



Motorola 52nd St. Superfund Site

Phoenix, Arizona

Community Involvement Plan



May 2014

Introduction



Executive Summary

This Community Involvement Plan organizes EPA's and ADEQ's (the Agencies) effort to help the community become involved in the cleanup decision-making process at the Motorola 52nd Street Superfund site. Community interviews with residents, activists, community organizations and political representatives were conducted to understand the community's site concerns and understand the most effective ways to involve them.

The main concerns can be grouped into environmental concerns, Superfund cleanup activity concerns, health concerns, cleanup costs and financial impacts, community education, and level of confidence with agency personnel. A discussion of how each of these concerns has been or will be addressed follows each concern, and refers to activities that are outlined in the Action Plan.

The Action Plan takes into account the voiced concerns and outlines a range of community involvement activities. The main tools for community involvement include the Community Informational Group, targeted neighborhood meetings, fact sheets, outreach to community organizations, and online access to site information.

Introduction

The U.S. Environmental Protection Agency (EPA) recognizes that Americans have the right to be involved in the government decisions that affect their lives. EPA's experience has been that when the public is involved in EPA's work, the cleanup process results in a better outcome and a more robust remedy.

At the Motorola 52nd St. Superfund site (Site), EPA's Community Involvement Program helps community members participate throughout the cleanup process, including investigation and remedy selection. EPA works closely with the Arizona Department of Environmental Quality (ADEQ). ADEQ is the lead agency for technical management of Operable Units (OUs) 1 and 2, and EPA is the lead for technical management of OU3 and community involvement. EPA is the lead for the Vapor Intrusion investigation, mitigation, and remediation in OU1 and OU2. ADEQ provides Community Involvement personnel in support of EPA throughout the Superfund process.

This Community Involvement Plan (CIP) organizes EPA's and ADEQ's (the Agencies) public participation efforts to actively involve the public in the cleanup decision-making process for the entire Superfund site. It is based on a series of community interviews conducted with the residents of Phoenix, elected officials and other stakeholders, combined with EPA's and Arizona's cleanup guidance.

The goals of EPA's Community Involvement Program are to:

- Provide opportunities for the public to become actively involved
- Meet the community's information needs
- Incorporate issues and concerns into cleanup decisions
- Give feedback to the public on how their issues and concerns were considered in the cleanup work

The Agencies will achieve these goals through various means, including published documents, public meetings, and community interviews. Community involvement activities will be based on the community's needs, as expressed by local groups and individuals.

CIP Organization

The purpose of the CIP is not to provide technical answers to the community's questions, but to show how, when and where the Agencies will provide information that the public needs to understand site work, and to show how the stakeholders can be actively involved in the cleanup decision-making process.

Chapter One of the CIP begins by identifying the issues and concerns expressed during the community interviews, completed in 2011. A discussion of how each issue has been addressed and/or will continue to be addressed immediately follows, and often includes a brief note in parentheses (Item Number, Page) regarding specific involvement and education activities that might be appropriate for that issue. The parenthetical notations direct the reader to a definition of the item in Chapter Two's Action Plan.

Chapter Two describes the Community Action Plan that was developed based on community feedback and recommendations, as well as the resources available. The plan relies both on tools and techniques that the Agencies has developed over the years, as well as specific tools developed for this site based on the community's feedback. EPA's official guidance for Community Involvement is available on the Internet at: http://www.epa.gov/superfund/community/cag/pdfs/ci_handbook.pdf.

Chapter Three charts the Agencies preliminary schedules for the investigation and cleanup activities. Where appropriate, it lists requirements for the regulatory agencies to solicit public comment and opportunities for community involvement activities.

The CIP concludes with a series of appendices that provide additional information, such as a site history, a community profile, an overview of the federal Superfund cleanup program, information on contamination and prior cleanup activities, a list of earlier community involvement activities, a list of acronyms, information on site reuse/redevelopment, a glossary, prior Agencies fact sheets, and key contacts.

The CIP is a "living document," meaning that it will be modified as new information and issues develop over the course of the investigation and cleanup of the Site. This CIP is an update of the last comprehensive CIP published in January 2009.

 		Sitio Superfund Motorola 52nd St. Superfund Site	
U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • March / marzo 2014			
Community Informational Group (CIG) Meeting Thursday, April 3rd, 2014 • 5:45-8:45 p.m.		Reunión del Grupo Informativo Comunitario Jueves, 3 de abril del 2014 • 5:45-8:45 p.m.	
Agenda		Orden del Día	
5:45	Sign in, Poster Sessions	5:45	Registro, Sesiones de Panel
6:00	Introductions	6:00	Introducciones
6:05	Review agenda, approve minutes, previous action items	6:05	Repaso del orden del día, aprobación de notas, artículos de acción anteriores
6:15	Motorola 52 nd St. Superfund Site overview – EPA	6:15	Revisión del Sitio Superfondo de Motorola Calle 52 – EPA
6:30	ADHS Update on Health Consultation	6:30	Actualización de la Consulta de Salud del ADHS
6:40	Introduction to the AZ Cancer Registry (ACR)	6:40	Introducción del Registro de Cáncer en Arizona (ACR)
7:10	Vapor Intrusion & February TAGA Sampling Updates – EPA	7:10	Intrusión de Vapores y Revisión del Muestreo de TAGA en Febrero – EPA
7:50	Overview of CIG retreat – CIG member 5 min/ Agencies 5 min	7:50	Resumen del Retiro CIG – Miembro CIG 5 min/ Agencias 5 min
8:00	Calls to the public and the agencies	8:00	Llamadas al público y a las Agencias
8:15	CIG Business	8:15	Campaña de la afiliación del CIG
8:45	Meeting Adjourn	8:45	Se levanta la sesión

*The ADHS Health Consultation and the Cancer Incidence Report are in process and findings will not be discussed at this meeting. After each report completes a quality review process, the findings will be presented to the CIG.

*La consulta de salud del ADHS y el reporte de incidencia de cáncer están en proceso y los hallazgos no se discutirán en este session. Cuando cada reporte completa un revisión de calidad, los hallazgos serán presentados al CIG.

What is the Motorola 52nd St. Superfund Site?

A large area of contaminated groundwater extending from the former Motorola facility and other sources at the intersection of McDowell Ave. and 52nd St. Contamination has spread west 7 miles to 7th Ave. and is bounded to the north and south by I-10 and the Sky Harbor International Airport. The responsible parties have operated various soil gas and interim groundwater treatment systems since the early 90's that have reduced contamination. However, EPA and ADEQ will

¿Qué es el Sitio Superfund Motorola 52nd St.?

Un área grande de contaminación del agua subterránea extendiéndose desde la antigua fábrica Motorola y otras fuentes en la intersección de McDowell Ave. y la calle 52nd. La contaminación se ha extendido hacia el oeste 7 millas hasta 7th Ave. y se encuentra entre la carretera I-10 y el Aeropuerto de Sky Harbor. Desde los principios de los años 90's, los grupos responsables han operado varios sistemas de limpieza del gas del subsuelo y sistemas interinos del agua subterránea que han reducido

Typical Community Information Group Meeting (CIG) Invite

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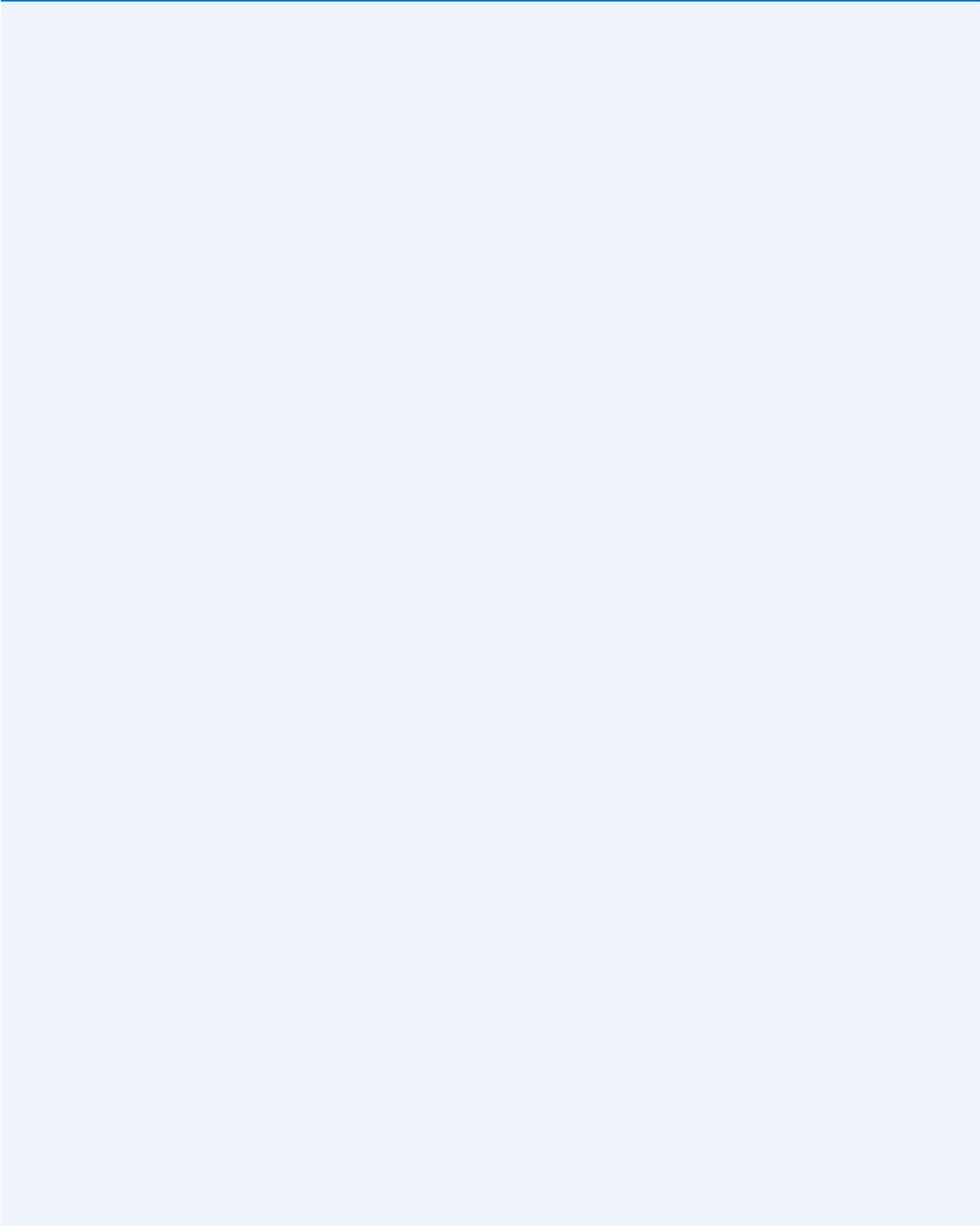
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CHAPTER 1

Community Issues and Concerns and Discussion

In order to understand the Site's community's issues and concerns, the Agencies conducted a number of stakeholder interviews. The Agencies interviewed local residents, property owners, activists, representatives from state and federal agencies, and government officials. Each interview consisted of approximately 20 questions covering many different topics.

The majority of respondents have lived or worked in the area for either less than 10 years or more than 41 years. Most respondents were fairly familiar with the project site and origins of the contamination plume, and learned of the contamination by word-of-mouth/neighborhood association meetings, newspapers, through their job, information sent out as part of the class-action lawsuit, and public meetings.

Over the course of 20 community interviews, residents and other stakeholders expressed a wide range of issues and concerns. Their responses showed a low to high level of knowledge about the site's history, and about the Agencies current and future activities.

The responses are grouped into six categories, although many responses cross category boundaries: 1) Environmental Concerns, 2) Superfund Cleanup Activity Concerns, 3) Human Health Concerns, 4) Cleanup Cost and Financial Impacts Concerns, 5) Communications and Public Education Concerns, and 6) Relationship/Level of Confidence with Agency Personnel.

Environmental Concerns

Impacts to environmental media: Generally speaking, individuals are concerned about the nature and extent of contamination and the migration of contaminants from all sources that may impact soil, surface water, groundwater, drinking water, and indoor air.

