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July 19, 2018

VIA E-MAIL AND U.S. MAIL
Mr. Michael Stoker
Regional Administrator
US EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105-3901

Re: ***EPA Concurrence to Implement Judicially-Approved NCP Compliant and State-Approved Groundwater Response Action***

Dear Mr. Stoker:

Thank you for your June 18, 2018 letter in response to our various correspondence and meetings with EPA over the last six months. As described in our prior correspondence, the groundwater contaminant plume migrating from the Motorola 52nd Street federal Superfund (M52) Site has seriously contaminated numerous Roosevelt Irrigation District (RID) water supply wells and is causing uncontrolled releases of toxic volatile organic compounds (VOCs) into the air of a local low income, minority community in Phoenix, Arizona. The purpose of our outreach to EPA over the past eighteen months is to accelerate cleanup in order to protect human health and the environment at the largest groundwater contaminant plume in Arizona and one of the largest in the United States. The Arizona Department of Environmental Quality's (ADEQ's) April 24, 2018 letter to EPA identifies relevant documents and data establishing that a continuous and unbroken TCE/PCE plume has migrated and continues to migrate from the adjacent, upgradient federal M52 Site into the West Van Buren Area (WVBA) Water Quality Assurance Revolving Fund (WQARF) Site, which was placed on Arizona's WQARF Registry of groundwater contamination sites in 1987.

Despite decades of EPA and ADEQ evaluation, neither agency has taken sufficient action to expedite a coordinated, regional groundwater remedy to contain the continuous and unbroken TCE/PCE plume, address RID's impacted water supply wells or mitigate the uncontrolled releases of toxic VOCs associated with the significant groundwater withdrawals from wells operating across the WVBA WQARF Site. In fact, the WVBA WQARF Site is the only known site in Arizona where active remediation has not been taken by a regulatory agency (EPA or ADEQ) to prevent direct and on-going public exposure to contaminated groundwater containing VOCs above Maximum Contaminant Levels (MCLs) to ensure protection of human health and the environment. The lack of any active governmental remediation of the groundwater contamination and toxic releases in the WVBA WQARF Site is of particular

concern given that data compiled from EPA's own analytical tool, EJSCREEN, indicate that, like the federal M52 Site, the WVBA WQARF Site is overwhelmingly comprised of an impoverished, undereducated, minority population having a disproportionally higher air toxics cancer risk.

RID is Committed to Cooperate in EPA's Expedited Evaluation and Supports Expanding the Federal M52 Site Boundaries to Include Most of the WVBA WQARF Site

RID appreciates EPA's recent request for data from ADEQ documenting the historic and on-going migration of the groundwater contamination from the federal M52 Site into the WVBA WQARF Site for the purpose of evaluating extending the boundaries of the federal M52 Site to include most of the WVBA WQARF Site. RID believes EPA's evaluation and decision to extend the boundaries of the federal M52 Site to include most of the WVBA WQARF Site should be relatively quick and simple given EPA's historical actions at the federal M52 Site, the information in ADEQ's April 24, 2018 letter and ADEQ's supporting documentation and data.

Originally, the current boundaries of Operable Unit (OU) 2 and OU3 of the federal M52 Site were the boundaries of the former East Washington WQARF Site. However, EPA extended the boundaries of the federal M52 Site to include the former East Washington WQARF Site in hopes of achieving containment of the first molecule of contamination released at the federal M52 Site.[1] Consistent with EPA's rationale for extending the boundaries of the federal M52 Site to include the former East Washington WQARF Site, ADEQ's April 24, 2018 letter points out, among other things, that calculations in 1983 "show that the M52 Site TCE plume was already past I-17 and Jefferson Street," (and therefore well within the WVBA WQARF Site), a determination that has been reconfirmed by EPA in 1994,[2] 2005,[3] and most recently in 2017.[4]

