

APPENDIX K
Responsiveness Summary Report

**REMEDIAL INVESTIGATION REPORT
RESPONSIVENESS SUMMARY**

*EAST CENTRAL PHOENIX – 24TH STREET AND GRAND CANAL
WQARF REGISTRY SITE
PHOENIX, ARIZONA*

Arizona Department of Environmental Quality
Remedial Projects Unit
1110 West Washington
Phoenix, Arizona 85007



June 2019

REMEDIAL INVESTIGATION REPORT RESPONSIVENESS SUMMARY

EAST CENTRAL PHOENIX – 24TH STREET AND GRAND CANAL
WQARF REGISTRY SITE
PHOENIX, ARIZONA

INTRODUCTION

Pursuant to the requirements of the Arizona Administrative Code (A.C.C.) R-18-16-406(J) the Arizona Department of Environmental Quality (ADEQ) has prepared this comprehensive responsiveness summary for comments received on the *Draft Remedial Investigation Report, 24th Street and Grand Canal WQARF Site, Phoenix, Arizona* dated March 7, 2019. The 24th Street and Grand Canal Water Quality Assurance Revolving Fund (WQARF) Site (Site) Draft Remedial Investigation (RI) Report was made available for public review and comment on March 7, 2019 for 60 days. A community advisory board (CAB)/public meeting was held at Arcadia High School, 4703 East Indian School Road, Phoenix, Arizona on April 22, 2019 during the 60-day public comment period. The purpose of the meeting was to receive oral and/or written comments on the Draft RI Report and to solicit and consider proposed remedial objectives. ADEQ received oral and written comments during the meeting and comment period. The comments are summarized below with ADEQ responses. *Copies of written comments submitted by the public are contained in the attachment following the summaries below.*

Oral Comments

Jon Hathaway, CAB Member

1. The documents online are very large and take a long time to download. It would be nice have a copy of just the main body of the report or to separate the document online into multiple files.
 - ADEQ Response: ADEQ will post the final RI report online in multiple sections.
2. It would be preferable that at least some figures be included within the body of the text.
 - ADEQ Response: Including figures as a separate section is generally most efficient for review. ADEQ will post the figures online as a separate section to allow for easier review.

Written Comments

Julie Riemenschneider, COP

General Comments

1. In general, the City agrees with the remedial investigation completed to date at this site. ADEQ has completed an Early Response Action at the former Moroney's and former Viking Cleaner Facilities. These former dry cleaners appear to be the source of the tetrachloroethene (PCE) at this WQARF site.

Please note that the City Water department is currently revising the 2011 Water Resource Plan (WRP). The Land and Water Use Report uses the old City WRP from 2011 and figures that are

no longer completely accurate. The City will provide ADEQ a copy of the new Water Resource Plan as soon as it is published.

Until the updated WRP is published, please note, regional water supply conditions have changed since 2011, therefore we recommend that the 2017 Land and Water Use questionnaire for the City be used to assess future uses of groundwater in the site area. Currently, the City has a surface water resource portfolio that is adequate to meet current and projected demands under regular supply conditions. Since the City published its 2011 Water Resource Plan, serious water supply challenges have developed for Arizona water users of Colorado River Water. More than 40% of the City of Phoenix water supply comes from this source. The City currently uses around 2% of groundwater and reclaimed water. The Bureau of Reclamation (BOR) who manages the Lower Colorado River operations has indicated severe shortages are possible in the near future due to changing climate and over allocation of the resource. Preparations are being made by the City to ensure that additional supplies are available during both short and long-term shortage situations caused by climatic conditions, emergencies, institutional changes, or unforeseen events. Because of this possibility the City views every active and in-active municipal water well as a potential water supply source in the event that Colorado River allocations are curtailed during a drought declaration. This may be needed even though water demands should remain relatively constant.

- ADEQ Response: Comment noted.
2. It is critical that the groundwater be remediated in such a way that existing and future City wells near the 24th Street and Grand Canal WQARF area be able to operate without restrictions imposed by the presence of contaminants. The City requests that ADEQ adopt a groundwater remedial objective (RO) that would be similar to the one stated below:

To restore, replace or otherwise provide for water for the designated use, lost or impaired by contamination associated with the 24th Street and Grand Canal WQARF site. This action will be needed for as long as the need for the water exists, the resource remains available and the contamination associated with the 24th Street and Grand Canal WQARF site prohibits or limits the irrigation or municipal uses of groundwater.

