology selection for remedies addressing VOCs.’”* They argue that this purported limited consideration of technologies is *“a blatant attempt to skew the FS evaluation toward the area-wide pump and treat approach and liquid granular activated carbon (GAC) treatment technology included in RID’s modified ERA.”*

Once again, the City of Phoenix and Other PRPs’ arguments are baseless. RID believes that it is prudent to rely on peer-reviewed work conducted by others and benefit from the extensive body of knowledge that exists in this area. However, RID has no intention of limiting the technologies to be considered and has stated in the

Draft FSWP that such technologies will include, but may not be limited to, the widely accepted pump and treat technologies. Regardless, any treatment system must “assure protection of public health against such [potential treatment system] failure” pursuant to R18-16-411(C).

II. Minor Clarifications and Clerical Changes

The City of Phoenix and Other PRPs have submitted a number of additional comments regarding the RID Draft FSWP, consisting mostly of clerical clarifications and corrections. These minor comments are briefly addressed below:

“Motorola Should Be Listed As A PRP For OU-1 And OU-2 (In Section 3.3.1)”

Based on the feedback from the community involvement activities, RID’s Draft FSWP will be revised to list Freescale Semiconductor, the successor-in-interest to Motorola, as a PRP for OU-1 and OU-2. It is telling that the City of Phoenix and Other PRPs do not deny the list of owners and operators identified by ADEQ’s records as the owners or operators of facilities where there has been an identified release of a hazardous substance.

References To West Central Phoenix WQARF Site Need To Be Clarified.

RID’s Draft FSWP will be revised to clarify that there are five separate and distinct WQARF Sites in the West Central Phoenix (WCP) area and that the groundwater flow and contaminant transport from the WCP-West Osborn Complex Site is to the southwest and into the WVBA WQARF Site.

However, RID’s Draft FSWP will not be revised to extrapolate on the potential impacts of the proposed groundwater remedy for this site since the proposed remedy is not anticipated to make significant reductions in the mass of VOCs migrating into the WVBA site. The proposed remedy in the WCP-West Osborn Complex site is estimated to remove approximately 1 ounce of VOCs per day, based on the pumping and treating of 30 gallons per minute of contaminated water.

Section 4.1 “... Must Discuss And Reference The Regulatory Requirements Listed In AAC R18-16-407 For Conducting An FS.”

RID’s Draft FSWP will be revised to include the regulatory requirements set forth in A.A.C. R18-16-407.

References In Section 4.2 To The M52 Site Should Be Deleted.

The last sentence in the first paragraph of Section 4.2 will be modified to read, *"This evaluation will be summarized in the FS Report to provide benchmarks of response actions taken at the adjacent M52 and WCP sites to ascertain the consistency and protectiveness of the adopted remedial actions."* Once again, RID believes it is prudent to evaluate the WVBA WQARF remedies to other similar cleanup actions to assure protection of the public health, welfare and the environment, to maximize the beneficial use of the waters of the state and to develop a reasonable, necessary, cost-effective and technically feasible remedy.

Statements In Section 4.3 Regarding Land Use And Expected Growth Need To Be Referenced.

Comment noted, references regarding the predicted growth will be cited.

Section 5.2 "Criteria Listed In This Section Are Not Listed In AAC R18-16-407(H)(3) And Must Be Removed."

A.A.C. R18-16-407.H.3 provides mandatory criteria that must be considered as part of the evaluation of the reference and alternative remedies in the feasibility study report. Section 5.2 discusses the Screening of Remediation Technologies. RID believes all criteria listed in Section 5.2 are appropriate and meaningful to ensure that the evaluation of the remedial actions are compliant with ARS § 49-282.06(A) and they will not be revised.

Section 5.3 Must "Clarify That The Remedial Alternatives Evaluated Will Provide Well Measures For All Impaired Wells And Any Necessary Remedial Measures Will Be Developed In Consultation With The Water Providers."

Section 5.1 of the RID Draft FSWP, Formulation of Remedial Strategies and Measures, already provides the clarification requested.

"The Cost Analysis Must Also Include Well Measures Such As Well Replacement, Well Modifications And Engineering Controls, In Addition To Alternative Water Supply Or Treatment."