EPA's prior determinations that groundwater contamination from the federal M52 Site has migrated into and commingled with the WVBA WQARF Site also are supported by data obtained by RID during its last nine (9) years of evaluating the WVBA WQARF Site and the groundwater contamination migrating from the federal M52 Site. EPA's and ADEQ's use of "average" or bulk hydraulic properties to derive a representative groundwater flow velocity neglects any consideration of preferential flow that is occurring within the layered,

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[1] In fact, during a meeting nearly 10 years ago in 2009 with EPA, ADEQ and RID representatives, EPA acknowledged that it already was looking into a potential OU4 extension of the federal M52 Site that would extend into the WVBA WQARF Site in order to capture the first molecule of contamination released at the federal M52 Site in accordance with federal superfund policy.

[2] The 1994 *Record of Decision for Motorola 52nd Street OU2*, written by ADEQ and approved by EPA, states that "the western edge of the contaminant plume has not been identified, but extends well beyond 7th Avenue" (the eastern boundary of the WVBA WQARF Site) and "the contamination extends beyond the East Washington area [OU2 and OU3 of the M52 Site] and into the West Van Buren WQARF area, to approximately 75th Avenue."

[3] According to the 2005 *Final Groundwater Investigation Report, Phase I and II Well Installation for OU3* prepared for EPA, the OU2 "commingled plume enters the OU3 Study Area and extends further west beyond the OU3 boundary into the West Van Buren WQARF site."

[4] According to EPA correspondence with OU3 PRPs, EPA requires a remedy to "contain and capture groundwater containing contaminants of concern (COCs) exceeding maximum contaminant levels (MCLs) at a compliance point west of 7th Avenue" and within the WVBA WQARF Site.

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heterogeneous, poorly consolidated sediments comprising the local alluvial aquifer. For example, within the federal M52 Site, the presence of coarse paleochannel deposits is a significant control on the prevailing westerly groundwater and dissolved contaminant movement in the Salt River Gravels and Basin Fill sub-units.[5] A sense of the magnitude of preferential flow is documented in the ADEQ-required fluid flow investigations conducted at a newly-installed RID production well (RID-111R) located at about 38th Avenue and Van Buren Street within the WVBA WQARF Site. Spinner logging data obtained while pumping RID-111R demonstrated that 1,500 gallons per minute (gpm) or 60% of the 2,500-gpm yield of the well was derived from a 30-foot thick zone within the approximately 300-foot saturated interval.[6] Such preferential flow in highly conductive layers can never be captured in estimates of "average" groundwater flow velocity. Accordingly, groundwater contamination from the federal M52 Site has migrated into the WVBA WQARF Site earlier, farther and impacted RID wells more expansively than any evaluation to date by EPA or ADEQ would indicate based on "average" groundwater flow velocity. Such documented migration of groundwater contamination from the federal M52 Site into the WVBA WQARF Site clearly justifies extension of the boundaries of the federal M52 Site to include the WVBA WQARF Site, at least to the extent documented by ADEQ, if not farther, just as EPA historically extended the boundaries of the federal M52 Site to include the former East Washington WQARF Site.

RID Voluntarily Continues to Mitigate Contaminant Exposure

RID appreciates that EPA recognizes the necessity of addressing the groundwater contamination and uncontrolled releases of toxic VOCs into the air of the local minority community within the WVBA WQARF. EPA's request that "RID should continue to ensure its activities do not exacerbate pathways for contaminant exposure" is consistent with ADEQ's 2013 approval of RID's Modified Early Response Action that requires RID "to implement measures to limit … exposures" from the "significant volatilization and transfer of contaminants, from the water into air, [that] is occurring and is ongoing."