- ADEQ Response: Comment noted; see final RO report.

Specific Comments

1. **Executive summary and page 25, 47;** The City agrees with Geosyntec that the petroleum hydrocarbon impacts identified at the site appear to be coming from a closed LUST site, and should be further investigated by the ADEQ UST program.
- ADEQ Response: Comment noted.
2. **Page 14, Regional Groundwater Conditions;** The City proposes the following changes to the language:

The AMA was established "due to concerns of over-draft conditions resulting in the passage" of the 1980 Groundwater Management Act.

Agricultural irrigation water and effluent discharged from the City of Phoenix 23rd and 91st Avenue wastewater treatment plants "also contributes to recharging the aquifer."

- ADEQ Response: The text has been changed.
3. **Page 23, Groundwater Investigation;** The groundwater quality tables do not contain the information from the grab samples collected in February 2018. The City notes that sampling in 2016 was completed with PDBs and the sampling in August 2018 was with HydraSleeve™. The February 2018 data should be in the tables and also a definition of "grab" samples should be provided.
 - ADEQ Response: The report has been amended accordingly; results are included in the tables and a description of the sampling methodology is included in Section 4.3.
 4. **Groundwater investigation;** There is very little definition in the southern center portion of the plume. It appears ADEQ did have a soil boring 24MW-11. Figure 2 indicates this location was an abandoned soil boring. Figure 10 also indicates a PCE [sic] of 17 micrograms per liter (ug/L) at this location. The City assumes that a grab sample was collected from this soil boring, please confirm. The City cannot find any discussion in the text concerning this soil boring. The City did find the data in the tables. ADEQ should discuss this soil boring in the text if it is going to be used to define the sites and draw isoconcentration lines. As this appears to be a good location for a monitoring well, the City would recommend ADEQ install a well here to aid with the Feasibility Study (FS) and Proposed Remedial Action Plan (PRAP) phases of this site. The City also notes that soil borings 24MW-10A and 24MW-10B were drilled and it appears from figures and tables that 10B was abandoned. An explanation of these activities in the text would be helpful. Without definition in the plume center it is very difficult to draw accurate isoconcentration lines, these lines at a minimum should be hatched. If ADEQ is using 24MW-14 to define the toe of the plume, the isoconcentration line should be hatched as this monitoring well is almost $\frac{3}{4}$ mile away.
 - ADEQ Response: The isoconcentration lines on the figures have been dashed, where appropriate, to reflect areas where uncertainty exists. However, the plume is considered adequately defined to allow for identification and comparison of alternative remedial actions in the FS. Additional wells that may be needed to evaluate remedy performance will be addressed in the FS. Discussion of borings 24MW-11 and 24MW-10B has been added to the RI text in Section 4.3.
 5. **Geologic Cross-sections Figure 12 and 13;** Please note that 24MW-11 is an abandoned soil boring (per Figure 2) and not a groundwater monitoring well as indicated on these figures. The text should be corrected.
 - ADEQ Response: Figure 12 has been updated to avoid confusion. 24MW-11 is not included on Figure 13.
 6. **Page 35, Soil Pathway;** The report indicates that limited sampling was conducted at the former Carnation and McKean's properties. The report concluded that the soil pathway at this area was incomplete and would require re-evaluation in the future. Has ADEQ already placed or is ADEQ proposing to place a Declaration Environmental Use Restriction (DEUR) on this property?
 - ADEQ Response: The soil pathway is incomplete. It does not require re-evaluation in the future and associated text indicating it does was unintentional. The text discussing re-evaluation for site redevelopment has been removed from the final report.

Soil vapor extraction conducted in these source areas has significantly reduced contaminant concentrations. Calculations using the equilibrium three-phase partitioning equation indicate the

concentrations remaining in soil do not exceed residential Soil Remediation Levels. Details of this analysis have been included in Section 6.5.3. Additionally, the site has passed a rebound evaluation for soil vapor testing and observed soil-gas concentrations were below a conservative 10^{-6} cancer risk under a residential indoor air exposure scenario, as calculated by a site-specific human health risk assessment (HHRA). Thus, a DEUR is not warranted.