The cost analysis outlined in Section 6.3.3 of the RID Draft FSWP will be conducted in accordance with the criteria set forth A.A.C. R18-16-407(H)(3)(c). These criteria already are clearly stated in the RID Draft FSWP and, therefore, no changes will be made in this regard.

Fennemore Craig Comments

Fennemore Craig, on behalf of Nucor Corporation and BNSF Railway, submitted three substantive comments regarding RID's Draft FSWP:

"It Is Premature For Anyone To Be Performing An FS At This Time." "Any FS to be Performed on the West Van Buren WQARF Site Should Await Full Implementation of the [Modified ERA]."

RID does not necessarily disagree with this opinion. However, the Modified ERA is not part of the feasibility study process. State law requires that the feasibility study begin after the issuance of the final remedial investigation report in order to "be fully integrated with the results of the remedial investigation."²² While the point is well taken, RID supports the immediate initiation of the feasibility study process to avoid further delays and the continuing stall tactics by those parties opposing the cleanup of the groundwater contamination. RID understands that the ADEQ-approved Modified ERA will be evaluated during the feasibility study for inclusion into the preferred remedy given that it already has been determined by ADEQ, according to ADEQ-approval criteria in A.R.S. 49-282.06, to be reasonable, necessary, cost-effective, etc. As noted in previous correspondence with ADEQ, RID's ADEQ-approved Modified ERA will reduce the scope and costs of the final regional groundwater remedy selected during the feasibility study process.

"RID Claims That It Will Be Considering Sources Of Contamination Other Than Those Identified In The 2012 Final Remedial Investigations Report..." "There Is No Legal Basis For RID To Be Evaluating Potential Sources Other Than Those Set Forth In The Final RI."

As set forth in the preceding response to the City of Phoenix and Other PRPs' Comments regarding source control activities, RID is not best suited to address any additional source investigations that have not previously been undertaken by ADEQ over the last 25 years. Additionally, RID has no legal authority to access the facilities to conduct an evaluation of any potentially continuing source of VOCs contributing to the WVBA groundwater plume. This work is best suited for the Working Group, which includes a variety of owners and operators of facilities where there have been identified releases of hazardous substances, which already has included source control in its Proposed FSWP. If the Working Group fails to comply with the legal requirements necessary to obtain ADEQ's approval of a FSWP or to properly conduct the feasibility study, RID would be open to discussing with ADEQ any reasonable modifications to RID's Draft FSWP.

²² ARS § 287.03(F).

“The Central Phoenix Plume Model [RID] Claims To Be Using To Support Its FS Is Not Adequate For That Purpose.” “To The Extent That RID Believes That Its Groundwater Model Can Be Used To Identify Other Potential Sources Of Contamination, It Is Mistaken.”

Conestoga-Rovers & Associates (CRA) conducted a review of the Central Phoenix Plume Model (CPPM). The objective of CRA’s review was to assess the utility of the model as the basis for groundwater flow and transport modeling in the West Van Buren Study Area (WVBSA). Based on the review, CRA identified numerous apparent shortcomings with the CPPM and concluded that the model “cannot be relied upon to represent actual groundwater flow conditions” and a “complete reconfiguration” of the model (in effect a new model) would be required to achieve their stated objective. It is important to note that CRA conditions their comments on the apparent limitation that they did not have the results of RID’s recent work on the groundwater model.

RID believes that it is premature to conclude that the CPPM does not adequately simulate groundwater flow conditions in the WVBSA and a new model is needed for the WVBSA. The conclusion reached by CRA that a new model is needed is based on a vague objective for the review, incomplete information about the current state of the model, and numerous assumptions. In order to assess the utility of the model, the intended use of the model must be considered. In this case, the model will be used to conduct a comparative assessment of a range of regional-scale response actions to address groundwater contamination for the WVBA FS. Based on our review and an initial update of the model (the result of which CRA has not reviewed), some modifications and additional updates to model will make it suitable for use on the FS.