As discussed with EPA, RID recently received limited additional funding and has already installed carbon replacement for the existing wellhead treatment systems in order to restart treatment on the most-highly contaminated RID wells pursuant to the ADEQ-approved and NCP-compliant RID remedial action. In response to EPA's June 18, 2018 letter and request for continued action, RID is reviewing what additional ADEQ-approved remedial measures may be voluntarily performed to "not exacerbate pathways for contaminant exposure." Given RID's currently limited funding, it appears the only additional affordable measures may be to seal RID's wellhead discharge boxes to limit volatilization at each water supply well with

[5] See *Arbitrator's Final Decision and Findings of Fact and Conclusion of Law*, dated July 11, 2001, in arbitration proceedings between Honeywell and Motorola, indicating both parties had similar views of general geology influencing groundwater flow in basin fill sediments.

[6] *Final Feasibility Study Report, West Van Buren WQARF Registry Site, Phoenix, Arizona*, prepared by Synergy Environmental, Section 3.2.2 - West Van Buren Area at 36. The highly conductive zone occurred at a depth of 223 to 253 feet below land surface.

concentrations of hazardous VOCs that exceed applicable Arizona aquifer water quality standards, which are consistent with the federal MCLs.

As previously presented to EPA and consistent with EPA's request for continued action, RID has secured private funds through a public-private partnership (P3) structure to expedite full implementation of the ADEQ-approved and NCP-compliant RID remedial action in order to provide prompt and necessary protection of public health, welfare and the environment and to address what the federal judge declared is "admittedly a very serious problem" due to the "plumes of very deadly carcinogenic chemicals floating around underneath the city of Phoenix, Arizona."[7] However, as previously explained to EPA, the P3 funding is conditioned upon governmental authorization and assurance that the RID remedial action will continue until the groundwater in the WVBA WQARF Site is restored to applicable aquifer water quality standards or MCLs, as required at all other groundwater contamination sites. G&K also continues to pursue a federal CERCLA Section 107 cost recovery action to ensure that the polluters ultimately pay the response costs and not the federal or state taxpayers.[8] Unfortunately, PRPs, including federal government agencies, and the State of Arizona continue to obstruct these funding efforts, which result in continued delay in implementing the ADEQ-approved and NCP-compliant RID remedial action in violation of applicable laws and to the detriment of the local low income, minority community.

EPA's administrative approval under CERCLA will enable P3 funding to expeditiously and fully implement and operate the RID remedial action, without the need for any financial contribution from the federal Superfund, which are two principal goals of EPA's Superfund Task Force. The ADEQ-approved and NCP-compliant RID remedial action will address the groundwater contamination and toxic air emissions within the WVBA WQARF Site that are attributable to the contaminated groundwater that has migrated over decades from the federal M52 Site and will continue to migrate in the future from the adjacent, upgradient federal M52 Site.[9] The P3 funding has been unreasonably and unjustifiably delayed because of the Arizona Department of Water Resources' refusal to "expedite the processing and issuance of" a routine administrative state permit "to facilitate the prompt conduct of [ADEQ] approved remedial actions" as required by Arizona law.[10] Administrative approval by EPA under CERCLA would

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[7] *Reporter's Transcript of Proceedings (Motion Hearing)* at page 38, lines 14-21, *RID v. SRP*, No. CV-10-0920 (D. Ariz. Feb. 28, 2017).

[8] However due to the continued delays in the state WQARF regulatory process, RID recently requested that ADEQ provide funding for the ADEQ-approved RID remedial actions from its WQARF Fund as required by Arizona law.

[9] EPA's 2017 position is that the hydraulic control of the M52 Site will need to occur within the WVBA WQARF Site.