7. **Page 40, City of Phoenix;** The report states "no active groundwater pumping by the COP occurs in or near the site." Although the City is not currently pumping our well located at Coronado Park, the City maintains this well and it is possible this well could be re-activated in the near future for municipal drinking water should severe drought conditions persist creating shortages of the City surface water supplies.
 - ADEQ Response: Additional text has been added in Section 7 for clarification.
8. **Page 41, City of Phoenix, Appendix H;** The recharge and recovery locations in the 2011 WRP are no longer accurate. As noted earlier, the City's Water department is currently revising the 2011 Water Resource Plan. The Land and Water Use Report cites the old plan and uses figures that are no longer completely accurate. The City will provide ADEQ a copy of the new Water Resource Plan as soon as it is published
 - ADEQ Response: A reference to the updated Water Resource Plan has been added to the RI text in Section 7. However, the Land and Water Use Report was commissioned under a previous contract and is considered final.

Andrea Martinez, SRP

1. SRP has reviewed the RI and respectfully requests the Arizona Department of Environmental Quality (ADEQ) update the RI and subsequent Appendix H Land and Water Use Report dated February 2018, to reflect the most current foreseeable SRP water uses in proximity of the Site. As discussed in further detail below, the SRP groundwater production wells identified in SRP's 2017 Land and Water Use Study Questionnaire for Municipalities/Utilities within the East Central Phoenix (24th Street and Grand Canal) WQARF Registry Site (Questionnaire) dated September 19, 2017, will be located upstream of the City of Goodyear (Goodyear) water treatment plant (WTP) in the near future.
 - ADEQ Response: This information has been added to the RI text in Section 7. However, the Land and Water Use Report was commissioned under a previous contract and is considered final.
2. SRP has reviewed the RI and respectfully requests the Arizona Department of Environmental Quality (ADEQ) consider a remedial objective (RO) for SRP's current and reasonably foreseeable future surface water use in and near the Site as SRP groundwater wells near the Site discharge to the Grand Canal, a water of the state.
 - ADEQ Response: As stated in the final RO Report (Appendix I), an RO for surface water use is not necessary, as contamination from the site has no direct connection to surface water. The RO for groundwater use protects the use of groundwater wells to discharge to a canal used for drinking water.

3. SRP provides water to its customers in the Phoenix area through a series of canals and laterals. This water source typically is a combination of surface water from the Salt and Verde Reservoirs and groundwater pumped from more than 270 SRP production wells, many of which lie in close proximity to WQARF sites. Historically, groundwater wells in the vicinity of the Site were pumped as a source of irrigation water. However, in 2017, SRP entered into an Agreement with Goodyear to wheel Goodyear's surface water supplies, including its entitlement to Central Arizona Project water through the SRP water delivery system (i.e., Grand Canal and associated laterals) to the future Goodyear WTP. Although the water delivered to Goodyear will primarily be Goodyear's surface water supplies, from an operational perspective, some of that water may be physically comingled with groundwater from SRP production wells located near multiple WQARF sites.

Once Goodyear's WTP is completed, the designated use of groundwater wells in and around the Site, which includes but is not limited to SRP wells 16E-6.8N, and 17E-8N, will include irrigation and raw drinking water supply. As a practical matter, water from these wells may also be included in the raw drinking water supply for Goodyear. Thousands of water customers will be served once Goodyear starts treating its raw water delivered by SRP.

Previous correspondence regarding the Agreement between SRP and Goodyear, and SRP's foreseeable use of groundwater in the Central Phoenix and East Central Phoenix WQARF areas includes:

- Letter from SRP to ADEQ dated September 4, 2018, *RE: Salt River Project Comments Draft- Remedial Investigation Report, 56th Street and Earll Drive*;
- Letter from SRP to ADEQ dated September 14, 2018, *RE: Salt River Project Comments Draft- Remedial Objective Report, 7th Street and Missouri Avenue*;
- Letter from SRP to ADEQ dated November 2, 2018, *RE: Addendum to SRP's September 4, 2018 Comments on the Draft Remedial Investigation Report for the 56th Street and Earll Drive Water Quality Assurance Revolving Fund Site, Phoenix, AZ*;
and
- Letter from SRP to ADEQ dated November 21, 2018, *RE: Salt River Project Concerns Regarding Delisting of East Central Phoenix 38th Street and Indian School Road and East Central Phoenix 40th Street and Indian School Road WQARF Sites*.