- Much of this information is covered in detail in the various Remedial Investigation Reports (RI Reports) that already exist and has been discussed in various prepared fact sheets (Item 1, Page 19) that summarize investigation results.
- Additional information will be covered during Remedial Investigations that are in progress, depending on the Operable Unit (OU; the site is divided into three) and Facility. (All of the existing or future remedial investigation reports containing this information are discussed in "Technical Documents," which is Item 14, Page 23.) When these reports are completed, they will be discussed at Community Informational Group (CIG) meetings (Item 2, Page 19) and fact sheets may be produced depending on community interest in the particular investigation.

Contaminants after they've been removed from groundwater: Other concerns included how contaminants are removed from treated water, how much is discharged to the air, the toxicity of these end products, and their disposal.

- This is updated every year in the Annual Effectiveness Reports for the OU1 and OU2 treatment plants (Item 14, page 23).

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End use of treated water: Questions were raised about the proposed end use for treated water in OU1, which will no longer be used in manufacturing processes as was done previously. Community members were concerned about how this would be decided, and what the effects would be on water quality and the affected irrigated soils if the water is discharged into the Grand Canal. Many want reinjection into the aquifer to be considered above all other options, as they believe it may prevent subsidence and provide a valuable future resource.

- Freescale's 2011 End-Use Report, which investigated several options for the fate of the treated water, was discussed and commented upon by the CIG members and larger community at the March 2011 CIG meeting, and these comments were submitted to Freescale by ADEQ on April 6, 2011 (Items 10 and 11, Page 23).
- Comments on the final End Use of the treated water will also be taken at a public meeting associated with the relevant Superfund decision document, which can be an Explanation of Significant Difference, an Amendment to the existing Interim Record of Decision, or a final Record of Decision (ROD) (Items 10 and 14, Page 23).

Subsidence: Related to the OU1 treated water end-use, questions were also raised regarding possible subsidence issues in the OU1 area and how it may be related to groundwater pumping and treatment, which has lowered the water table.

- Information regarding subsidence was shared with the community through the EPA email list serve on March 6, 2011 and at the June 2011 CIG meeting (Item 2, Page 19).

Superfund Cleanup Activity Concerns

Final remedy and cleanup standards: The majority of individuals were interested in understanding the future remediation activities resulting in a final remedy/determination, what cleanup standards will be used, and what cleanup standards are used at present.

- At present there are two Interim Remedies, one for OU1 and one for OU2. The goal of these interim remedies is to obtain capture (containment) of the groundwater contamination, and they do not establish standards for a final cleanup goal. However both interim remedies treat water to safe drinking water standards, meaning that every chemical of concern in the treated water must not exceed Maximum Contaminant Levels established by EPA and/or the Aquifer Water Quality Standards (AQWS). More information about these remedies, including the treatment standards they require, can be found in the interim ROD for OU1 and for OU2.
- A final cleanup goal will be defined once a final ROD is established (Item 14, Page 23).

Efficiency: Several people were concerned about the efficiency and effectiveness of the Interim Remedies and the eventual final remedy.

- This issue is detailed in the 2011 Five Year Review, and was discussed at the January 2012 CIG meeting (Item 2, Page 19).

Timeframe: The cleanup timeframe is important to many people. Most people want the cleanup to move forward and not be delayed.

- A general project schedule is located in Chapter 3, Page 27 of this CIP.
- The challenges to reaching a final remedy and cleanup have been discussed in presentations at several CIG meetings (Items 2 and 14: M52 site overview, OU1 Effectiveness Report, Bedrock Pilot Study, 2011 Five

Year Review, pages 19 and 23). They include the large number of responsible parties and corresponding legal agreements and investigations that must take place, as well as the nature of groundwater contamination, which is not only generally slow to treat with the technologies available, but it is also embedded in bedrock resulting in an ongoing source of contamination. The Five Year Review referenced earlier also identifies issues that must be resolved in order to achieve protectiveness and a final cleanup as quickly as possible.

Summary: Most respondents want the cleanup to be permanent, cost-effective, efficient in its planning, execution and supervision, and be based on science. The Agencies use the nine criteria when choosing a remedy.

These criteria are emphasized in the description of the Proposed Plan in Appendix 15.

Community Input and Technical Assistance: The Agencies recognize that people have the right to provide input into the cleanup decisions at a Superfund site.

- A range of final cleanup options will be evaluated for each OU in the technical document called the Feasibility Study (FS) (Item 14, Page 23). Following the completion of the FS for each OU, the Agencies will initiate the most important community involvement activity: the receipt of public comments on the Agencies Proposed Plan for the Final Record of Decision (Item 8, Page 22). The Proposed Plan process includes a minimum 30-day comment period (Item 11, Page 23). The Proposed Plan fact sheet compares the potential cleanup alternatives using EPA's nine evaluation criteria and identifies the Agencies preferred remedy.
- Notification of the Proposed Plan comment period and public meeting, as well as CIG meetings will be made to those on the EPA's postal mailing and e-mail lists (Items 6 and 7, Page 22), and through public notices (Item 12, Page 23) and articles in the local paper from press releases (Item 13, Page 23).
- Community members can learn how the Agencies have addressed their comments to the Proposed Plan by reading the Responsiveness Summary (Item 9, Page 22).

- Input can be provided throughout the whole Superfund cleanup process via many avenues listed in the Action Plan, such as CIG meetings (Item 2, Page 19), and informal communication with the Agencies points of contact.
- The Agencies cleanup work results in a number of technical documents. Historically, communities at Superfund sites have asked for assistance in understanding these documents so interested community members can express their issues and concerns, and provide formal comments to cleanup proposals. EPA provides a TAG (Item 16, Page 25) to a nonprofit community group or a TASC advisor (Item 17, Page 25) to assist the community in interpreting these technical documents.

Human Health Concerns

Many respondents had concerns focused on potential short-term and long-term human health impacts from the site. Specifically, people had questions about: 1) long term health effects resulting from past exposures of Motorola plant workers and people living in the area when the Motorola Facility was in operation, 2) exposures to contaminants that may be released into the outdoor air by the interim remedies or from the groundwater plume itself, 3) ongoing exposures resulting from potential vapor intrusion into area residences and other buildings, 4) children's exposure, 5) exposure dangers through home gardens, and 6) casual contact with water.

- The contaminated ground water plume is not used for drinking water. There are no drinking water wells within the area of the plume and the Superfund boundary. The City of Phoenix primarily uses surface water for drinking water.
- There are several Human Health Risk Assessments (HHRAs) that have been performed or will be performed (Item 14, Page 23) that address those questions. The Five Year Review, which was finalized in September 2011 (Item 14, page 23), also reviews the remedies in place and determines whether they are protective of human health and the environment.

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Vapor intrusion: Many individuals are concerned about vapor intrusion in OU1, specifically the neighborhood to the west of the former Motorola Facility on 52nd and McDowell, and in OU2, and any resulting impacts to human health. Respondents were also concerned about potential vapor intrusion impacts in OU3.

- From 2011 to 2014, EPA conducted oversight of Freescale's (the current party responsible for the Motorola 52nd St Facility Superfund cleanup) evaluation and mitigation of vapor intrusion in the residential areas in OU1. Various rounds of soil gas, sub slab, and indoor air samples were collected in Winter and Summer to reflect potential seasonal variation. In OU1, mitigation systems were installed at 14 buildings with one additional system to be installed in early 2014. In February 2014, EPA conducted soil gas and indoor air sampling using the Trace Atmospheric Gas Analyzer (TAGA mobile lab) in OU1,OU2 and OU3 to gather confirmation data for OU1 and new data to evaluate potential vapor intrusion in OU2 and OU3.
- Fact sheets summarizing the results of the soil gas investigation and the 2011 indoor air and subslab sampling events were sent to community in the OU1 study area in May 2011 and January 2012. Community meetings were held on June 8, 2011, February 15, 2012, April 24, 2013, July 24, 2013, and April 3, 2014 to share the results and outline next steps.
- Individual indoor air and subslab results were shared with property owners and tenants through one-on-one conversations with EPA and a formal letter and table explaining the property's results and the general neighborhood results.
- The results of this investigation will be in a final report of the OU1 Vapor Intrusion Investigation (Item 14, Page 23), and be included in a Focused RI for OU1 (Item 14, Page 23), which will include a characterization of the soil gas contamination and vapor intrusion in the area. Where the results of the investigation have indicated a potential vapor intrusion problem, EPA has worked with Freescale to mitigate exposure pathways in homes and ensure that the problem has been addressed. As of March 2014, 15 buildings have

SSD systems installed to prevent any vapors found underneath the home from entering the home.

- The health risks associated with exposure to vapor intrusion will be a component of an updated HHRA for OU1.

Health-based Standards: Questions were raised about what EPA's indoor air health standards are for the contaminants at the Site, as well as the groundwater treatment standards.

- EPA presented a summary of how the health-based standards for the primary Chemicals of Concern (COCs) in the vapor intrusion investigation, trichloroethene (TCE) and tetrachlorethene (PCE), are determined at community meetings in December 2010, June 2011 and February 2012 (Item 2, Page 19), as well as in a June 2011 Fact Sheet (Item 1, Page 19).
- For groundwater, the treatment plants for OU1 and OU2 treat the COCs to safe drinking water standards. This means identified contaminants must not exceed the Maximum Contaminant Level (MCL) for each Chemical of Concern, which are established by the EPA. Individual fact sheets that detail the toxicity, health effects, and regulatory standards for the main contaminants at the site, TCE and PCE, are also available through the U.S. Agency for Toxic Substances and Disease Registry (ATSDR) website (Item 4, page 21).

Worker safety: A few respondents were also concerned with worker and public safety during remedial construction or operation and maintenance activities, as well as the safety of workers who used to work at the Motorola plant or presently work at ON Semiconductor.

- The Site Management Plans and Health and Safety Plans both address worker safety for contractors during sampling and during cleanup activities. These items are available in the Information Repository (Item 5, Page 21), and will be updated throughout each phase of the project.
- Worker safety for the companies' current and past operations is not directly covered by EPA's cleanup authority. Worker safety is covered under the Occupational Safety and Health Administration (OSHA).

Past exposures: A number of those interviewed have health problems and are curious if past exposures from the site caused or contributed to their compromised health.

- ATSDR is the federal public health agency whose mission is to prevent adverse human health effects that result from hazardous waste exposure. ATSDR produces toxicological profiles on a wide range of contaminants. The toxicological profiles for the contaminants of concern at this site are available at the Information Repository (Item 5, Page 21) on the ATSDR website (Item 4, Page 21) and are described in detail in the Site History Section. If you think you have been exposed to contamination from this Site, please see Appendix 4, Page 39 for information on how to follow up with ATSDR and your health care provider.
- In 2002 EPA requested that the Arizona Department of Health Services (ADHS) conduct a health consultation to examine the water use status of private wells at that time. The Information Repository contains the ADHS health consultation, dated April 7, 2002. The health consultation focused on whether there was any possible exposure to contamination from private wells. The consultation found no exposure to contaminated groundwater; therefore, the private wells did not pose a public health hazard. Health consultations performed by ADHS can be requested at any time, and a description of what these consultations entail and how results are used, was presented at the June 2010 TAG meeting and can be found on the EPA website under “Community Involvement” (Item 4, Page 21).
- The Baseline HHRA for the Motorola 52nd St. Facility, written by ADHS for ADEQ in November 1992 (Item 14, Page 23), is a study of the various ways people might come in contact with contamination and is a calculation of how likely it is that human health effects might occur in the future because of exposure to site contamination. This HHRA is a part of the RI Report (Item 14, Page 23).