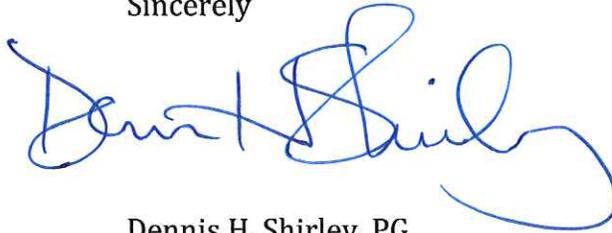
Further, CRA’s conclusion about the adequacy of the CPPM is unsubstantiated and undocumented. In order to reach their conclusions about the model construction, calibration, and ultimate adequacy, RID expects that CRA would have conducted detailed evaluations of the original CPPM, run the original CPPM and evaluated the results, conducted model simulations to test their hypothesis about potential model shortcomings, and documented the results of this work. Unfortunately, CRA fails to discuss what specific work was performed to reach its conclusion. If this type of work was conducted, then RID requests to review the results. Without these results, RID cannot fully assess whether the conclusions reached by CRA are useful for developing an appropriate and adequate groundwater model for the WVBSA, and more importantly, the FS.

Lastly, we agree with the statement that the CPPM, or any groundwater flow model for that matter, is not capable of identifying sources of potential contamination. The RID Draft FSWP did not make a claim to this effect.

Conclusion

We appreciate the opportunity to respond to the public comments submitted on RID's Draft FSWP as part of RID's ongoing community involvement activities. Although not all of the public comments are relevant to the Draft FSWP, attached is an appendix that identifies the various redline modifications that resulted from the community involvement activities. Also attached are two clean copies of the final RID FSWP that contain the appropriate modifications and meet all of the requirements in AAC R18-16-407 and R18-16-413. Therefore, we respectfully request that ADEQ approve RID's FSWP, as modified, pursuant to AAC R18-16-413(E).

Sincerely



Dennis H. Shirley, PG

By Courier Delivery and Electronic Mail:

Cc: Henry Darwin, ADEQ
Laura Malone, ADEQ
Donovan Neese, RID
David Kimball, Gallagher & Kennedy

Addendum to Response To Comment Letter

June 21, 2013

The following redline/strike-out changes reflect the modifications to the RID Draft FSWP as elaborated in the preceding letter. Changes are shown in blue for additions and red strikeout for deletions. The RID Final FSWP, attached to this letter, reflects the incorporation of these changes in a finalized, "clean" copy. There are only five (5) clarifications being incorporated to the RID Final FSWP as revisions. These five (5) minor revisions are excerpted and provided as follows:

Revision 1: In Response to the comment that "Motorola should be listed as a PRP for OU-1 and OU-2." The following modifications to the FSWP will be incorporated:

3.3.1 Motorola 52nd Street CERCLA Site

Changes are being incorporated in the first (1st) paragraph in this section, page 13, as follows:

*The M52 site encompasses the regional groundwater contamination plume to the east of the WVBA Site as shown in **Figure 1**. Groundwater monitoring data indicate groundwater flow and contaminant transport in the plume is east to west. The M52 Site is subdivided into three operable units: OU1, OU2, and OU3. As previously mentioned, the M52 Site is a federal-lead site under CERCLA authority. Although the M52 Site is a federal CERCLA site, EPA designated ADEQ as the lead agency for oversight of OU1 and OU2 on the basis that groundwater remedies have been developed and implemented at these operable units. Interim groundwater pump and treat systems are currently operating in OU1 and OU2 to address impacted groundwater within these OUs. *Freescale Semiconductor is a listed PRP in both OU-1 and OU-2. In addition, according to the ADEQ's Narrative Site Information for the M52 site, on September 3, 2003, EPA issued General Notice letter to the following companies in OU2:**

- *D-Velco Manufacturing of Arizona*
- *Honeywell International, Inc.*

There are no additional changes are being made to this section.

Revision 2: In Response to the comment that “References to West Central Phoenix WQARF Site need to be clarified.” This clarification will be incorporated in several places in the RID FSWP as follows:

1.2 Scope of the Feasibility Study Work Plan

No changes until the seventh (7th) paragraph in this section, page 4, as shown below.

The WVBA Site is also part of a larger region of VOC groundwater contamination that encompasses the adjacent Motorola 52nd Street federal Superfund site (M52 Site) to the east and the West Central Phoenix WQARF sites (WCP sites) to the north as shown in Figure 1 and discussed in more detail in Section 3.3.2. Information provided in the Final RI Report (Terranext, 2012) indicates that groundwater contamination from Operable Unit 3 (OU3) at the M52 Site and at least one of the five (5) sub-sites within the WCP sites migrates into and impacts the WVBA Site. Although the WVBA, WCP, and M52 sites are contiguous, they have been subdivided for the purpose of assisting administration and implementation of groundwater remedial actions. The United States Environmental Protection Agency (EPA) directs M52 Site remedial actions pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or federal Superfund Program, whereas ADEQ is responsible for the WVBA Site and WCP sites under WQARF Program authority. The WVBA Site FS will integrate available information from the M52 and WCP sites, where appropriate, to provide regional context for the evaluation of groundwater.