SRP respectfully requests that ADEQ correct the RI report and the Land and Water Use Report to better reflect the foreseeable future use of groundwater wells in the vicinity of the Site as drinking water supply wells.

- ADEQ Response: No revision to the Land and Water Use Report is needed. A reference to the future use of groundwater wells and the canal to provide drinking water is included in sections 2.3 and 2.4 of the report. Similar references are included in both the main body of the Remedial Investigation Report (section 7.4.2) and in the RO report (Appendix I).
4. Geologic cross sections for visualization of the groundwater plume show gravel below a depth of about 350 to 450 feet. Drillers logs for SRP wells show decomposed granite at a depth of about 400 feet at 16E-6.8N and at a depth of about 215 feet at 17E-8N. Consideration should be given to include a discussion regarding depth to bedrock in the modeled area and perhaps conducting additional vertical characterization near the source areas.
- ADEQ Response: The geologic cross section in Figure 12 has been edited to include the observed lithologies from SRP wells. Delineation within the study area was not influenced by these edits and text edits are not warranted at this time.

5. The RI report states ‘there are no points of natural discharges of groundwater to surface water within 1-mile of the site’ and that ‘the nearest surface water conveyance is the SRP Arizona Canal’. This is incorrect. SRP wells 16E-6.8N and 17E-8N discharge to the Grand Canal either directly or via distribution laterals off the Arizona Canal.
 - ADEQ Response: The term “natural discharge” is used here to describe discharge that would occur without human influence. Groundwater wells are not considered natural discharge.
6. As stated in the previous correspondence, SRP maintains a policy that prohibits wells to discharge into canals if the water does not meet applicable standards for the receiving water body. Consistent with Arizona Pollutant Discharge Elimination System (AZPDES) permit #AZ0024341, wells discharging into canals that feed municipal drinking water systems must not exceed established drinking water standards (DWS) for volatile organic compounds (VOCs). As the RI indicates, groundwater COC impacts remain because tetrachloroethylene (PCE) and trichloroethylene (TCE) levels exceed their respective Aquifer Water Quality Standard (AWQS) of 5 µg/L. Although some data suggest that the COCs have been naturally attenuating over time, in certain areas levels of COCs remain substantially above the AWQS.

Consideration should be given to developing remedial strategies that address the hot spot areas of the groundwater plume. In the event that PCE or TCE drinking water standards are exceeded when the Goodyear WTP becomes operational, SRP expects that appropriate contingency measures, such as wellhead treatment, will be in place to allow continued operation of the SRP wells.

- ADEQ Response: Comment noted. Evaluation of remedial strategies will be included in the forthcoming feasibility study.
7. SRP supports ADEQ further investigating the presence of non-chlorinated hydrocarbons in the deep vadose zone, which are thought to be associated with releases from leaky underground storage tanks at former gasoline service stations in the proximate Site area. It is important that ADEQ identifies the source(s) of the contaminants, as they also could impact groundwater quality and impair SRP groundwater production wells.
 - ADEQ Response: Comment noted.
 8. Our concerns regarding water quality and availability in the Phoenix Metro area are heightened because of anticipated effects of climate change and the additional stress expected to be placed on already stressed surface water supplies. The importance of groundwater and the ability to utilize the aquifer in local and large scale water management scenarios is critical to the future growth and wellbeing of the entire metropolitan area. We cannot overstate the importance of effective cleanups of contaminants that potentially threaten drinking water in the Phoenix Metro area.
 - ADEQ Response: Comment noted.

Attachment A

COPIES OF WRITTEN COMMENTS RECEIVED



City of Phoenix
OFFICE OF ENVIRONMENTAL PROGRAMS

May 6, 2019

Arizona Department of Environmental Quality
Waste Programs Division
Mr. Matt Narter
400 West Congress, Suite 433
Tucson, Arizona 85701

Re: Comments regarding the March 2019 Draft Remedial Investigation Report (RI) for the East Central Phoenix 24th Street and Grand Canal Water Quality Assurance Revolving Fund (WQARF) prepared by Geosyntec Consultants for the Arizona Department of Environmental Quality (ADEQ).