Health Concerns: Some respondents were interested in creating a health registry for all people that had worked at Motorola or resided in the nearby areas over the last 30 years. The Agencies do not have the tools or authority

to require such a project. Some community members also would like a study to be performed that could show whether past exposures have contributed to current health problems. This does not fall under the Agencies mandate, as the Agencies are tasked with measuring potential health risks from contaminants and cleaning up the contaminants to acceptable risk levels. However, the following were offered as resources for those interested in pursuing both the registry and the health study:

- A meeting focused on health concerns was held on September 17, 2009 where presentations were given by Gerry Hiatt, an EPA Toxicologist, Robert Knowles from ATSDR, Jennifer Botsford and Janine Hanley from the ADHS, and Dr. Walt Klimecki, a University of Arizona (U of A) professor in the Superfund Basic Research Program, describing their work and the types of resources they could provide. Presentations from this meeting are available (Item 5, page 21). Dr. Klimecki explained that U of A can design a study to answer the community’s questions, such as determining if human exposure to contamination is occurring, at what level it is occurring, or if the exposure is associated with poor health. However, because community members present were more interested in past exposures, which is very difficult to track and measure, this was not an area in which the U of A could help.
- ADHS updated its cancer registry in 2010 and found no elevated levels in the areas. ATSDR presented its findings, as well as information on how ADHS health consultations are conducted, and other approaches for conducting community health studies, at a TAG meeting on June 1, 2010. The presentation from this meeting is available in the site overview, under “Community Involvement.” (Item 4, Page 21).
- Technical Assistance to Services for Communities (TASC) (Item 17, page 25) conducted a needs assessment at a TAG meeting on April 6, 2010, with the goal of helping the community clarify its needs, both in general and with a focus on health concerns, and give guidance on how to pursue agreed upon goals. This meeting resulted in a report from TASC providing recommendations for how to move forward. This report is still available and is posted on the EPA’s Site

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webpage (Item 4, page 21 and Item 17, page 25). If community members are interested in pursuing any of these projects, EPA can re-enlist services from TASC if necessary.

The statement was made that the site needs to be safe for all people (children, workers at the onsite companies, elderly) after the Agencies cleanup work is completed. This is the goal of the final ROD, which will address these issues.

Impacts on pets and gardens: One individual is concerned about impacts on animals and gardens from contaminated groundwater and/or soil gas.

- The risk assessments (specifically the site-wide in 1992 and the Honeywell Facility in 2011, available at the Site Repository listed in Appendix 10) have shown that there is no exposure pathway from the groundwater to humans and animals. No assessment has been done on plants because the groundwater is at a depth that would not come into contact with gardens or trees. Studies of Site VOCs have shown that contaminated soil gas does not affect plants.
- The final ROD discusses how human health and the environment will be protected.
- The Agencies can produce a fact sheet or handout about gardening issues as well, if there is a heightened community concern (Item 1, Page 19).

Cleanup Cost and Financial Impacts Concerns

Cost effectiveness: Some people raised concerns about the cleanup cost, how the funds are being directed and whether the funds are being used cost-effectively.

- This is addressed in a number of documents, but particularly in the cost comparison between alternatives, which is a critical component of the Proposed Plan (Item 8, Page 22). The Proposed Plans for both of the Interim Remedies, as well as the future Proposed Plan for the final ROD, evaluated or will evaluate the cost of different alternatives.

- The Five Year Reviews and Annual Effectiveness Reports also evaluate the effectiveness of the remedies in place, including their cost effectiveness.

Decision making: Some people felt that decisions made by the Agencies were influenced by political or financial motives rather than scientific ones, and those less protective actions were being chosen in order to gain favor with the Responsible Parties.

- Decisions and actions are approved and overseen by the Agencies, and are done according to the authority given to them through Superfund law. Actions are determined first and foremost by their protectiveness of human health and the environment, using the best science available, and then balanced by cost effectiveness. This is addressed in the nine evaluation criteria used when deciding on a remedy (Appendix 15). Superfund law, the Comprehensive Environmental Recovery and Compensation Liabilities Act (CERCLA), is a powerful enforcement tool that dictates that parties responsible for the contamination must pay for the cleanup to all applicable standards in the most efficient and cost-effective way, until the site is determined to be safe for unrestricted use.

Who pays: Some people also expressed that it should be made clearer that tax dollars are not being used to pay for the cleanup, rather they are paid for by the responsible parties.

- Information about Superfund's liability structure can be found on the web at: <http://www.epa.gov/oecaerth/cleanup/superfund/liability.html>. General information about the Superfund enforcement process, enforcement authorities, and enforcement tools is available in the "Superfund Enforcement Process: How It Works" fact sheet. The Agencies are committed to ensuring that those who are responsible for hazardous waste sites take the lead in cleanup, when appropriate, throughout the Superfund cleanup process. Legal agreements detailing the obligations of the responsible parties, such as an Administrative Order of Consent (AOC), can be found in the Information Repository (Item 5, Page 21).

- Where responsible parties have not yet been identified or bound by a legal agreement, funding set aside by the federal government for Superfund cleanups is used. At this time, the Remedial Investigations for parts of OU2 and OU3, where smaller individual contributors are still being investigated, are being funded in this way.

Budget cuts: There were also concerns regarding the budget cuts to ADEQ and the impacts these have had on moving the cleanup forward quickly.

- Budget restraints for ADEQ, as well as EPA, do affect the size and workload of an agency's staff. The political climate and the national and state economies influence the amount of funding given to Superfund. At the same time, this site has viable responsible parties that ultimately pay for the investigation and cleanup for large portions of the site, and both ADEQ and EPA are reimbursed by these parties.

Communications and Public Education Concerns and Suggestions

Summary: Many people requested that the Agencies provide frequent and informative communication and public education throughout the cleanup process. They said that this communication should involve elected officials, schools, and community groups. Recommendations included going to neighborhood association meetings and other community group meetings, fairs, etc., to do outreach and give brief updates to a larger audience. The majority of respondents felt that while there are only a few community members who have the time and passion to be heavily involved, there is a large population of people that would appreciate brief updates on a yearly basis or when there is an important new development. People emphasized the importance of learning about the progress being made in the cleanup and of focusing on these positive achievements.

What inspires public interest and involvement: Respondents were asked what inspires them to be involved and/or interests them about the site cleanup. Elected officials indicated that their level of interest is primarily based on their constituents' level of concern. One respondent stated that people have to be touched personally for them to care. For example, she got involved in the project after her husband died. Another respondent said that we should answer the question "why am I here?" and explain the reason for, value of, and level of community involvement.

Sharing information: Respondents' recommendations and feedback regarding community education varied significantly. While the majority of respondents feel they have been kept adequately informed, when asked about the level of community involvement and outreach from the project to residences and businesses affected by the project site, most respondents indicated that the current level was "ok", while an almost equal number of respondents indicated that it needs improvement. The majority of respondents indicated that they currently receive project information primarily through the mail, followed closely by email. Comments made regarding the level of outreach included:

- Two elected officials noted they could be more informed, particularly with the same information provided to residents in the area;
- One respondent each:
 - » Indicated that their level of feeling adequately informed depended on the type and timeliness of the information;
 - » Felt information was hidden by the companies involved, between communications with lawyers and confidential information sent to the Agencies;
 - » Thought that there is a lot being done by the Agencies, but the community itself does not take the time to get involved;
 - » Felt that community education has been sufficient – most people who want to know, get involved;
 - » Felt that community perspectives were not taken into consideration when they were raised by the community;

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- » Noted seeing information in the papers but otherwise seeing nothing; and
- » Commented on receiving so much information that it would be helpful to get a phone call if something significant changes.

Content of materials: With regard to mailings, the majority indicated that the information they received was clear and easy to understand, and at the same time they emphasized keeping language from being too technical and the use of more pictures, as the information was often overwhelming. One person indicated that information should be simpler. Four respondents commented on the need to keep getting the basic information out to the community. Other comments that were made by one respondent each included:

- It is good that lots of information is provided/made available;
- Project should provide bilingual information sheets;
- Project efforts for distributing information should focus on children;
- Information sheets/flyers should be given to community members for them to distribute in the community;
- Project needs to communicate hazards associated with the project to businesses located in the project area; and
- Include a visual of the CERCLA process with an arrow showing progress.

Methods and frequency of outreach: Most respondents indicated meetings were the best way to provide information – specifically, presentations and talking with project people one-on-one. The next common response was that community networking was best for them. Community networking referred to project personnel getting involved/sharing information with schools and neighborhood associations, providing information in community newsletters, forming relationships, and participating in community expos. The best ways to get information out to the respondents was via emails, websites (Agencies, AZ Central, and blogs), information sheets, and mailings.

Respondents indicated that they prefer to receive information on a quarterly basis or as project conditions change. Suggestions as to how to best provide information was to do so in increments - start with less technical information and then increase the technical level, and if websites are updated, send out emails and/or a notification to let people know the information was updated. Respondents identified their most frequently used information outlets included newspapers, websites, television and radio stations, community newsletters, mailers to include school mailings, and word of mouth.

Meeting suggestions: Most respondents have participated in public or CIG meetings. Four respondents indicated that the main reason they do not attend meetings is due to schedule and/or time constraints. For the most part, people stated that a weeknight, Tuesday through Thursday, was the best time for community members to attend the meetings.

Meeting comments were varied, and responses included:

- Combine the various project-related meetings that occur, such as the TAG and CIG meetings;
- Meeting information was too technical;
- Show changes over time;
- Project staff should get creative with the meetings, make them more interactive and engaging for all age levels;
- Enforcement of the Open Meeting Law is inconsistent, confusing, and limits the sharing of meaningful information;
- Project staff should attend the neighborhood association meetings to show they are interested in community members, this would get people more interested in the project; and
- With the recent changes in immigration law enforcement in Arizona, Latinos are afraid to attend project meetings thinking that they might be a cover for an immigration bust.

Respondents indicated that the first five people they would contact for information in their communities were neighborhood associations and other community groups such as a mentors program and Table Talk, neighbors and local community members.

Respondents were asked to identify community members they thought would be interested in becoming part of the CIG. Responses identified environmental professionals and community organizations such as the Phoenix Revitalization Corp, and Urban League, elected officials, including newly elected ones, City Council members, City of Phoenix staff, and government officials, such as the Governor's Environment and Natural Resources office, school officials, educators, and education communities at Arizona State University, and community members/neighborhood residents.

Miscellaneous suggestions: Respondents were asked if they could think of a different/better way to engage the community. Most responses were related to improving outreach efforts and making it clear in project materials why community involvement was important to the project. Many felt that public meetings are a good way to educate the community and keep people informed, and were important given how people are moving in and out of the area. Specific suggestions included:

- Provide a project progress update that fits to 1 page so it can easily be copied and shared with others in the community;
- Need to pay agency people more, hire more staff, and provide more funding for cleanups; for example, the Chamber of Commerce has gone to legislature to tell them to stop cutting state projects like WQARF;
- Use CIG members to do presentations at schools; provide coloring books for kids;
- Publish more information in the newspapers;
- Need to identify community newsletters, etc., and provide smaller bits of project-related information; maybe make it seasonal;
- Use interactive webpages such as Facebook;
- Need to use a variety of methods to reach various segments of the community; there are immigrant and refugee sub-populations who will need different language and child care; send flyers home with the kids – cooperate with the schools. Get kids involved and they'll take the message home to parents;
- CIG is a good way to start. Pull resources from different disciplines, such as a marketing perspective, to maximize outreach;
- Combination of in-person meetings and email updates is best; most legislators do some sort of constituent newsletter, or email; they are always looking for information to include in these;
- Neighborhood associations are very territorial and they may think that until you come to their meeting, it's not important. Have 1-2 people available to go to community meetings; if you don't attend their meetings, you're not showing them any respect. Roosevelt, Garfield, Sky Harbor, East Lake, Lindon Park, and Capital Mall are all active associations;
- If something new is going on, such as new wells going in, it would be good to have someone go door-to-door to inform people, especially if a well has been installed in their easement, and remind them of the work being done. Many people don't understand how this affects them;
- Need to tell people their tax dollars aren't being used for this work;
- Very traditional approach may not be working for the project; need to be more creative to get people to come – keep meetings short, provide food/door prizes, make it more interactive with visual aids – those can change meeting interactions/dynamics in a good way;
- Need to communicate contamination hazards to business owners; many don't know much, if anything, about the project;
- People are continuously revolving – there is a lot of movement due to economy; education is an ongoing process. Need to keep getting basic information out; use website;
- Some agency personnel seem to not be as busy or productive as others. Maybe each one can get up and talk about what they are doing;

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- Give flyers to community members and have them distribute to their community –one side English/one side Spanish;
- Would like to see more updated methods to present/ share information given technology now – e.g. 3-D, cut-aways, etc.; and
- Heading in appropriate direction; need to remain aware and diligent on the process. Need to make sure people most impacted by decisions are able to participate.

Most respondents knew about the information repositories and indicated that the current locations were appropriate for the communities affected by the project.

Respondents suggested some community involvement activities that cannot realistically be implemented without involvement of other stakeholders due to limited agency resources. These activities include: 1) more meetings than the 4 annual CIG meetings, CERCLA-required meetings and open houses associated with the vapor intrusion investigation, 2) expanded technical discussions in the meetings, and 3) expanded technical discussions in fact sheets.

