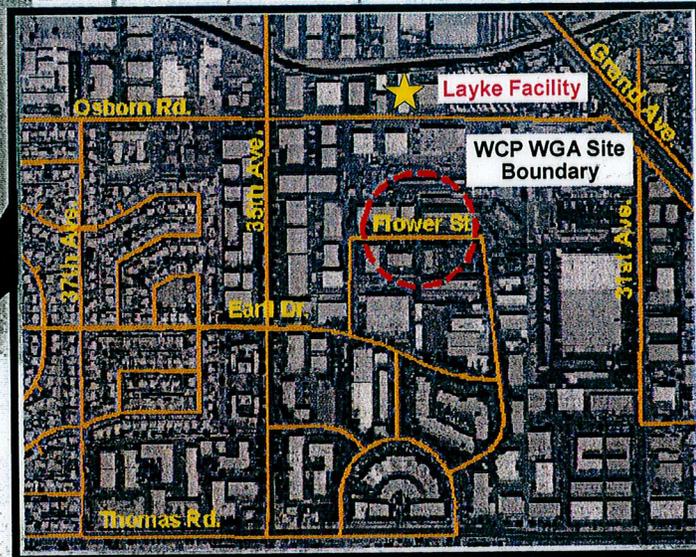


Proposed Remedial Objectives Report

West Central Phoenix West Grand Avenue Site Phoenix, Arizona



May 2005

Prepared by
Arizona Department of Environmental Quality
1110 W. Washington Street
Phoenix, Arizona 85007

(602) 771-2300 • <http://azdeq.gov>



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ACRONYMS

A A.C.	Arizona Administrative Code
A.R.S.	Arizona Revised Statutes
ADEQ	Arizona Department of Environmental Quality
CAP	Central Arizona Project
COP	City of Phoenix
FS	feasibility study
GPL	groundwater protection level
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
NFA	no further action
RI	remedial investigation
RO	remedial objective
SRL	soil remediation level
SRP	Salt River Project
SVE	soil vapor extraction
TCE	trichloroethylene, trichloroethene
WCP	West Central Phoenix
WGA	West Grand Avenue
WQARF	Water Quality Assurance Revolving Fund

1.0 INTRODUCTION

The Arizona Department of Environmental Quality (ADEQ) has prepared this Proposed Remedial Objectives report for the West Central Phoenix (WCP) West Grand Avenue (WGA) Water Quality Assurance Revolving Fund (WQARF) Registry site to meet the requirements established under Arizona Administrative Code (A.A.C.) R18-16-406. This report relies upon the Land and Water Use Report (Use Report) prepared by ADEQ for the site dated January 2004.

Remedial Objectives (ROs) are established for the current and reasonably foreseeable uses of land and waters of the state that have been or are threatened to be affected by a release of a hazardous substance. The rule specifies that the reasonably foreseeable uses of land are those likely to occur at the site, and the reasonably foreseeable uses of water are those likely to occur within one hundred years unless site-specific information suggests a longer time period is more appropriate [R18-16-406(D)]. Reasonably foreseeable uses are those likely to occur, based on information provided by water providers, well owners, land owners, government agencies, and others. Not every use identified in the Use Report will have a corresponding RO. Uses identified in the Use Report may or may not be addressed based on information gathered during the public involvement process, limitations of WQARF, and whether the use is reasonably foreseeable.

The ROs chosen for the site will be evaluated in the feasibility study (FS). The FS will evaluate specific remedial measures and strategies required to meet the ROs and propose a reference remedy and at least two alternative remedies, all capable of meeting the ROs. The proposed remedies will also be generally compatible with the future land use specified by the land owner. Because the future land and water uses at the site are generally not specific, the mechanism to achieve the ROs may be an insurance policy or environmental protection fund that could be drawn on in the future. Possible mechanisms to achieve the ROs will be evaluated in the FS and presented in the FS report.

Definitions

Remedial Strategy: One or a combination of the six general strategies identified in Paragraph B.4 of A.R.S. §49-282.06 and further defined in rules promulgated in accordance with this statute. In general, these strategies are as follows: *plume remediation, physical containment, controlled migration, source control, monitoring, and no action.*

Remedial Measure: A specific action taken in conjunction with remedial strategies as part of the remedy to achieve one or more of the remedial objectives. For example, remedial measures may include well replacement, well modification, water treatment, provision of replacement water supplies, and engineering controls.

Reference Remedy: A combination of remedial strategies and remedial measures which, as a whole, is capable of achieving remedial objectives. The reference remedy is compared with the alternative remedies for purposes of selecting a proposed remedy at the conclusion of the feasibility study.

Alternative Remedy: A combination of remedial strategies and remedial measures different from the reference remedy that is capable of achieving remedial objectives. The alternative remedies are compared with the reference remedy for purposes of selecting a proposed remedy at the conclusion of the feasibility study.

This proposed report has been prepared with stakeholder input gathered during the May 10, 2004 WCP community advisory board meeting and public meeting. Written comments on this proposed report will be accepted for a period of 30 days following its release. If significant public interest exists or if significant issues or information have been brought to the attention of ADEQ, an additional public meeting may be held and the comment period may be extended. The final RO Report will be prepared by ADEQ following the comment period and the additional meeting, if held. The final report will include a responsiveness summary to written comments received from the public during the comment period. Upon completion of the final RO Report, the final remedial investigation (RI) report will be available to the public.