Dear Mr. Narter,

The City of Phoenix (City) has reviewed the above referenced Draft RI for 24th Street and Grand Canal WQARF and has the following comments for ADEQ.

General comments:

In general, the City agrees with the remedial investigation completed to date at this site. ADEQ has completed an Early Response Action at the former Carnation and McKean's Facilities. These former dry cleaners appear to be the source of the tetrachloroethene (PCE) at this WQARF site.

Please note that the City Water department is currently revising the 2011 Water Resource Plan (WRP). The Land and Water Use Report uses the old City WRP from 2011 and figures that are no longer completely accurate. The City will provide ADEQ a copy of the new Water Resource Plan as soon as it is published.

Until the updated WRP is published please note, regional water supply conditions have changed since 2011, therefore we recommend that the 2017 Land and Water Use questionnaire for the City be used to assess future uses of groundwater in the site area. Currently, the City has a surface water resource portfolio that is adequate to meet current and projected demands under regular supply conditions. Since the City published its 2011 Water Resource Plan, serious water supply challenges have developed for Arizona water users of Colorado River Water. More than 40% of the City of Phoenix water supply comes from this source. The City currently uses around 2% of groundwater and reclaimed water. The Bureau of Reclamation (BOR) who manages the Lower Colorado River operations has indicated severe shortages are possible in the near future due to changing climate and over allocation of the resource. Preparations are being made by the City to ensure that additional supplies are available during both short and long-term shortage situations caused by climatic conditions, emergencies, institutional changes, or unforeseen events. Because of this possibility the City views every active and in-active municipal water well as a potential water supply source in the event that Colorado River allocations are curtailed during a drought declaration. This may be needed even though water demands should remain relatively constant.

May 6 2019

It is critical that the groundwater be remediated in such a way that existing and future City wells near the 24th Street and Grand Canal WQARF area be able to operate without restrictions imposed by the presence of contaminants. The City requests that ADEQ adopt a groundwater remedial objective (RO) that would be similar to the one stated below:

To restore, replace or otherwise provide for water for the designated use, lost or impaired by contamination associated with the 24th Street and Grand Canal WQARF site. This action will be needed for as long as the need for the water exists, the resource remains available and the contamination associated with the 24th Street and Grand Canal WQARF site prohibits or limits the irrigation or municipal uses of groundwater.

Specific comments:

1. **Executive summary and page 25, 47;** The City agrees with Geosyntec that the petroleum hydrocarbon impacts identified at the site appear to be coming from a closed LUST site, and should be further investigated by the ADEQ UST program.
2. **Page 14, Regional Groundwater Conditions;** The City proposes the following changes to the language:

The AMA was established "*due to concerns of over-draft conditions resulting in the passage*" of the 1980 Groundwater Management Act.

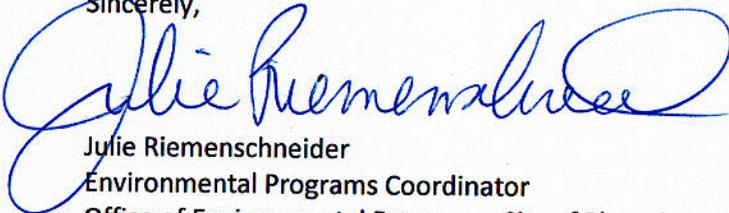
Agricultural irrigation water and effluent discharged from the City of Phoenix 23rd and 91st Avenue wastewater treatment plants "*also contributes to recharging the aquifer.*"

3. **Page 23, Groundwater Investigation;** The groundwater quality tables do not contain the information from the grab samples collected in February 2018. The City notes that sampling in 2016 was completed with PDBs and the sampling in August 2018 was with HydraSleeve™. The February 2018 data should be in the tables and also a definition of "grab" samples should be provided.
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7. **Page 40, City of Phoenix;** The report states "no active groundwater pumping by the COP occurs in or near the site." Although the City is not currently pumping our well located at Coronado Park, the City maintains this well and it is possible this well could be re-activated in the near future for municipal drinking water should severe drought conditions persist creating shortages of the City surface water supplies.
8. **Page 41, City of Phoenix, Appendix H;** The recharge and recovery locations in the 2011 WRP are no longer accurate. As noted earlier, the City's Water department is currently revising the 2011 Water Resource Plan. The Land and Water Use Report cites the old plan and uses figures that are no longer completely accurate. The City will provide ADEQ a copy of the new Water Resource Plan as soon as it is published

We appreciate the effort of ADEQ in this remedial investigation and Early Response Action (ERA) clean up report. The City looks forward to working with ADEQ on the RO's, FS and development of the final remedy for this site. If ADEQ would like to meet and discuss any of these comments, please contact me at 602-256-5681.