Relationship/Level of Confidence with Agency Personnel Concern

Most of the respondents indicated generally positive experiences with the Agencies, while five respondents indicated they have had negative experiences. Positive experiences included: 1) good communication with the community by keeping people notified, 2) acknowledging the Agencies were doing the best job they could, 3) and general project interactions seem to be improving. Negative experiences included: 1) difficult interactions with ADEQ, 2) problems with the Agencies personnel turnover rates/lack of consistency at the Agencies, 3) perceptions on both sides of tense interactions, and 4) community interests in health studies do not seem to be a priority to project staff.



Historic EPA Staff presenting at a CIG Meeting in 2011

CHAPTER 2

Community Involvement Action Plan

This section describes the specific activities and resources that the Agencies will use to help actively involve the community. The many ideas and suggestions raised in the community interviews were incorporated into the Action Plan as much as possible.

Below are the principal points of contact for the Site for community questions, issues or concerns.

Contacts:

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Community Involvement Coordinator

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**Both Agencies have a
toll free number**

EPA: 1 (800) 231-3075

ADEQ: 1 (800) 234-5677

Chapter 2

Spectrum of Public Participation

In addition to providing representatives to answer community questions, EPA and ADEQ employ many tools and techniques to support community involvement. The choice of what tools to use is dependent on the goals of the effort and community appropriate involvement methods. It is important to be clear with the community on how decisions are made so they can participate in a meaningful manner. In simple terms, Superfund cleanup decisions must:

- Protect human health and the environment, and use science and cost effectiveness to do it within the realm of budgets, applicable laws and current regulations.
- Consider public input, be sensitive to community values and find common ground to the maximum extent possible, but in the end the decision must satisfy the Agencies responsibilities.

Below is the Spectrum of Public Participation, used by the International Association of Public Participation to aid in successful planning and implementation of community involvement programs. Per this spectrum, the goal of community involvement in the Superfund process is mainly to inform and consult, and at times, involve. It is the Agencies responsibility to communicate to the public how decisions are made, what factors are considered, and to provide feedback on how public input influenced the decision.

	<i>Increasing Level of Public Impact</i>				
	Inform	Consult	Involve	Collaborate	Empower
Public participation goal	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision-making in the hands of the public.
Promise to the public	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.
Example techniques	<ul style="list-style-type: none"> ▪ Fact sheets ▪ Web sites ▪ Open houses 	<ul style="list-style-type: none"> ▪ Public comment ▪ Focus groups ▪ Surveys ▪ Public meetings 	<ul style="list-style-type: none"> ▪ Workshops ▪ Deliberative polling 	<ul style="list-style-type: none"> ▪ Citizen advisory committees ▪ Consensus-building ▪ Participatory decision-making 	<ul style="list-style-type: none"> ▪ Citizen juries ▪ Ballots ▪ Delegated decision

International Association for Public Participation's Spectrum of Public Participation

1. Fact Sheets, hand-outs and flyers

Fact Sheets are the Agencies principal method of providing site-related information to the community. They are short (2-6 page) documents, written in non-technical language, and mailed directly to the site's mailing list. They often summarize larger technical documents, provide updates on site cleanup activity, or announce community meetings. They include the Agencies contact information and refer people to the Agencies websites and library for more technical information. The Agencies will create fact sheets as events dictate or in response to community requests for specific kinds of information. Appendix 14 lists the Sites past fact sheets.

Flyers are 1-2 page notices that are sometimes distributed during door-to-door notifications or posted on community bulletin boards. The Agencies have distributed flyers or fact sheets at residences, schools and businesses to give notification of an upcoming activity.

Handouts provide supplemental information, for example at community meetings. Some are also posted to the Agencies websites. A handout listing the different agencies to contact for needs that cannot be addressed by the Agencies Superfund staff is made available at all meetings, and is included in Appendix 14.

Blurbs

1-2 paragraph blurbs were requested from some community organizations for the purpose of inserting into their existing newsletters.

2. Community Meetings

A variety of formats for community meetings are used depending on the needs of the community and the goal of the particular event.

Open Houses

At Open Houses, materials such as posters are presented to the public and staff is available to answer questions one-on-one. Open Houses are particularly effective in getting relevant information to diverse community members that have different interests, needs, or levels of understanding. Some people prefer them over lecture format because interested community members can focus on what interests them and get their particular questions answered one-on-one. Open Houses may be held periodically to share information with affected communities about activities that are of particular concern to them, such as the vapor intrusion investigation in the residential neighborhood of OU1.

Community Informational Group (CIG)

To increase the frequency and intensity of public participation, the Agencies, in partnership with the community organization Phoenix Revitalization Corp (PRC), created a Community Informational Group or CIG on June 16, 2010.

A CIG is a self-forming, self-governing stakeholder group that meets regularly to learn about the Agencies cleanup process, and provides feedback to the Agencies. Participants represent themselves as individuals and do not provide formal advice. The Agencies are able to provide support to the CIG by attending meetings, making presentations, procuring a meeting room, advertising the meetings and providing copies of documents. The CIG members' responsibilities include communicating information and serving as representatives of their communities, reviewing site information in order to have a proficient understanding of the site, and attending the quarterly CIG meetings. CIG members are not granted any more attention/deference than an individual member of the public or regulated community would receive. Interested community members may contact EPA's CIC (See Page 17) for more information.

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The purpose of the CIG is to:

1. Represent the interests of the communities and stakeholders, and to receive and share information with their communities. All CIG members serve as individuals and as a vehicle for improved outreach to residents so as to keep them informed of remedial actions at the site. This indicates an effort on the part of the CIG members to share information they receive with those they represent.

Health studies, health registries, and health care are not under the authority of EPA or ADEQ and will not be the focus of the CIG. The CIG would be free to form a separate group or subcommittee that could meet for this purpose.

The CIG is designed to serve as an ongoing vehicle for information sharing, discussion, and open communication between the community, regulatory agencies and responsible parties with the shared goal of achieving site cleanup that is protective of human health and the environment. Its members should represent a diverse cross-section of key stakeholder interests, including affected property owners, concerned residents, local governments, community groups, environmental groups, health experts, the business community, and others as appropriate.

The CIG's role is informational only. While the CIG members are free to make suggestions and provide feedback on discussed site activities at CIG meetings, those requests are not binding. CIG meetings are intended for the Agencies to provide information to the CIG over ongoing site activities.

Elected Officials and neighborhood association leaders currently receive invitations to the Agencies public meetings and CIG meetings (Item 3, Page 21). EPA has conducted outreach to university students from Arizona State, University of Arizona, and Gateway Community College, many of whom currently attend the CIG meetings. In the fall of 2011, 80 students from the BioScience High School were assigned by their teachers to create projects that would improve community outreach regarding the site. As a result several students have attended the CIG meetings.

It is difficult to structure meetings in a way that can satisfy all of the differing needs of community members. In response to the community input through this CIP interview process, and through discussions with CIG members and community members that have attended meetings, the CIG meetings are structured in the following way:

- Prior to each meeting, there is a 15 minute poster session at which attendees are invited to familiarize themselves with site information and have one-on-one conversations with the Agencies staff. This is intended to reach those community members that are new to the site and would like a brief overview.
- The CIG meeting agenda is determined by what the CIG members request at the prior meeting, and is finalized by the Co-Chairs and the EPA Community Involvement Coordinator. Both the community Co-Chairs and EPA Community Involvement Coordinator try to structure the agenda around the most pressing site activities and items that will benefit most from discussion with the community at that time.
- When presentations are given at the CIG meeting, every effort is made by the Agencies to present the most important aspects of an issue in a way that is technical enough to be meaningful and allow for in depth analysis by the community, and yet simple enough that it is understandable and relevant. Feedback and questions from the community are vital in making these presentations most effective.
- Discussion focus will be on how project decisions will be made, what the options are to choose from, and why.
- Agency staff also makes an effort to provide the larger context, and respond to community questions when a site decision warrants such community input as per the CERCLA process. The Agencies will consider and review such comments, however, project decisions are ultimately made by the Agencies using the well-defined nine criteria (See Appendix 15).

- Some people are concerned that most community members do not understand the Superfund process. The Agencies will write documents and give presentations being mindful of the need to put different actions in context of the overall process.
- Aside from the CIG meetings already described, the Agencies hold public meetings at various milestones and at the request of the community. Public meetings are organized to convey site information via presentations and discussions, and to answer questions from community members. Public meeting locations and past and upcoming scheduled CIG meetings are listed in Appendix 7.
- All meeting minutes and presentations will be available on the Agencies websites.

To aid in the effectiveness of the CIG meetings, a separate goal-setting meeting organized by the CIG co-chairs took place in January 2012. This was held to set priorities for the year in regards to what information should be discussed at the CIG meetings, in what format, and how other information can be shared with the public outside of the CIG meetings. Ground rules for how to conduct the meetings were also discussed and are listed below. Ground rules are necessary, to make sure meetings are as productive and inviting to all participants.

M52 CIG Meeting Ground Rules

We will

- treat each other with respect
- value constructive feedback
- be brief and focus on facts, rather than opinions
- be open, non-judgmental in our communications
- de-personalize the discussion – no personal attacks
- honor that everyone participates, no one dominates
- create action list with responsibilities, timelines. Items outside focus of meeting placed in Parking Lot

Small Group Meetings

Neighborhood associations and community groups can contact Agency representatives and invite them to attend their meetings at any time.

3. City Council Updates

The Agencies provide status reports to the Phoenix City Council upon request.

4. Websites

EPA has created a website specifically for this Site. The website includes electronic copies of EPA's investigation documents and will be one location for viewing both the site history and the proposed cleanup plans as they are available. There are also links to presentations, agendas, and minutes of community meetings under the "Community Involvement" heading. EPA updates the webpage on a regular basis. Please visit the website at: <http://www.epa.gov/region09/motorola52ndst>.

ADEQ maintains a website with a site narrative, site map, CIG meeting minutes and contact information on their website at: <http://www.azdeq.gov/envIRON/waste/sps/phxsites.html#mot52a>. ADEQ also maintains a public administrative record available for review at their Main Office Records Management Center in Phoenix.

The Agency for Toxic Substances and Disease Registry maintains a website with individualized information for a hundreds of contaminants: www.atsdr.cdc.gov

5. Information Repository and Administrative Record

The Agencies maintain 2 local public project files, which are called Information Repositories. The first Information Repository at Burton Barr library contains hardcopies of major site documents, fact sheets and other relevant items.

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The second Information Repository at the Saguaro Library contains electronic copies on compact disk. To browse site documents, please visit the Information Repositories:

Burton Barr Library (hard copies)

1221 N. Central Avenue
(602) 262-4636

Phoenix Public Library, Saguaro Branch (Files on CDs)

2802 North 46th St.
(602) 262-6801

ADEQ Records Management Center

(M-F 8:30 am - 4:30 pm)
1110 W. Washington St.
(602) 771-4380

Records are also maintained at the EPA Superfund Records Center in San Francisco:

Superfund Records Center

95 Hawthorne St., room 403
San Francisco, CA 94105
(415) 820-4700

When EPA is ready to formally propose a cleanup action, it must collect every document that was used to develop and analyze the proposed action. This collection of technical documents is called the Administrative Record, and the Administrative Record for both the OU1 Interim ROD and OU2 Interim ROD are in the Information Repositories. The Administrative Record for the final ROD will also be located in the Information Repositories when completed. There is a specific Administrative Record for every proposed cleanup action.

6. Mailing List

EPA maintains a mailing list for distribution of fact sheets and meeting notices. To be added or deleted from the mailing list, contact the community involvement coordinator (see Page 17). Periodically, a brief description of the Site is sent to all addresses that are in the area of the plume of contaminated groundwater, along with a postcard for people to return if they are interested in being on the mailing list.

7. E-mail Group

EPA maintains an e-mail list for electronic distribution of fact sheets, meeting notes, and periodic site updates. To be added or deleted from the mailing list, contact the community involvement coordinator (see Page 17).

8. Proposed Plan

When the Agencies are ready to formally propose a cleanup plan, they create a document called a Proposed Plan. The Proposed Plan summarizes the contamination, compares the various ways that the contamination can be cleaned up, and identifies one preferred alternative that the Agencies think balances all considerations. This is the most important time for community input. The timeframe for the final Proposed Plan for the site is still unknown; however, a Proposed Plan will be developed for each OU following the Remedial Investigation/Feasibility Study work that is in progress. The Agencies will distribute the Proposed Plan for each OU to the mailing list, hold a minimum 30-day public comment period, and conduct a public meeting where the Proposed Plan will be discussed and public comments taken.

