

APPENDIX L
RESPONSIVENESS SUMMARIES



CITY OF
TUCSON

ENVIRONMENTAL
SERVICES

June 17, 2013

VIA HAND DELIVERY

Ms. Gretchen Wagenseller, Project Manager
Superfund Program Unit – Southern Regional Office, ADEQ
400 W. Congress Street, Suite 433
Tucson, AZ 85701

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Re: City of Tucson Comments - Draft Remedial Investigation Report, 7th Street and Arizona Avenue WQARF Site Tucson, Arizona, May 16, 2013

Dear Ms. Wagenseller:

Attached, please find detailed comments from Tucson Water, City of Tucson, Real Estate, and City of Tucson, Environmental Services (COT-ES) on the above referenced report. These comments are being submitted during the public comment period which ends June 17, 2013. Below is a summary of the most pertinent comments.

- The City of Tucson agrees with the remedial objective to prevent human exposure to soil vapor contaminant levels which may pose a health risk. Therefore, we agree that the subject property should have Declaration of Environmental Use Restriction (DEUR) placed on it to prevent future residential development. However, based on the reported concentrations in soil vapor beneath the asphalt at the site, the City of Tucson believes that any commercial development should also have mandated engineering controls to prevent migration of contaminated vapor into the building, and that any commercial building development at the site be restricted to at-grade structures.
- The City of Tucson agrees with the conclusion that soil vapor beneath the site should be remediated to prevent exposure to persons working at the site. The report indicates that the source is residual dense non aqueous phase liquid, which is still present beneath the site. The proposed soil vapor remediation system should address the source as well. If the source is remediated, then engineering controls for commercial development may be unnecessary.
- The City of Tucson agrees that two additional perched wells be installed to further delineate the perched groundwater plume downgradient of the site. Should the wells be scheduled for placement in public right-of-way or other City-owned property, please coordinate the locations with the City of Tucson, Real Estate.
- The City of Tucson requests that ADEQ develop a monitoring plan to determine the fate and transport of soil vapor and groundwater contaminants in both the perched and regional aquifer. The City is actively working to develop this area and migration of this plume may affect these efforts. Therefore, it's critical that the City be appraised of environmental conditions related to soil vapor and groundwater contaminant movement over time.



Ms. Gretchen Wagenseller

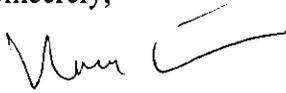
June 17, 2013

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- The City of Tucson disagrees that the regional aquifer well network is sufficient to monitor impacts from the perched plume. The regional aquifer well situated furthest downgradient of the site is within the perched plume (7AZR-3). However, the perched aquifer appears to “pinch out” south of well 7AZP-12. Such a condition may also result from thinning or breaks in the clay aquitard beneath the perched groundwater and may allow contaminated water to migrate into the regional aquifer. Therefore, we recommend placement and monitoring of a regional aquifer well downgradient of the perched aquifer plume.

We appreciate the opportunity to provide comments on the draft Remedial Investigation report. If you have any questions, please don't hesitate to contact Molly Collins at (520) 837-3703.

Sincerely,



Nancy Petersen
Deputy Director

NP/MC/nr

cc: Jim Rossi, City of Tucson Real Estate (email link)
Wally Wilson, Tucson Water (email link)
Lynne Birkinbine, City of Tucson Environmental Services (email link)
Richard Byrd, City of Tucson Environmental Services (email link)

**RESPONSIVENESS SUMMARY FOR JUNE 17, 2013, CITY OF TUCSON COMMENTS ON DRAFT
REMEDIAL INVESTIGATION REPORT, 7TH STREET AND ARIZONA AVENUE WQARF SITE,
TUCSON, ARIZONA**

AUGUST 6, 2013

The following is in response to comments, submitted to ADEQ during the 30-day public comment period, from Tucson Water, City of Tucson (COT) Real Estate and COT Environmental Services on the *Draft Remedial Investigation Report* for the 7th Street and Arizona Avenue WQARF Site. This responsiveness summary is included in an appendix to the *Final Remedial Investigation Report* for the Site, pursuant to Arizona Administrative Code (AAC) § R18-16-406(J).