Sincerely,



Julie Riemenschneider
Environmental Programs Coordinator
Office of Environmental Programs, City of Phoenix

- C: Tina LePage, ADEQ (electronic copy)
Scott Greene, ADEQ (electronic copy)
Nancy Allen, OEP (electronic copy)
Cynthia Campbell WSD (electronic copy)
Alexander Richards, WSD (electronic copy)
Elizabeth Zima, OEP (electronic copy)



Andrea Martinez, Water Quality &
Waste Management Services, Manager
PAB 359 | P.O. Box 52025
Phoenix, AZ 85072-2025
P: (602) 236-2618 | srpnet.com
Andrea.martinez@srpnet.com

May 6, 2019

Via Electronic Mail

To: Matt Narter
Project Manager
Waste Programs Division
Arizona Department of Environmental Quality
400 W. Congress St. Suite 433
Tucson, AZ 85701
Email: narter.matthew@azdeq.gov

Reference: Draft Remedial Investigation Report, 24th Street and Grand Canal Water Quality Assurance Revolving Fund Site; Phoenix, AZ

RE: Salt River Project Comments – Draft Remedial Investigation Report for 24th Street and Grand Canal WQARF Site

Salt River Project Agricultural Improvement and Power District (SRP) appreciates the opportunity to provide comments on the Draft Remedial Investigation Report (RI) published in March 2019 for the 24th Street and Grand Canal Water Quality Assurance Revolving Fund (WQARF) site in Phoenix (Site). SRP has reviewed the RI and respectfully requests that the Arizona Department of Environmental Quality (ADEQ):

- 1) Update the RI and subsequent Appendix H *Land and Water Use Report* dated February 2018, to reflect the most current foreseeable SRP water uses in proximity of the Site. As discussed in further detail below, the SRP groundwater production wells identified in SRP's 2017 *Land and Water Use Study Questionnaire for Municipalities/Utilities within the East Central Phoenix (24th Street and Grand Canal) WQARF Registry Site* (Questionnaire) dated September 19, 2017, will be located upstream of the City of Goodyear (Goodyear) water treatment plant (WTP) in the near future.
- 2) Consider a remedial objective (RO) for SRP's current and reasonably foreseeable future surface water use in and near the Site as SRP groundwater wells near the Site discharge to the Grand Canal, a water of the state.

Recent Changes to SRP's Foreseeable Water Uses

SRP provides water to its customers in the Phoenix area through a series of canals and laterals. This water source typically is a combination of surface water from the Salt and Verde Reservoirs and groundwater pumped from more than 270 SRP production wells, many of which lie in close proximity to WQARF sites. Historically, groundwater wells in the vicinity of the Site were pumped as a source of irrigation water.¹ However, in 2017, SRP entered into an Agreement with Goodyear to wheel Goodyear's surface water supplies, including its entitlement to Central Arizona Project water through the SRP water delivery system (i.e., Grand Canal and associated laterals) to the future Goodyear WTP.² Although the water delivered to Goodyear will primarily be Goodyear's surface water supplies, from an operational perspective, some of that water may be physically comingled with groundwater from SRP production wells located near multiple WQARF sites.

Once Goodyear's WTP is completed, the designated use of groundwater wells in and around the Site, which includes but is not limited to SRP wells 16E-6.8N and 17E-8N, will include irrigation and raw drinking water supply. As a practical matter, the pumped groundwater may also be included in the raw drinking water supply for Goodyear. Thousands of water customers will be served once Goodyear starts treating its raw water delivered by SRP.