Sometimes the Agencies perform temporary, short-term or interim cleanup actions, and the public is notified of these actions through a similar document. This occurred at the Motorola 52nd St. Superfund Site in 1992 when the OU1 Interim Proposed Plan was released, and in 1997 when the OU2 Interim Proposed Plan was released.

9. Responsiveness Summary for the Proposed Plan Comment Period

When the Agencies make a final decision about which cleanup methods they will use, they create a document called a Responsiveness Summary that explains how the public comments received (see above #8 Proposed Plan) were addressed. This document is a part of the decision document called a ROD. Responsiveness Summaries were prepared for both the OU1 and OU2 Interim Records of Decision, and there will also be a Responsiveness Summary for any future decision documents associated with the site.

10. Explanation of Significant Differences

When a significant change is made to an existing remedy, a document called an Explanation of Significant Differences (ESD) is required. This document summarizes the change, and how this change will affect the original nine criteria against which the existing remedy was evaluated. When an ESD is proposed, a public meeting will be held, and there will be a 30-day public comment period.

Notification of the ESD comment period and public meeting will be made to those on the Site's postal mailing list and e-mail list, and through public notices and articles in the paper.

Once the ESD is produced, community members can learn how the Agencies have addressed their comments by reading the Responsiveness Summary. But they also can provide input throughout the whole process via other avenues listed in the Action Plan, such as CIG meetings, written letters or emails, and informal communication with the Site's points of contact.

11. Formal and Informal Comment Periods

As discussed above (#8 Proposed Plan), the Agencies hold public comment periods for certain documents. Documents that require formal comment periods are limited to Proposed Plans, Explanations of Significant Differences, the ROD, and the notice to delete the site from the Superfund list (or National Priorities List). Sometimes comment periods are less formal and not required, and are held because the Agencies are committed to involving the community. Comment periods may be announced by the Agencies in several ways, including a notice in a fact sheet, an announcement at a public meeting or notification to the email and mailing list. Formal comments received within the 30-day comment period will be reviewed by the Agencies and may receive a response. In addition, written comments or formal comments from the community are always considered if they are submitted in a timely manner, whether or not a comment period has been announced. In this case, the Agencies will work with the community, but a formal response may not be provided.

12. Public Notices

For those who are not on the site's mailing list, the Agencies will announce formal comment periods in the display section of the Arizona Republic or Business Gazette. A notice in Spanish will also be displayed in La Voz newspaper.

13. Press Releases/Media contacts

EPA and/or ADEQ may distribute news releases that address investigation and construction activities, proposed and final decisions, treatment system operations, associated traffic impacts and diversions, investigation findings, and community involvement activities.

14. Technical Documents

Most of the people that were interviewed had environmental and health concerns. They wanted to know if the air, soil, surface water and/or groundwater were contaminated, and how the Agencies planned to address those areas. The answers to many of those questions are or will be in the technical documents that the Agencies produce as part of its investigation and cleanup process. The Agencies may also mail out a summary of key documents as a fact sheet. Below is a listing and short description of those documents that will be developed over the course of the Superfund cleanup process.

Sampling and Analysis Plan (SAP): The SAP details the field sampling schedule, sample collection procedures, and analytical methods required to collect sufficient data to perform an RI/FS for the Site.

Site Management Plan: The Site Management Plan provides details pertaining to site security, site access, health and safety, contingency procedures, waste disposal, management responsibilities, document management, project meetings, and audits during the RI.

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RI Report: The overall purpose of the RI is to identify the nature and extent of contaminants, migration pathways of the contaminants, and potential threats to human and ecological receptors in the study area. The remedial investigation is usually done with the FS. Together they are often referred to as the “RI/FS.”

Feasibility Study (FS): A report that identifies cleanup objectives and alternatives to meet those objectives, and evaluates each alternative using the first seven of *EPA’s nine criteria* which are listed in Appendix 15.

Cultural Resources and Historic Building Survey: A report that includes archival research, an historic building survey, and an intensive pedestrian cultural resources survey of the Superfund Site. The purpose of this report is to provide an inventory and assessment of cultural resources that might be affected by the Superfund cleanup.

Biological Evaluation: This report contains an ecological habitat survey of the Site.

Human Health Risk Assessment (HHRA): This document provides a qualitative and quantitative evaluation of the current and potential risks posed to human health by the presence of Site contaminants. Risk assessments evaluate both the carcinogenic and non-carcinogenic risks to human health from Site contaminants.

Ecological Risk Assessment (ERA): This document provides a qualitative and quantitative evaluation of the current and potential risks posed to ecological receptors from exposure to Site contaminants.

Effectiveness Report: This document evaluates the effectiveness of a remedy on an annual basis. OU1 and OU2 Effectiveness Reports are produced annually to evaluate the effectiveness of their respective treatment systems.

Five Year Review: When cleanup remedies leave contaminants in place at a Superfund site above levels that allow for unrestricted use and unrestricted exposure of impacted environmental media, Superfund law requires an evaluation of the remedy every five years. The purpose of the Five-Year Review is to make sure the cleanup continues to protect human health and the environment.

Health and Safety Plan: When a remedy is being constructed or a sampling event is being conducted, this plan is written to ensure the health and safety of the workers during project activities.

Record of Decision: A public document that explains which cleanup methods, actions, tools and/or techniques will be used at the Site, including the residual contamination levels (if any), and any restrictions on future land use (where waste is left in place).

Remedial Design: The development of engineering drawings and specifications for a site cleanup. This phase follows the RI/FS.

15. Door-to-door Notifications

When EPA is working in the field, it may provide notices to directly-affected residents and businesses through door-to-door notifications. It may also use this method to inform residents of specific hazards that might be identified once environmental samples have been analyzed. When conducting indoor air sampling at residences and businesses, phone calls to property owners and tenants, as well as home and commercial site visits, will be conducted to gain access and explain the investigation.

16. Technical Assistance Grant

A TAG is a federal grant awarded to an incorporated nonprofit organization of community members affected by the site. It is used to fund an environmental professional to provide an independent technical review of cleanup documents. An initial grant up to \$50,000 is available to help the community understand technical information about their site, and can be supplemented as needed for the life of the cleanup. As of July 2013, the TAG for this site expired and we are evaluating options to provide technical assistance support to the community.

17. Technical Assistance to Serve Communities

TASC is a contract available through EPA that communities can utilize for technical assistance. It can provide similar services as the TAG, but it is different in that the technical advisor(s) are provided directly by EPA through a contractor, rather than by the community organization that received the TAG grant. TASC also can provide some services that are not available through the TAG, and can serve as a supplement to the TAG. Additional information about the TASC can be found at: www.epa.gov/superfund/community/tasc. A needs assessment performed through TASC for the Site community in 2010 is included in Appendix 13. It can also be found on the site overview webpage under “Community Involvement,” dated May 18, 2010 (see Item 4).

18. Presentations to Groups

The Agencies staff are available to make presentations at meetings for local community groups, neighborhood associations, and institutions upon request. Contractors running the treatment systems are also available for tours of the facilities. For example, in November 2011, a field trip for 80 BioScience High School students to the OU2 treatment plant and Biologically-enhanced Soil Vapor Extraction (BSVE) system was conducted upon request, which included a presentation in the classroom with a 3D groundwater model.

19. Language Translation

When a need arises, EPA provides an interpreter at its community meetings, such as at OU1 vapor intrusion neighborhood-specific open houses and community informational meetings. So far a translator has not been requested for CIG meetings. However, if demand arises and requests are made no later than 2 weeks before a meeting, a translator will be provided. EPA always translates all of its fact sheets and meeting announcements into Spanish.

20. Arizona Department of Health Services (ADHS) Cancer Registry

EPA, ADEQ and the CIG requested that ADHS update its cancer registry for Phoenix, which is based on hospital records organized by zip code. The home webpage for the registry is:

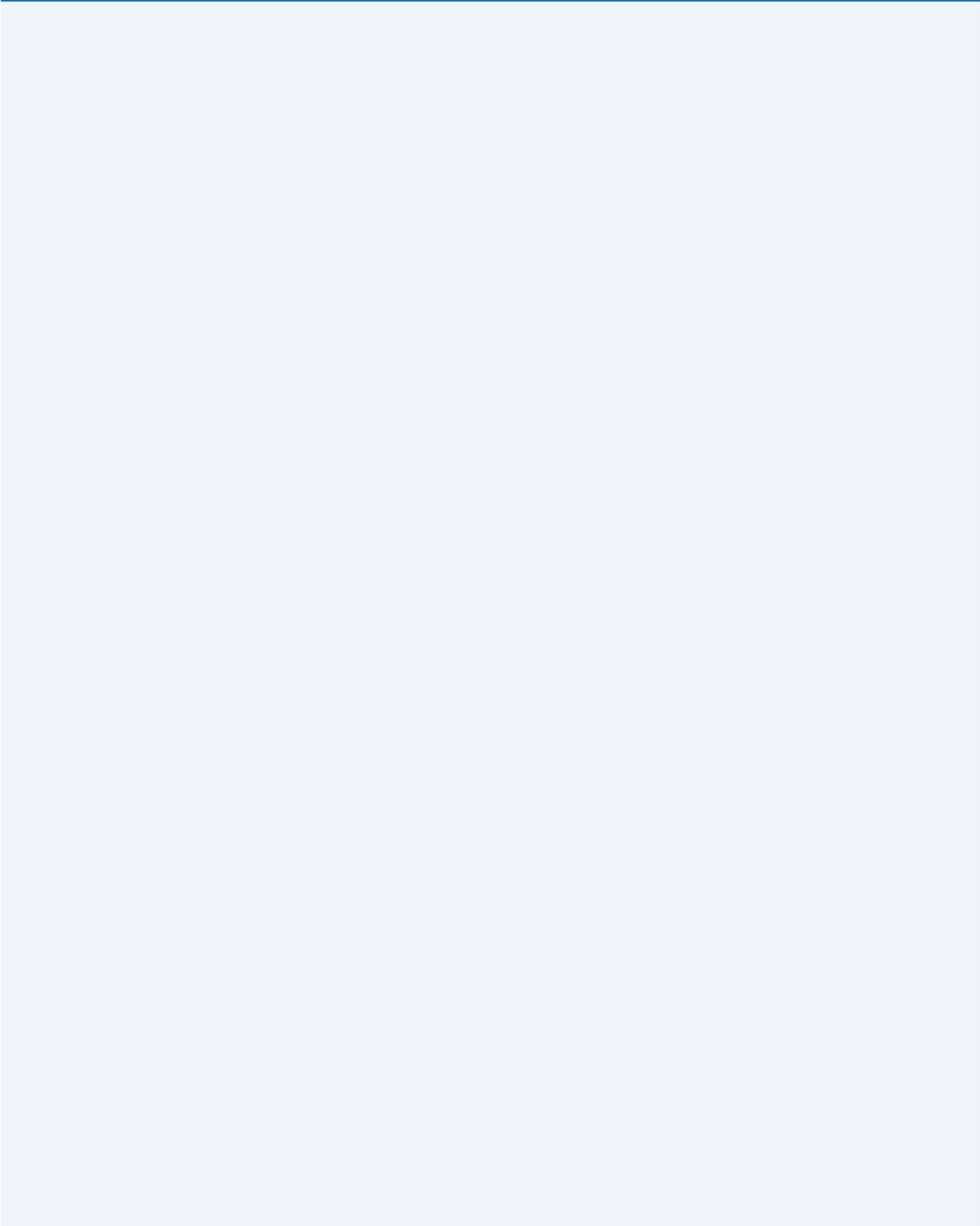
<http://www.azdhs.gov/phs/phstats/acr/>

The following links allow you to query the registry and sort by zip code, types of cancer, etc.:

http://healthdata.az.gov/query/module_selection/azcr/AzCRSelection.html

<http://www.azdhs.gov/phs/azcha/>

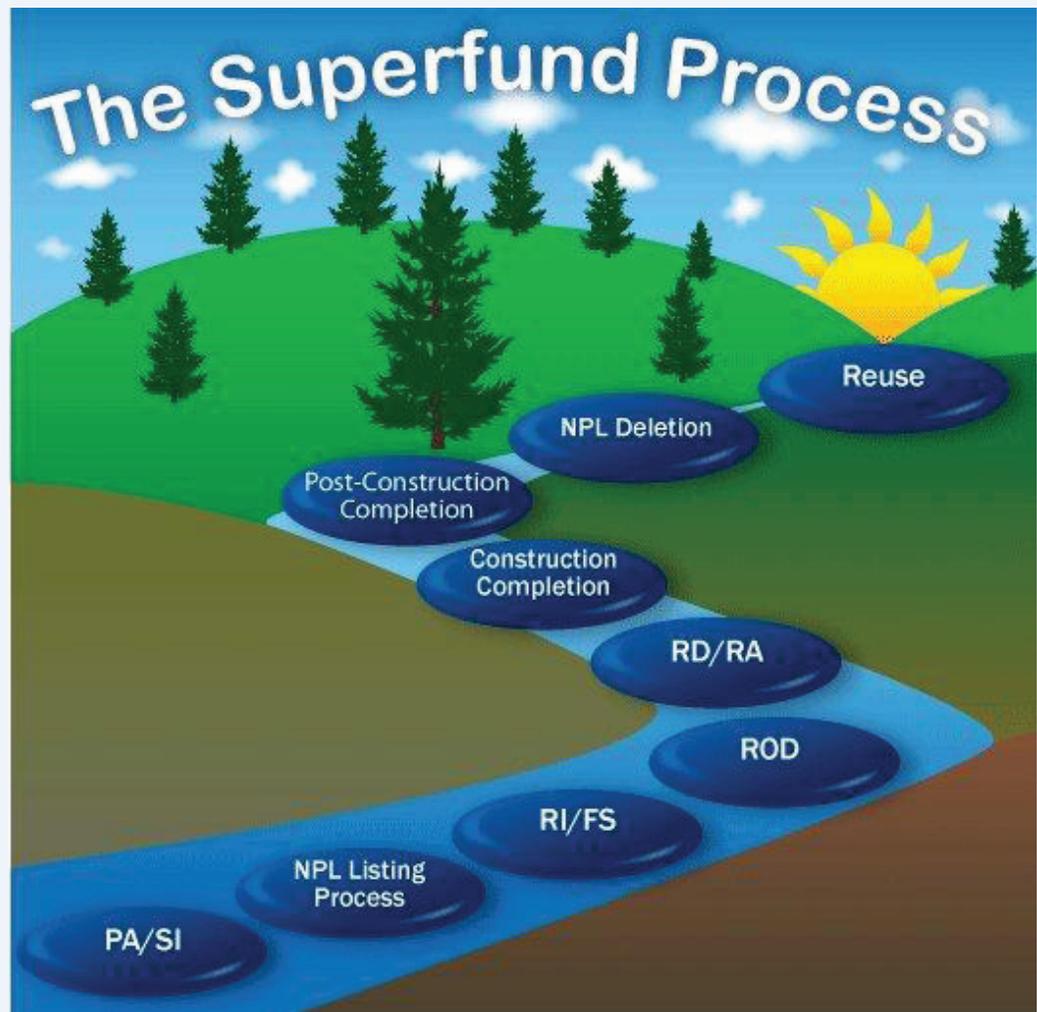
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CHAPTER 3

The Cleanup Schedule

There are several steps involved in the Superfund process, each with opportunities for community involvement. The multi-year investigation and cleanup process includes the investigative effort, delivery of technical documents, cleanup decision-making, design of the remedy, construction, and review and evaluation of results. The value in offering the public an outline of current and upcoming activities is that people can decide for themselves the point(s) at which they want to learn more, attend meetings, or offer their comments or concerns.



Steps in the Superfund Cleanup Process

Chapter 3

The site is divided into three OUs. Geographic and demographic information for each OU can be found in Appendix 2 on Page 33. The activities below help the public understand the Agencies' work at each OU.

Public participation activities and resources will be ongoing, that is, they won't be tied to a specific OU or year. These will include CIG meetings, providing cleanup documents on websites and in the Informational Repository, updates to elected officials as requested, and providing information to the media. EPA will solicit ADEQ input and public comments as important Site milestones are reached.

OU1

For OU1 soil, soil vapor, indoor air, groundwater activities and a bedrock study are ongoing and will continue. The residential vapor intrusion investigation and mitigation were completed in March 2014. The Facility vapor intrusion investigation is expected to begin in 2014. The ongoing activities will be consolidated as part of the OU1 RI/FS which is expected to be completed in late 2017/early 2018.

OU2

The collection of groundwater data for the final OU2 RI will occur in 2014. The RI Report with input from EPA and ADEQ is scheduled for completion by the PRPs in 2015 followed by the FS in 2016. The PP for OU2 where we will seek public input is scheduled for 2017. The operation of the final Soil Vapor Extraction system for Joray Kachina started in March 2014 and the plan is to collect additional data to complete the RI in 2016.

OU3

The OU3 RI/FS draft will be completed in 2015. In 2016 and 2017 EPA anticipates releasing a proposed plan and ROD for the site.

APPENDIX 1

Site Location and History

EPA has gathered information about Site history from numerous sources. Due to the long and complex history of the Site, there are multiple accounts of this history and some discrepancies exist. EPA has made its best effort to compile and accurately describe the Site history in a concise manner here. However, EPA acknowledges that other accounts of the site history vary slightly from what is presented.

Location of Motorola 52nd Street Superfund Site

The Site, USEPA identification number AZD009004177, is located in Phoenix, Arizona, generally between 52nd Street on the east, Palm Lane on the north, 7th Avenue on the west, and Buckeye Road on the south. Because of the size of the site, it has been divided into three areas called Operable Units (OUs) to better manage the cleanup efforts. The approximate boundaries of the different OUs and the Honeywell 34th Street Facility that make up the Site are described below:

- 1. OU1 Boundaries:** 52nd Street to the east, Palm Lane to the north, Roosevelt Street to the south, and 46th Street to the west.
- 2. OU2 Boundaries:** Roosevelt Street to the north, 46th Street to the east, Buckeye Road to the south and 18th Street to the west.
- 3. Honeywell 34th Street Facility:** Considered its own OU within OU2, the Honeywell Facility extends from approximately 36th Street to the east to approximately 29th Street to the west, and is immediately north of the Sky Harbor Airport north runway.
- 4. OU3 Study Area Boundaries:** McDowell Road to the north, 18th Street to the east, Buckeye Road to the south, and 7th Avenue to the west.

The Motorola 52nd Street Facility was originally constructed in 1956. The facility was operated by Motorola until 1999 when ON Semiconductor (a Motorola semiconductor entity) began operations at the facility. In 2004, Motorola spun off its Semiconductor Product sector, which included ON Semiconductor and Freescale Semiconductor, Inc. (Freescale). ON Semiconductor continued operations at the facility until 2011 when it closed the onsite manufacturing plant. ON Semiconductor continues to operate its global headquarters at the 52nd St. Facility.

Motorola was responsible for the remediation effort related to its former operations at the 52nd St. Facility. In the 2004 spin off, Freescale assumed the environmental liability that was once Motorola's. Freescale agreed to implement the requirements of the OU1 ADEQ consent decree (CD), the EPA Administrative Order on Consent (AOC) for investigating and remediating the vapor intrusion pathway in OU1, and the OU2 EPA Unilateral Administrative Order (UAO).

The Honeywell 34th Street Facility was constructed in 1951 and continues to operate today. Historically, the Honeywell Facility has operated under the names of AiResearch Manufacturing Company of Arizona, Garrett Turbine Engine Company, and AlliedSignal Aerospace Company. Located on approximately 188 acres and consisting of more than 130 buildings, Honeywell and its predecessors have conducted jet engine design, assembly, testing, and repair at the site.

More detailed information on the background and history of each OU and the Honeywell 34th Street Facility can be found in Appendices B through E of the 2009 CIP.

Appendix

Site Overview

In the past, chemicals were spilled/leaked at the former Motorola plant at 52nd Street and McDowell Road, the Honeywell Facility at 34th Street and Air Lane, and potentially at other facilities in the area. These chemicals seeped downward through the ground and mixed with the groundwater. The contaminated groundwater has spread toward the west. Freescale and Honeywell have been working to investigate and cleanup the contamination. ADEQ and EPA closely monitor all work performed by Freescale and Honeywell (the Companies) at this site.

The Site was proposed for the NPL in October 1989 and formally placed on the NPL in November 1989 to investigate the presence of soil and groundwater contamination by chlorinated solvents. More information on the contaminants of concern (COCs) for the site can be found in Sections 1.4 and 4.1 of the 2009 CIP. In 1988, prior to formal listing, ADEQ and USEPA approved a groundwater recovery and treatment system as an interim remedy known as OU1. In 1989, ADEQ and Motorola entered into a consent order requiring Motorola to design and implement groundwater and soil remedies. The full-scale treatment system was constructed in 1992 and designed to



OU2 Honeywell groundwater treatment system

restrict contaminant migration at the Crosscut Canal along 46th Street, and to reduce the levels of contamination at the Motorola Facility. Since 1992, Motorola/Freescale has been operating and maintaining the system under ADEQ oversight.

In 1992 and 2003, USEPA conducted PRP searches which identified numerous PRPs for the Site. As of January 2012, the Agencies have entered into enforcement agreements with Freescale, Honeywell, Arizona Public Service, the Salt River Project, Phoenix Newspapers, Baker Metals, Adobe Air/Arvin Meritor/Cooper Industries, Walker Power, Kachina Joray, ITT Canon, and Aviall. The other PRPs are under investigation to determine whether they contributed to the groundwater contamination and are responsible for investigation and cleanup (for a list of these PRPs, see Appendix F in the 2009 CIP).

In 1994, ADEQ and USEPA selected a second interim remedy near 20th and Washington Streets designed to contain and treat the groundwater contamination in the OU2 area. ADEQ signed a Consent Decree with Motorola for the remedial design of OU2 in 1996. The design was completed and approved in December 1999. USEPA signed the Explanation of Significant Differences to the OU2 ROD in September 1999 to describe the changes in water treatment technology and end-use of the treated water. USEPA issued a Unilateral Administrative Order to Freescale and Honeywell in November 1998 for the construction of the OU2 treatment system and operation and maintenance of the system for two years. This Order was amended in December 2003 to provide for long-term operation and maintenance of the system by Freescale and Honeywell. The OU2 treatment system construction began in March 2000 and was completed in October 2001.

The OU2 treatment system became fully operational in December 2001. Freescale and Honeywell are responsible for the operation of this system under ADEQ and EPA oversight. Also in OU2, Honeywell, with ADEQ oversight, has been conducting an investigation of soil and

groundwater contamination at its facility. ADEQ and Honeywell entered into an administrative order on consent (AOC) in September 1999 to conduct a remedial investigation (RI) at the 34th St. Facility. The AOC required Honeywell to investigate its potential source areas and to define the full extent of its contamination at and emanating from the 34th St. Facility. Honeywell completed this RI in 2008 and started a baseline HHRA to be completed in 2012. As part of the human health risk assessment, a workplan for an indoor air vapor intrusion investigation at the Honeywell 34th St. Facility began in 2011, to be completed in 2012. Honeywell discovered a jet fuel plume at their facility that was mingling with the larger VOC plume. They installed a Biologically-enhanced Soil Vapor Extraction (BSVE) system to address the jet fuel plume in 2009 managed by the ADEQ Leaking Underground Storage Tank (LUST) Action under a corrective action plan. As of the first quarter of 2012 the BSVE system has removed in excess of 4,000,000 pounds of petroleum hydrocarbons and recently, removal rates have averaged over 5000 pounds per day indicating that the BSVE system is performing very well.

In 1997, the Agencies established a third OU study area to address groundwater contamination downgradient of OU2. EPA entered into an AOC with Honeywell and Arizona Public Service to perform the remedial investigation/feasibility study (RI/FS) for the OU3 Study Area in late 2009. The Remedial Investigation began in 2010.

The OU1 and OU2 treatment plants have been effective in containing the plume and reducing concentrations of contaminants in most areas. The 2011 Five Year Review of the remedies concluded that there were several issues that needed to be addressed in order to get to a final remedy. One major issue is addressing an ongoing source of contamination—dense non-aqueous phase liquid (DNAPL) that has seeped into fissures in bedrock—and the other is to complete the evaluation of the vapor intrusion pathway in OU1 and OU2.