The ROs must be stated in the following terms: 1) protecting against the loss or impairment of each use; 2) restoring, replacing, or otherwise providing for each use; 3) when action is needed to protect against or provide for the use; and 4) how long action is needed to protect or provide for the use.

2.0 REMEDIAL OBJECTIVES FOR LAND USE

The zoning pattern in the area has been long established and there are no foreseeable changes for the future. Land uses for the Layke facility property and within the WCP WGA site area are expected to remain predominantly industrial (A-2) or light industrial (A-1).

Soil remediation conducted at the Layke facility through the use of a soil vapor extraction (SVE) system meets soil remediation standards established in Arizona Revised Statutes (A.R.S.) §49-152 and A.A.C. R18-7-2. The analytical results obtained from soil samples collected on-site between December 26, 2001 and January 14, 2002 indicated no detections of trichloroethylene (TCE). The residential soil remediation level (SRL) of TCE is 27 milligrams per kilogram (mg/kg). The minimum groundwater protection level (GPL) of TCE is 0.61 mg/kg. Based on this information, ADEQ granted a No Further Action (NFA) request on December 19, 2002, pursuant to A.R.S. §49-287.01.

Based on the above information, no remedial objectives are proposed for this use.

3.0 REMEDIAL OBJECTIVES FOR GROUNDWATER USE

Four current and/or potential groundwater uses were identified within the WCP WGA site: 1) the possible future use of groundwater in the WCP WGA site for drinking water purposes by the City of Phoenix (COP); 2) the future use of SRP irrigation wells; 3) the future use of the Michigan Trailer Park drinking water well; and 4) the future use of the Danone drinking water well.

City of Phoenix Municipal Use

The COP is not currently operating any wells within a one-mile radius of the WCP WGA site boundary. [Two municipal wells (COP wells 70 and 71), located 1.5 miles west of the WCP WGA site were removed from service in 1982 due to TCE groundwater contamination at the WCP West Osborn Complex site.]

COP's continued interest in future well development in the Central Phoenix wellfields led COP to the development of computerized tools that would assist the City in evaluating the suitability of groundwater resources in the Central Phoenix area. The primary goal of the project was to aid the City in evaluating the general location and timing of future groundwater resources development for the COP public water supply. As part of the project, in June 2002, COP evaluated the entire water service area for future well development and assigned numerical scores, based on established criteria. Based strictly on the statistical evaluation of the scores, COP indicates that areas with scores in at least the 75th percentile (scores ≥ 81) may warrant consideration for future well development. The area where the WCP WGA site is located at scored 74, therefore, according to the June 2002 report, COP would not consider the area for future well development. However, in a letter received from COP dated May 12, 2005, COP indicates that site-specific considerations and operational/service needs may require the location of wells in lower scoring areas. COP's current analysis is that scores in the 78-80 range, or perhaps lower in certain circumstances, may indicate generally favorable well development conditions.

The proposed RO for the COP is:

To restore or provide for the use of the COP groundwater supply if it becomes impacted by the TCE groundwater contamination emanating from the WCP WGA site. This action would be needed for as long as the level of contamination in the identified groundwater resource threatens or prohibits its use.

SRP Municipal and Irrigation Use

SRP owns several irrigation wells in the area and will continue to need operational wells to supplement surface water supplies. However, no SRP wells are affected by the contamination at the WCP WGA site because wells 9.5E-7.7N and 10.5E-7.5N are located crossgradient and upgradient, respectively, from the contamination in the WCP WGA site. These wells are currently not being pumped in accordance with an agreement between ADEQ and SRP. The agreement may remain in place until a remedy selection has been made.

A water treatment plant may be built on the Grand Canal sometime in the future, which would change the use of the groundwater from irrigation to drinking water.

The proposed RO for the SRP wells is:

To protect for the use of the SRP groundwater supply threatened by the TCE contamination emanating from WCP WGA site should the wells be lost due to changes in groundwater flow direction that would affect the concentration of TCE at the wells. This action would be needed for as long as the level of contamination in the identified groundwater resource threatens or prohibits its use.

Michigan Trailer Park Well

The Michigan Trailer Park operates a 400-foot well as the sole water supply source for the Park's residents. The park is expected to continue to use their well to provide drinking water to park residents. However, the Michigan Trailer Park well is located crossgradient from the WCP WGA site.

The proposed RO for the Michigan Trailer Park Well is:

To protect for the use of the Michigan Trailer Park groundwater supply threatened by the TCE contamination emanating from WCP WGA site should the well be lost due to changes in groundwater flow direction that would affect the concentration of TCE at the well. This action would be needed immediately.

Danone Water Well

Danone Waters extracts water from their 952-foot well for their processing and bottling operation. Danone is expected to continue to use the well located on their property in their bottling operations. Even though the Danone well is located downgradient from the WCP WGA site, water withdrawn from the well is obtained from a deeper, non-contaminated aquifer.

The proposed RO for the Danone well is:

To protect for the use of the Danone groundwater supply threatened by the TCE contamination emanating from WCP WGA site should the well be lost due to changes in groundwater flow direction that would affect the concentration of TCE at the well. This action would be needed immediately.