[10] Pursuant to ARS § 49-290.01, the "department of water resources shall expedite the processing and issuance of permits, approvals or authorizations to facilitate the prompt conduct of approved remedial actions." Historically, nearly every pump and treat remedial action in Arizona has been issued a Poor Quality Groundwater Withdrawal Permit (PQGWP). However, ADWR has refused to provide a PQGWP to further the ADEQ-approved RID remedial action. Instead, ADWR unjustifiably has imposed new and inconsistent interpretations and standards on the RID remedial action approved by ADEQ. Additionally, ADWR has unlawfully revoked ADWR's prior written determination "that the duration of [the RID-SRP 1921, 1927 and 1950] agreements would not affect the legal availability of groundwater pumped by RID for use within its boundaries, for purposes of Assured Water Supply determinations," effectively delaying full implementation of the ADEQ-approved and NCP-compliant RID remedial

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negate the need to obtain the administrative state permit from the current ADWR Director and, thereby, provide the necessary certainty for the P3 funding to fully implement, operate and maintain the ADEQ-approved and NCP-compliant RID remedial action. RID simply seeks EPA's administrative approval of its ADEQ-approved and NCP-compliant remedial action under CERCLA in order that "RID [can] continue to ensure its activities do not exacerbate pathways for contaminant exposure,"[11] as EPA has requested.

Remedial Action is Necessary to Address an "Immediate and Substantial Endangerment to Public Health or the Environment"

As determined by ADEQ, RID's remedial action is reasonable, necessary and cost-effective to address an "immediate and substantial endangerment to public health or the environment" under state law.[12] Again, given EPA's Superfund Initiative goal of expediting remediation and EPA's historical actions (as described below) at the adjacent, upgradient federal M52 Site, it is surprising EPA would delay, "until EPA completes [its] evaluation of the [WVBA] WQARF site for NPL listing or as an operable unit of the Motorola 52nd Street Site," any opportunity to address the immediate and substantial endangerment to public health and the environment within the WVBA WQARF Site caused in significant part by the migration of contaminated groundwater from the federal M52 Site.

As noted in prior correspondence with EPA, RID is simply seeking EPA's confirmation that groundwater remediation in the WVBA, as required at all similar groundwater remediation sites, will need to continue until applicable aquifer water quality standards or MCLs are achieved. In fact, as EPA historically acted at OU1, EPA should go further and concur with the ADEQ-approved and NCP-compliant RID remedial action as an interim remedy. Such concurrence would be consistent with EPA's prior actions for the interim groundwater pump and treatment at OU1 of the federal M52 Site in September 1988, more than a year before the federal M52 Site was listed on the National Priorities List in October 1989. The 1988 Record of Decision (ROD) "serve[d] as EPA concurrence with the remedial action for the Motorola 52nd Street site, as approved by [ADEQ]. ADEQ approved this remedial action in conformance with: the Arizona Administrative Code; Arizona Revised Statute; ... the National Contingency Plan, to the extent practicable; and relevant state and federal requirements."

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action with P3 funding. This unlawful and unilateral reversal of prior ADWR written determinations by the new ADWR Director is disturbing especially given the fact that the current ADWR Director actively opposed the RID remedial action at his prior job with a prominent PRP at the WVBA WQARF Site.

[11] As discussed with EPA, RID is looking at restoring a water supply well that already has an installed wellhead treatment system to remove toxic VOCs. However, RID would prefer to discuss certain options with EPA that would optimize remediation of the contaminated aquifer consistent with applicable State law and EPA's own remedial action objectives for OU3 of the federal M52 Site.

[12] *See* ADEQ Reimbursements to RID for Incurred Costs pursuant to ARS § 49-282.E.11 (authorizing ADEQ to "reimburse a political subdivision of this state for its reasonable, necessary and cost-effective remedial action costs incurred in response to a release or threat of a release of a hazardous substance or pollutants that presents an immediate and substantial endangerment to the public health or the environment"); *see also* Working Agreement between ADEQ and RID, dated October 8, 2009.