COT comments and ADEQ responses are listed below:

- The City of Tucson agrees with the remedial objective to prevent human exposure to soil vapor contaminant levels which may pose a health risk. Therefore, we agree that the subject property should have Declaration of Environmental Use Restriction (DEUR) placed on it to prevent future residential development. However, based on the reported concentrations in soil vapor beneath the asphalt at the site, the City of Tucson believes that any commercial development should also have mandated engineering controls to prevent migration of contaminated vapor into the building, and that any commercial building development at the site be restricted to at-grade structures.

A Declaration of Environmental Use Restriction (DEUR) will be proposed for the source property to prevent residential development and will be included in the *Proposed Remedial Action Plan* (PRAP). As contamination at the source property is being addressed through the selected remedy (SVE and air sparging) to prevent vapor intrusion, ADEQ does not believe that COT's recommendation is necessary at this time.

- The City of Tucson agrees with the conclusion that soil vapor beneath the site should be remediated to prevent exposure to persons working at the site. The report indicates that the source is residual dense non aqueous phase liquid, which is still present beneath the site. The proposed soil vapor remediation system should address the source as well. If the source is remediated, then engineering controls for commercial development may be unnecessary.

The remedy selected for the source property (SVE and air sparging), to be proposed in the PRAP, is anticipated to address both the soil vapor contamination and any dense non-aqueous phase liquid (DNAPL) which may still be present at the source property.

- The City of Tucson agrees that two additional perched wells be installed to further delineate the perched groundwater plume downgradient of the site. Should the wells be scheduled for placement in public right-of-way or other City-owned property, please coordinate the locations with the City of Tucson, Real Estate.

Three perched wells will be installed by COT, as replacements to wells that were abandoned during Arroyo Chico drainage and light-rail construction. These wells are anticipated for installation: 1) at the far downgradient edge of the plume, between wells 7AZP-9 and 7AZP-12; 2) at the downgradient western edge of the plume south of 7AZP-11; and 3) approximately between 7AZP-5 and 7AZP-9. These perched wells are expected to further delineate the PCE plume.

- The City of Tucson requests that ADEQ develop a monitoring plan to determine the fate and transport of soil vapor and groundwater contaminants in both the perched and regional aquifer. The City is actively working to develop this area and migration of this plume may affect these efforts. Therefore, it's critical that the City be appraised of environmental conditions related to soil vapor and groundwater contaminant movement over time.

A monitoring plan to evaluate fate and transport of soil vapor and groundwater contaminants in the perched groundwater and regional aquifer will be included as part of remedial design. Once monitoring commences at the Site, periodic monitoring reports will be available for public review that will include environmental conditions related to soil vapor and groundwater contaminant movement over time.

- The City of Tucson disagrees that the regional aquifer well network is sufficient to monitor impacts from the perched plume. The regional aquifer well situated furthest downgradient of the site is within the perched plume (7AZR-3). However, the perched aquifer appears to “pinch out” south of well 7AZP-12. Such a condition may also result from thinning or breaks in the clay aquitard beneath the perched groundwater and may allow contaminated water to migrate into the regional aquifer. Therefore, we recommend placement and monitoring of a regional aquifer well downgradient of the perched aquifer plume.

ADEQ does not agree that an additional regional aquifer well downgradient of the perched groundwater PCE plume is necessary at this time. Installation of replacement monitoring wells by COT (see bullet #3) will allow for further characterization of the lithology in this area including the perching clay layer. The perched groundwater well installed between well 7AZP-9 and 7AZP-12 is anticipated to delineate the downgradient edge of the perched groundwater plume. An additional regional aquifer well will be installed at approximately 5th Avenue and 5th Street and will allow for better evaluation of groundwater flow direction and gradient within the regional aquifer.