Appendix

In 2009, a Bedrock Pilot Study was initiated in order to evaluate the effectiveness of extracting DNAPL from bedrock using wells. The data from this study is still under review, and a conclusion as to how to proceed will be reviewed as more data is received.

In 2011, EPA entered into an agreement with Freescale to investigate the soil gas to indoor air pathway in OU1. Soil gas samples were taken first, followed by subslab and indoor air samples of homes, apartment buildings, and commercial buildings. From 2011 to 2014, EPA investigated the potential for indoor air intrusion in OU1. Mitigation systems were installed in buildings where vapor intrusion occurred.

An investigation into whether vapor intrusion is occurring in OU2 began in February 2014 and will continue, following similar protocol as was used in OU1.

Investigations that have been conducted at all OUs will be used for the RI/FS phase for a final remedy for each OU. To complete the RI/FS at each OU, agreements with Potentially Responsible Parties must be negotiated and are dependent on a large number of unpredictable factors and lengthy legal negotiations.

Contaminants of Concern

EPA and ADEQ identify Contaminants of Concern during the RI/FS process that help drive cleanup decisions at a site. At the Motorola 52nd St. Site, past studies have identified Volatile Organic Compounds (VOCs) as the COCs that are currently driving cleanup. Under the classification of VOC, Trichloroethene (TCE) and Tetrachloroethene (PCE) are the two specific contaminants of concern. The Agencies are currently gathering information across all OU's and may be adding COC's by the end of the year.

APPENDIX 2

Community Profile

Operable Unit 1 Community Information

Geographic Information for OU1

The contaminated groundwater plume addressed by the OU1 remedy defines the OU1 area. The boundaries of OU1 are approximately 52nd Street on the east, 46th Street on the west, Palm Lane to the north, and Roosevelt Street to the south. The focus of the planned community involvement activities will be the residences and businesses in the OU1 area.

Demographic Information for OU1

The OU1 area, which is in Council Districts 6 and 8 and the 85008 zip code, consists of mixed residential and industrial/commercial land uses. Based on the 2010 U.S. Census information for this area, residents of this area represent a variety of ethnic backgrounds with the majority being Hispanic at 60.3%. There is also a significant Somali population in OU1. The 2010 Census data indicates that the main occupations for residents in this area are sales and office professions (23.4%), service occupations (26.5%), business, science, and arts (23.1%), production, transportation and material moving (12.2%), and natural resources construction and maintenance occupations (14.7%). The levels of education achieved are less than 9th grade (20.1%), high school graduate (27.8%), high school but no diploma (10.6%), and some college (23.1%). Language spoken in the home was identified as a language other than English (55.3%), Spanish (50.9%), and English only (44.7%).

Operable Unit 2 Community Information

Geographic Information for OU2

The OU2 area is defined by the OU2 remedy that addresses the plume of contaminated groundwater down gradient of the OU1 boundary. The OU2 area of groundwater contamination is generally between Roosevelt Street to the north, 20th Street to the west, slightly north of Buckeye Road to the south, and 40th Street to the east, with a rectangular northeastern extension up to 46th Street/State Route 143 on the west.

Demographic Information for OU2

OU2 comprises the zip codes 85034 and 85008 and is included in Council District 8. Demographics of each zip code were averaged because the sizes of the zip code areas were approximately the same. The area is a mixed residential and industrial area. Based on the 2010 U.S. Census figures for these zip codes, the OU2 community consists of people from various ethnic backgrounds. The Hispanic population is the majority component at approximately 61.1%, with many community members who do not speak English. The OU2 community comprises mainly low- and middle-income families. Most of the acreage in this area is either vacant or used for industrial purposes. Sky Harbor International Airport has the next largest amount of acreage, with single-family dwellings being next in acreage use.

Appendix

Operable Unit 3 Community Information

Geographic Information for OU3

The OU3 Study Area extends from 20th Street to about 7th Avenue to the west, McDowell Road to the north, and Buckeye Road to the south. More exact boundary information will result from additional investigations.

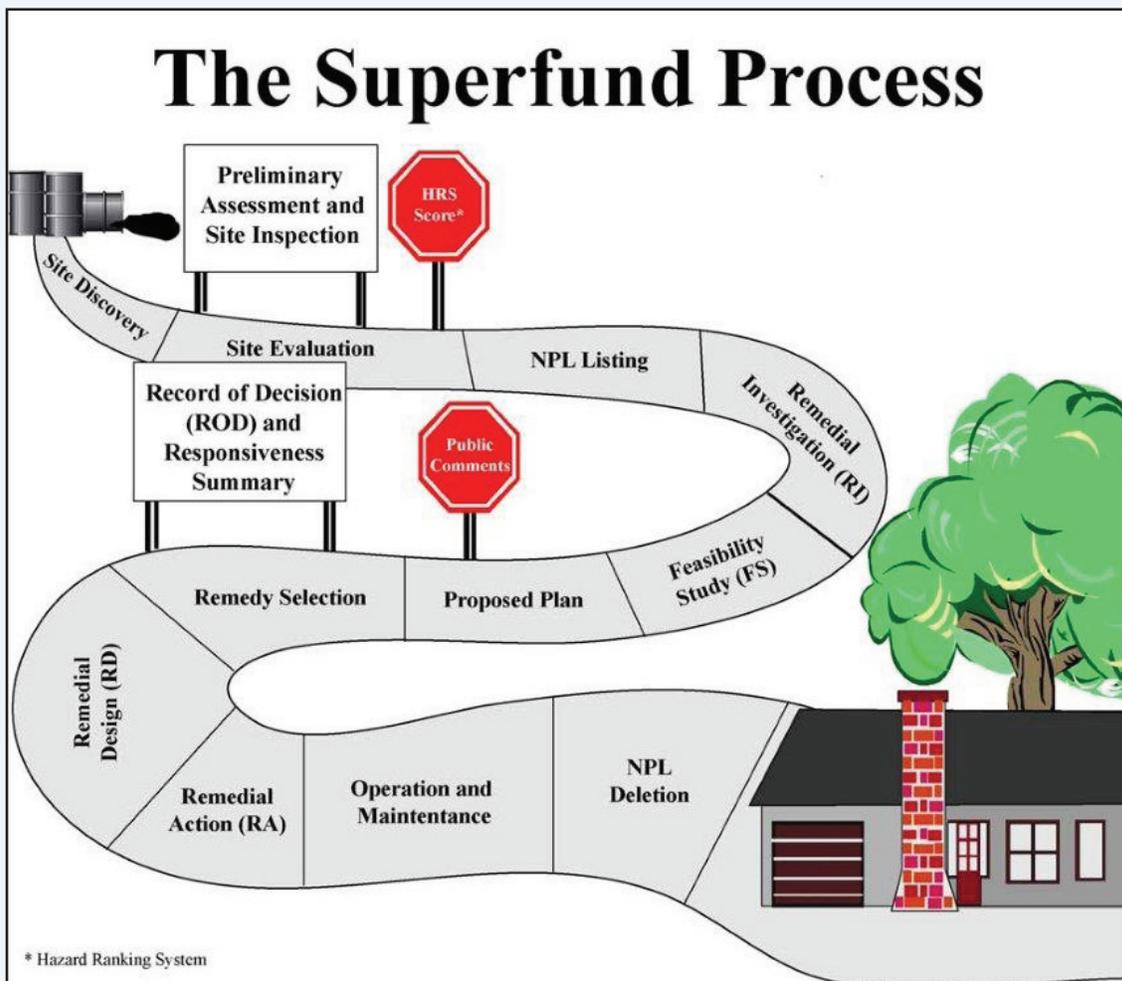
Demographic Information for OU3

The OU3 Study Area has a wide range of communities and types of land use. The OU3 comprises the zip codes 85006, 85034, 85003, and 85004 and Council District 8. Demographics of the zip codes from the 2010 U.S. Census were averaged because the sizes of the zip code areas were approximately the same. This area is mixed residential, commercial, and industrial. The ethnic composition is majority Hispanic at approximately 56.7%. The OU3 Study Area comprises mainly low- and middle-income families. Most of the acreage in this area is used for single-family dwellings, industrial uses, and commercial uses.

APPENDIX 3

Superfund Cleanup Program Overview

During community interviews, many people had questions about how EPA cleans up sites. The following provides a general listing of the many steps in the cleanup process, from the initial investigations through the removal of the site from the National Priorities List (Superfund List). As of 2013, the site has had two interim remedies operating for many years in OU1 and OU2 to extract VOCs from the groundwater and treat the extracted water to meet EPA's safe drinking water standards for TCE and PCE. These interim remedies also contain the groundwater plume from migrating. In OU1 and OU2, vapor intrusion has been investigated and based on the results, mitigation has been installed in the OU1 neighborhoods. Additional studies and investigations are being completed which will lead to an additional RI/FS for OU1 and OU2, and the first RI/FS for OU3.



Steps in the Superfund Cleanup Process

Appendix

1. Site Discovery

The first step in the Superfund process is called Site Discovery. This term applies to all of the different ways that EPA becomes aware of the need to consider a site for cleanup. Sometimes the notification comes from the general public, sometimes from a State that has been working on the site for some time, and sometimes other reports, such as the media, bring the site to EPA's attention.

2. Preliminary Assessment/Site Investigation (PA/SI)

Following Site Discovery, EPA reviews any existing information, including prior sampling results, in a step called the Preliminary Assessment. This is followed by various activities such as a site visit or additional sampling, which are called the Site Investigation. Together these are called the Preliminary Assessment/Site Investigation.

3. National Priorities List (NPL) Process

If the information warrants it, EPA then goes through the NPL process, which requires an analysis of the types of known or suspected contaminants and their location next to people or the environment, to determine the potential for harm. The analysis document, the NPL Scoring Package, becomes the basis for approaching a State's Governor to request the State's agreement for proposing that the site be added to the National Superfund List.

If EPA receives State concurrence, EPA publishes the name of the site in the Federal Register and begins a 30-day public comment period. It is at this stage that EPA may begin its Community Involvement process. EPA might provide notification to the public through newspaper advertisements, and if the site has an existing mailing list, a flyer or fact sheet announcing the comment period and explaining the Superfund program.

EPA considers public comments for and against adding the site to the NPL and makes a decision. If the site is added to the NPL, EPA will notify the public through appropriate means and formally begin to develop its Community Involvement process.

4. Remedial Investigation (RI)

Following NPL listing, EPA designs a thorough investigation of the site, characterizing both the lateral extent of contamination (the area affected and to what depth), and the types and concentrations of contaminants. This usually involves a significant air, soil, surface water and/or groundwater sampling process and often times multiple sampling events that can take many years.

During this time, the site's Community Involvement Coordinator conducts stakeholder interviews to help understand the unique issues and concerns. This information rolls into a Community Involvement Plan (CIP) which organizes EPA's public participation effort. The CIP includes a general cleanup timetable, a list of activities to involve the public, and contact information. Sometimes at the conclusion of the RI, EPA issues a fact sheet that summarizes the findings. The RI is placed in the Information Repository (usually at a library) and some portions are placed on the internet.

5. Feasibility Study (FS)

Once the contamination has been identified, EPA develops a list of possible ways to address it. The tools, techniques and process are organized into alternatives, often with multiple elements, that are evaluated using a number of criteria, including protectiveness of human health and the environment, ease of implementation, cost, and time to reach cleanup goals.

Sometimes certain elements are tested at a reduced scale in the laboratory or in the field. These are called treatability studies. Their results help EPA decide which alternatives should be considered and offered to the public for their comments. The FS is available in the Information Repository and on the Internet. The RI and FS are often spoken of in combination because they are often part of the same scope of work, so they are often noted as the RI/FS process.

6. Proposed Plan

A Proposed Plan is a 10-20 page document written for the public and distributed principally through EPA's mailing list. It announces a formal 30-day comment period (minimum), summarizes the findings of RI/FS, compares various ways to address site contaminants, rates them against EPA's nine criteria, identifies EPA's preferred alternative, and explains how to provide public comments.

The proposed plan period leads EPA to gather enough information to make cleanup decisions. These decisions follow a "Nine Criteria" analysis detailed in Appendix 15, and are formalized in a Record of Decision or (ROD).