ADEQ similarly has approved RID's voluntary groundwater remedial action. In 2010, after having "carefully analyzed technical and legal documents and correspondence contained in the Site file, including submittals by RID and other interested parties since September 2009, and comments received through the public participation process" and having "analyzed the [Early Response Action] Work Plan to determine compliance with applicable State statutes and rules," ADEQ approved the RID Early Response Action (ERA) because "RID has a unique opportunity to increase the removal of contamination from the aquifer via its wells" and "[w]ithout treatment, these contaminants will continue to degrade the quality of the aquifer within the Site."[13] Again in 2013, ADEQ approved RID's Modified ERA and "RID's objectives to protect RID's supply of water and addressing current and future risks to public health, welfare, and the environment [[AAC] R18-16-405(A)]."[14] Additionally, ADEQ's Modified ERA approval required "RID's implementation of … measures" to limit exposures from the "significant volatilization and transfer of contaminants, from water into the air, [that] is occurring and ongoing."[15] Finally, in 2015, ADEQ "determined that the [RID] FS Report [and proposed remedial action] meets the requirements of Arizona Revised Statutes 49-287.03 and Arizona Administrative Code R18-16-407 and therefore ADEQ is approving RID's FS Report."[16]

A federal court also recently found that "RID gave substantial thought and attention to compliance with site-specific Arizona law" and that RID "did as a matter of law substantially comply with the applicable requirements set forth in the NCP."[17] The Court also sharply criticized the lack of remedial action by public entities. Specifically, the federal judge stated: "It … astounds me, to be honest with you, as to why the public entities here didn't step up more forcefully on all bases to do something about what is admittedly a very serious problem. I don't think anybody disagrees, or if they do, I don't know on what basis they could possibly suggest that there aren't plumes of very deadly carcinogenic chemicals floating around underneath the city of Phoenix, Arizona."[18]

EPA's concurrence with the ADEQ-approved and NCP-compliant RID groundwater remedial action would expedite addressing an immediate and substantial endangerment to public health and the environment, be consistent with EPA's prior actions and concurrence with the ADEQ-approved remedial action for OU1 at the federal M52 Site and be consistent with EPA's Superfund Initiative goal of expediting cleanups and utilizing private-party funding to avoid costs to the federal Superfund and American taxpayers. As noted by ADEQ, RID's voluntary remedial action is a unique opportunity. Rarely, if ever, has EPA been presented with a groundwater remedial action already determined by a state and/or federal court to comply with applicable state law, to substantially comply with the federal NCP, to have been subject to

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[13] ADEQ letter to RID (June 24, 2010).
[14] ADEQ letter to RID (February 1, 2013).
[15] *Id.*
[16] ADEQ letter to RID (April 13, 2015).
[17] *RID v. SRP*, No. 2:10-cv-00290, Dkt. 1396, "Order: (1) Denying Motion for Summary Judgment re: NCP Compliance; (2) Granting Cross-Motion for Summary Judgment re: NCP Compliance; and (3) Overruling Objections to Additional Fact Statements," 28 (D. Ariz. filed March 15, 2017).
[18] *See* fn. 7.

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significant public participation and that meets all applicable state and federal remedial action criteria at no cost to the federal Superfund.

Conclusion

We appreciate EPA obtaining additional supporting data from ADEQ and are prepared to share the technical information on groundwater flow velocity referenced above. For the reasons discussed herein and in ADEQ's April 24, 2018 letter to EPA, we support expanding the boundaries of the federal M52 Site to include most of the WVBA WQARF Site, just as EPA historically extended the boundaries to include the former East Washington WQARF Site. We also would appreciate the opportunity, at your earliest convenience, to further discuss EPA's concurrence under CERCLA with the ADEQ-approved and NCP-compliant RID remedial action, just as EPA historically concurred at OU1, in order to expedite full implementation of the remedial action necessary to address an immediate and substantial endangerment to public health and the environment caused in significant part by the documented migration of groundwater contamination from the adjacent, upgradient federal M52 Site into the WVBA WQARF Site.

Very truly yours,

GALLAGHER & KENNEDY, P.A.

By: David P. Kimball, III

DPK/sgl

cc: Misael Cabrera, ADEQ Director

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