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ADEQ - SRO
Received
FEB 27 2014

February 25, 2014

Bob Wallin
Arizona Department of Environmental Quality
400 West Congress, Suite 433
Tucson, AZ 85701

Subject: Draft Remedial Objectives Report for the 7th Street and Arizona Avenue Site

Dear Mr. Wallin:

CH2M HILL has reviewed the draft Remedial Objectives Report for the 7th Street and Arizona Avenue Site (the Site) on behalf of Union Pacific Railroad Company and has one comment:

The last sentence of the first paragraph of Section 3.0 states that "[The chlorinated solvent] plume begins near the northeastern fringe of an extensive body of diesel fuel thought to be associated with the UPRR passenger depot which is located approximately 1,000 feet to the south." This sentence may be interpreted as meaning that the plume of volatile organic compounds at the Site was caused by the diesel fuel and not by historical activities at the Site. The diesel fuel is not related to the chlorinated solvent plume and does not affect the remedial objectives for the Site. Therefore this text should be removed from the report.

Thank you for providing the opportunity to comment on this report.

Sincerely,

CH2M HILL

A handwritten signature in black ink, appearing to read "Rick Edwards".

Rick Edwards
Project Manager

Comment on 7th&AZ RO Report.docx

c: Gary Honeyman, Union Pacific Railroad Company

**RESPONSIVENESS SUMMARY FOR FEBRUARY 25, 2014, CH2MHILL COMMENT ON DRAFT
REMEDIAL OBJECTIVES REPORT, 7TH STREET AND ARIZONA AVENUE WQARF SITE, TUCSON,
ARIZONA**

MARCH 21, 2014

The following is in response to a comment, submitted to ADEQ during the 30-day public comment period, from CH2MHill on behalf of UPRR on the *Draft Remedial Objectives Report* for the 7th Street and Arizona Avenue WQARF Site. This responsiveness summary is included in an appendix to the *Final Remedial Investigation Report* for the Site, pursuant to Arizona Administrative Code (AAC) § R18-16-406(J).

CH2MHill Comment:

The last sentence of the first paragraph of Section 3.0 states that “[The chlorinated solvent] plume begins near the northeastern fringe of an extensive body of diesel fuel thought to be associated with the UPRR passenger depot which is located approximately 1,000 feet to the south.” This sentence may be interpreted as meaning that the plume of volatile organic compounds at the Site was caused by the diesel fuel and not by historical activities at the Site. The diesel fuel is not related to the chlorinated solvent plume and does not affect the remedial objectives for the Site. Therefore this text should be removed from the report.

ADEQ Response:

This sentence has been clarified by including an additional sentence following the text in question, as follows: “Chlorinated solvents from the Oliver’s Cleaners property historically moved downward through the vadose zone and mixed with diesel fuel extending beneath the Site.”

**RESPONSIVENESS SUMMARY FOR COT COMMENT ON DRAFT REMEDIAL OBJECTIVES, 7TH
STREET AND ARIZONA AVENUE WQARF SITE, TUCSON, ARIZONA AT THE FEBRUARY 18,
2014, CAB MEETING**

MARCH 21, 2014

The following is in response to a comment, submitted to ADEQ at the CAB meeting during the RO solicitation process, from the City of Tucson. This responsiveness summary is included in an appendix to the *Final Remedial Investigation Report* for the Site, pursuant to Arizona Administrative Code (AAC) § R18-16-406(J).

City of Tucson's Comment:

COT's Richard Byrd suggested that an RO to protect groundwater be included.

ADEQ's Response:

ADEQ added the following RO based on the lack of use of the perched groundwater:

The remedial objective for regional groundwater at the site is to protect for the use of the groundwater supply by the City of Tucson from contamination at the Site. This action is needed for the present time and for as long as the level of contamination in the soil threatens the use of the regional groundwater for municipal uses.