There are no additional changes are being made to this section.

3.3.2 West Central Phoenix WQARF Site

Changes are being incorporated beginning in the first (1st) paragraph in this section, page 14, as follows:

Impacted groundwater north of the WVBA Site at McDowell Road between 27th and 51st Avenues is associated with the WCP sites and is being managed by ADEQ. Groundwater monitoring data indicate groundwater flow and contaminant transport, at least in shallow groundwater in the WCP sites, is to the southwest and into the WVBA Site (Terranext, 2012; GeoTrans, 2012).

The original WCP Area ~~is subdivided into 5 sub-sites~~ was divided into five (5) separate sites in 1998: 1) East Grand Avenue, 2) West Grand Avenue, 3) North Plume, 4) North Canal Plume, and 5) West Osborn Complex, of which the West Osborn Complex (WOC) is the southernmost site and hence most closely associated with the WVBA Site. Groundwater and contaminant transport from the WCP-WOC Site, and other WCP WQARF sites, is to the southwest and into the WVBA WQARF Site. Three facilities have been identified as likely sources of groundwater contamination in the WOC (Terranext, 2012):

- United Industrial Corporation
- Corning Inc./Components Inc.
- NUCOR Corporation

A number of other industrial facilities ...

There are no additional changes being made to this section.

Revision 3: In Response to the comment that “RID’s Draft FSWP must ... reference the regulatory requirements listed in AAC R18-16-407.” The following modifications to the FSWP will be incorporated:

4.1 Regulatory Requirements

Changes are being incorporated in the first (1st) paragraph in this section, page 19, as follows:

ADEQ has established specific remedial action criteria pursuant to ARS §49-282.06 and A.A.C. R18-16-407 that must be met in consideration and selection of remedial action(s) for the WVBA Site.

Among other requirements, the designated remedial actions ...

There are no additional changes being made to this section.

Revision 4: In Response to the comment that “References to the M52 Site should be deleted.” The following modifications to the FSWP will be incorporated:

4.2 Response Actions/Remedial Goals at M52 and WCP Sites

Changes are being incorporated in the first (1st) paragraph in this section, page 20, as follows:

The adjacent M52 and WCP sites are further advanced in the RI/FS process than the WVBA Site and have selected or initiated groundwater remedial actions at certain sub-sites to address contamination within their site boundaries. Relevant information pertinent to remedy selection at the M52 and WCP sites, such as ROs, regulatory requirements, development and selection of remediation technologies, and groundwater end use, will be compiled, reviewed, and documented as part of this FS. This evaluation will be summarized in the FS Report to provide benchmarks of ~~requirements that are applicable or relevant and appropriate to WVBA groundwater remedy selection to ensure~~ response actions taken at the adjacent M52 and WCP Sites to ascertain the consistency and protectiveness of adopted remedial actions.

There are no additional changes being made to this section.

Revision 5: In Response to the comment that “References to the M52 Site should be deleted.” The following modifications to the FSWP will be incorporated:

4.3 Current and Reasonably Foreseeable Land Use

Changes are being incorporated beginning in the second (2nd) paragraph in this section, page 21, as follows:

Within the WVBA Site there are no village cores (a central focus with a pedestrian-oriented mix of land uses) or special planning districts. There are, however, large acreages of agricultural land available to be developed, especially in the western Estrella Village. Consequently, as identified in the Final Remedial Objectives Report (Terranext, 2012), Estrella Village has been identified as a COP targeted growth area and is expected to experience significant increases in both employment and residential growth.

Land use in eastern COT, adjacent to the WVBA Site, is primarily agricultural/vacant and industrial. Based on data obtained by the U.S. Census Bureau indicating a 32 percent increase in population since 2000, this area, similar to the COP Estrella Village area, is also expected to experience significant increase in growth.

There are no additional changes being made to this section.