Previous correspondence regarding the Agreement between SRP and Goodyear, and SRP's foreseeable use of groundwater in the Central Phoenix and East Central Phoenix WQARF areas includes:

- Letter from SRP to ADEQ dated September 4, 2018, *RE: Salt River Project Comments Draft- Remedial Investigation Report, 56th Street and Earll Drive*;
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- Letter from SRP to ADEQ dated November 21, 2018, *RE: Salt River Project Concerns Regarding Delisting of East Central Phoenix 38th Street and Indian School Road and East Central Phoenix 40th Street and Indian School Road WQARF Sites*.

SRP respectfully requests that ADEQ correct the RI report and the *Land and Water Use Report* to better reflect the foreseeable future use of groundwater wells in the vicinity of the Site as drinking water supply wells.

¹ Although SRP groundwater production wells are located in or adjacent to various WQARF sites, SRP reserves the right to pump the wells for irrigation purposes where (i) the well's discharge may be isolated to laterals and canals without prospective drinking water uses, (ii) the concentrations of contaminants do not exceed the applicable standards for the receiving water body, and (iii) there is no risk to public health.

² The Agreement was finalized shortly after SRP submitted to ADEQ the 2017 Questionnaire, and therefore was not referenced in the Questionnaire.

Conceptual Site Model

Geologic cross sections for visualization of the groundwater plume show gravel below a depth of about 350 to 450 feet. Drillers logs for SRP wells show decomposed granite at a depth of about 400 feet at 16E-6.8N and at a depth of about 215 feet at 17E-8N. Consideration should be given to include a discussion regarding depth to bedrock in the modeled area and perhaps conducting additional vertical characterization near the source areas.

Surface Water Pathway

The RI report states 'there are no points of natural discharges of groundwater to surface water within 1-mile of the site' and that 'the nearest surface water conveyance is the SRP Arizona Canal'. This is incorrect. SRP wells 16E-6.8N and 17E-8N discharge to the Grand Canal either directly or via distribution laterals off the Arizona Canal.

SRP Discharge Policy and Site Expectations

As stated in the previous correspondence, SRP maintains a policy that prohibits wells to discharge into canals if the water does not meet applicable standards for the receiving water body. Consistent with Arizona Pollutant Discharge Elimination System (AZPDES) permit #AZ0024341, wells discharging into canals that feed municipal drinking water systems must not exceed established drinking water standards (DWS) for volatile organic compounds (VOCs). As the RI indicates, groundwater COC impacts remain because tetrachloroethylene (PCE) and trichloroethylene (TCE) levels exceed their respective Aquifer Water Quality Standard (AWQS) of 5 µg/L. Although some data suggest that the COCs have been naturally attenuating over time, in certain areas levels of COCs remain substantially above the AWQS.

Consideration should be given to developing remedial strategies that address the hot spot areas of the groundwater plume. In the event that PCE or TCE drinking water standards are exceeded when the Goodyear WTP becomes operational, SRP expects that appropriate contingency measures, such as wellhead treatment, will be in place to allow continued operation of the SRP wells.

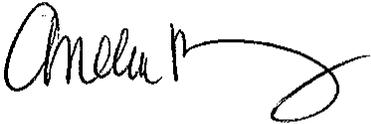
In addition, SRP supports ADEQ further investigating the presence of non-chlorinated hydrocarbons in the deep vadose zone, which are thought to be associated with releases from leaky underground storage tanks at former gasoline service stations in the proximate Site area. It is important that ADEQ identifies the source(s) of the contaminants, as they also could impact groundwater quality and impair SRP groundwater production wells.

Our concerns regarding water quality and availability in the Phoenix Metro area are heightened because of anticipated effects of climate change and the additional stress expected to be placed on already stressed surface water supplies. The importance of groundwater and the ability to utilize the aquifer in local and large scale water management scenarios is critical to the future growth and wellbeing of the entire metropolitan area. We cannot overstate the importance of effective cleanups of contaminants that potentially threaten drinking water in the Phoenix Metro area.

SRP appreciates the opportunity to provide the foregoing comments to ADEQ. SRP reserves its right to provide additional comments once these concerns are addressed.

If you have any questions, please call me at 602-236-2618.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrea Martinez", with a stylized flourish at the end.

Andrea Martinez

Water Quality & Waste Management Services Manager

cc: Bob Pane, SRP