7. Record of Decision (ROD)

The ROD is a public document that explains which cleanup alternatives will be used to clean up a Superfund site. The ROD is created from information generated during the Remedial Investigation/Feasibility Study (RI/FS).

A ROD contains site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, scope and role of response action, cleanup criteria, and the remedy selected for the cleanup.

8. Remedial Design (RD)

Remedial Design is the development of engineering drawings and specifications for a site cleanup. This phase follows the ROD. A fact sheet is distributed when the design work is at 70% complete.

9. Remedial Action (RA)

Remedial Action is the actual building of treatment facilities, removal of waste piles, entombment of contamination, implementation of institutional controls or any other aspect that completes the cleanup decision. This phase includes the testing and certifying of any facilities that are put into operation.

10. Five Year Review

This is an analysis prepared every five years to determine if site remedies remain protective of human health and the environment. Prior to the Five Year Review process beginning, the community is notified and asked to provide any information about the operations of the as-built remedy, or any issues and concerns that have arisen regarding the remedy. When the Five Year Review report is complete, the community is notified of the results.

11. Delisting

When a site has met its cleanup objectives, it can be removed from the NPL (Superfund List). When removed from the NPL, the public is notified and a comment period is held.

Other Cleanup Steps

Two other potential steps in the site's cleanup process might occur.

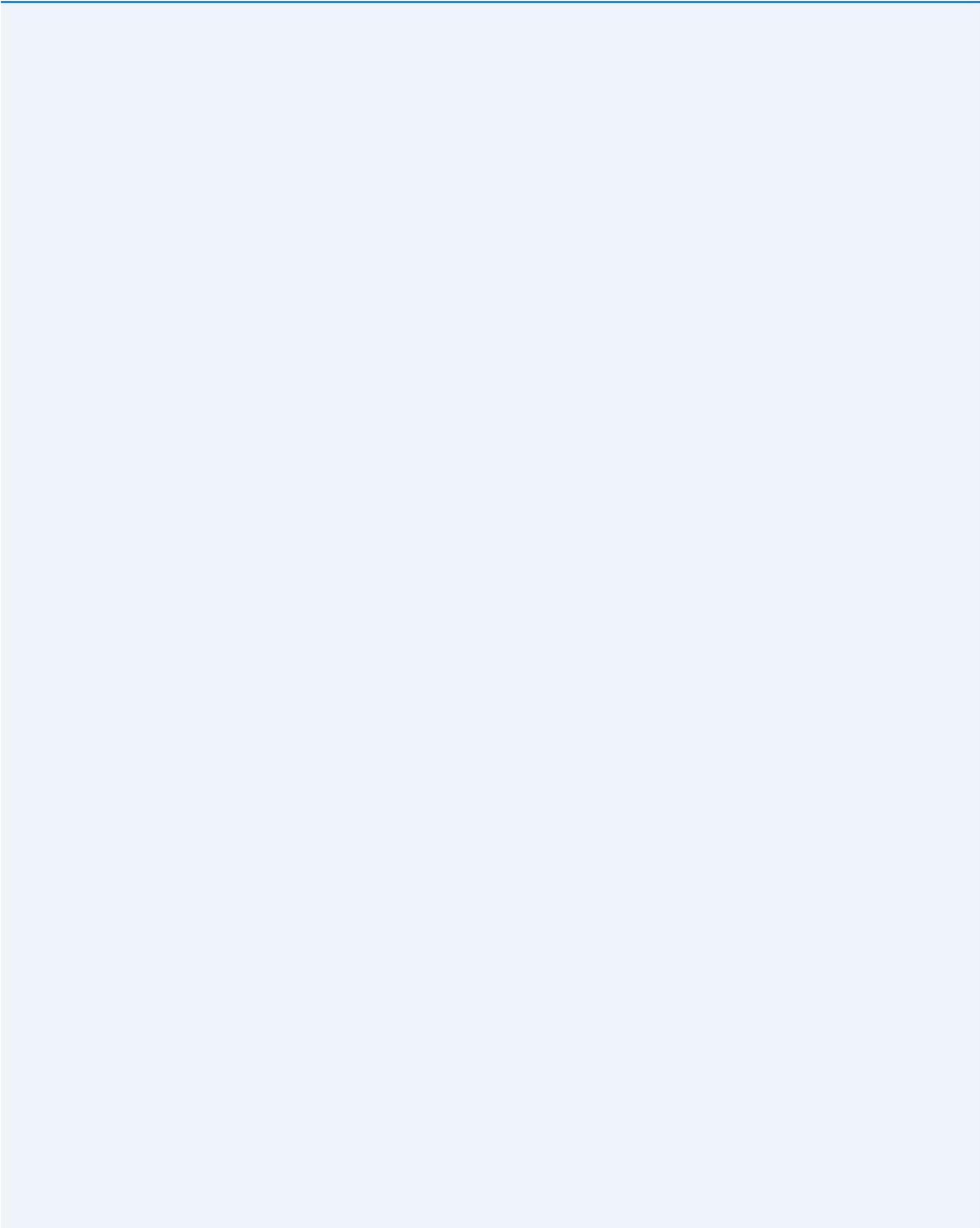
1. Interim Actions

An interim action is any short-term, temporary or preliminary construction or activity that addresses contamination before a final cleanup decision is made. The choosing of an interim action often results in a public participation process similar to the Proposed Plan process that leads to a ROD. This has occurred at the Site in both OU1 and OU2.

2. ROD Amendment/Explanation of Significant Differences

If a final remedy needs to be changed after a ROD has been made, the public is notified and a process similar to the Proposed Plan process leading up to a ROD might ensue. This depends on the nature and extent of the proposed changes.

Appendix



APPENDIX 4

Exposure to Site Contaminants

This section provides information the federal Agency for Toxic Substances and Disease Registry (ATSDR) about exposure to site contaminants.

1. What is ATSDR?
2. What is environmental exposure?
3. Where do the contaminants come from?
4. How can I be exposed?
5. Will I get sick from environmental exposure?
6. How can I tell if I have been exposed?
7. What can I do if I think I have been exposed to contaminants from a site?
8. Reference Section

What is ATSDR?

The ATSDR is the federal public health agency whose mission is to prevent adverse human health effects that result from hazardous waste exposure. The agency conducts assessments or evaluations to determine whether communities have been exposed to hazardous waste and then provides health information to prevent harmful exposures and related diseases.

What is environmental exposure?

Environmental exposure occurs when you contact a chemical substance or radioactive material in your environment. This could be where you work, live, and/or play.

For chemical exposure to occur you must come in contact with the substance or material and it must enter or touch your body. Exposure to radioactive material can occur these ways too, or it can enter your body if you are close to it.

Where do the contaminants come from?

Chemical substances and radioactive materials enter the environment from a source. There are many different types of sources.

Some examples of outdoor sources include:

- Industrial facilities, such as factories and chemical plants
- Landfills
- Hazardous waste sites
- Illegal dumping onto land or into water

Some examples of household sources include:

- Paints and paint strippers
- Household cleaners
- Cigarette smoke
- Air fresheners
- Gun cleaner

Appendix

How can I be exposed?

You can be exposed to a contaminant at its source or where it has moved to in air, water, soil/sediment, or food.

Depending on the contaminants, you can be exposed by:

- Eating or drinking the contaminants in water, soil, or food.
- Breathing them in air.
- Touching them in water, soil, sediment, air, or food.
- Direct irradiation from airborne or deposited radioactive material.

Will I get sick from environmental exposure?

Being exposed does not mean you will get sick.

Whether you get sick depends on:

- The type of contaminant.
- How it entered your body.
- How much entered your body.
- The developmental stage when exposure occurred.
- How long you were exposed.
- How many times you were exposed.
- Your individual health and how your body reacts to exposure.

How can I tell if I have been exposed?

First, ask your health care provider to take an exposure history. A document on how to take an exposure history is available at http://www.atsdr.cdc.gov/HEC/CSEM/exphistory/docs/exposure_history.pdf [PDF, 420 KB].

For some chemicals or radioactive materials, blood or urine sampling can tell if you have been exposed. Ask your health care provider if he or she can do these tests or recommend where you could go to have them done.

Your health care provider will need some specific information about the possible environmental exposure. Without that information your health care provider may not be able to tell you what your testing results mean.

What can I do if I think I have been exposed to contaminants from a site?

Contact your community or state health or environmental quality department.

To request that ATSDR evaluate potential exposure in your community or neighborhood, call 1-800-CDC-INFO or visit <http://www.atsdr.cdc.gov/HAC/petition.html>.

Reference Section

ATSDR. 2005. Public health assessment guidance manual (update).

Atlanta, GA: US Department of Health and Human Services.

ATSDR. 2003. Chemical exposure fact sheet. Atlanta, GA: US Department of Health and Human Services.

ATSDR. Environmental chemical exposure: The basics. Atlanta, GA: US Department of Health and Human Services.

APPENDIX 5

Site Meetings since January 2009

Year	Date	Activity
2009	Feb. 25, 2009	Open House Community Information Event
	July 9, 2009	Open House Community Information Event
	Sept. 17, 2009	Community Meeting
2010	Feb. 11, 2010	Open House Community Information Event
	May 17, 2010	Open House Community Information Event
	June 1, 2010	TAG Meeting with EPA and ADHS
	June 16, 2010	CIG Meeting
	Sept. 22, 2010	CIG Meeting
	Dec. 9, 2010	Neighborhood community meeting in OU1 regarding upcoming vapor intrusion pathway investigation
2011	Jan. 26, 2011	CIG Meeting
	March 23, 2011	CIG Meeting
	June 11, 2011	CIG Meeting
	August 24, 2011	TAG Meeting,
	August 25, 2011	EPA presentation at BioScience High School regarding community involvement
	Sept. 21, 2011	CIG Meeting
	Nov. 8, 2011	BioScience High School Field Trip to OU2 Treatment Plant and Honeywell BSVE treatment system
	Nov. 10, 2011	CIG Meeting

Appendix

Year	Date	Activity
2012	Jan. 25, 2012	CIG Meeting
	April 25, 2012	CIG Meeting
	Aug. 16, 2012	CIG Meeting
	Oct. 24, 2012	CIG Meeting
2013	Jan. 23, 2013	CIG Meeting
	April 24, 2013	CIG Meeting
	July 24, 2013	CIG Meeting
	October, 2013	CIG Meeting (cancelled due to Sequester/Federal Government Shutdown)
2014	April 3, 2014	CIG Meeting

APPENDIX 6

Potential Locations for Public Meetings

Facilities identified by ADEQ and EPA as potential locations to conduct public meetings and open houses include the following:

OU1:

Note: to reserve rooms that are part of the Balsz School District, contact:

Stephanie Bastin

(602) 629-6467

sbastin@balsz.k12.az.us

Balsz School District Office

4825 E. Roosevelt St.

Phoenix, AZ 85008

(602) 629-6400

Griffith School

4504 E. Palm Lane

Phoenix, AZ 85008

(602) 629-6700

Orangedale School

5048 E. Oak

Phoenix, AZ 85008

(602) 629-6800

Gateway School

Contact: Kathy Tegarden

1100 N. 35th Street, Phoenix 85008

(602) 522-1000

Brunson-Lee Elementary School

1350 48th St., Phoenix 85008

(602) 629-6900

Sonoran Science Academy

4837 East McDowell Rd

Phoenix, AZ 85008

(480) 557-2000

OU2:

Wilson School District Offices

3025 E. Fillmore Street

Phoenix, AZ 85008

(602) 681-2200

Eastlake Recreation Center

1548 E. Jefferson Street

Phoenix, AZ 85007

(602) 262-6759

GateWay Community College

108 N. 40th Street

Phoenix, AZ 85034

(602) 286-8000

Appendix

OU3:

BioScience High School

512 E. Pierce St.
Phoenix, AZ
(602) 764-5600

Capitol Elementary School

330 N. 16th Avenue
Phoenix, AZ 85007
(602) 257-3835

Kenilworth Elementary School

1210 N. 5th Avenue
Phoenix, AZ 85003
(602) 257-3889

Senior Opportunities West

Senior Center
1220 S. 7th Ave.
Phoenix, AZ
Contact: Kathy Walsh
(602) 261-8984

Harmon Park

1239 S. 5th Avenue
Phoenix, AZ
(602) 262-6898

Burton Barr Library

1221 N. Central Ave.
Phoenix, AZ
(602) 262-4636

APPENDIX 7

Neighborhood Associations

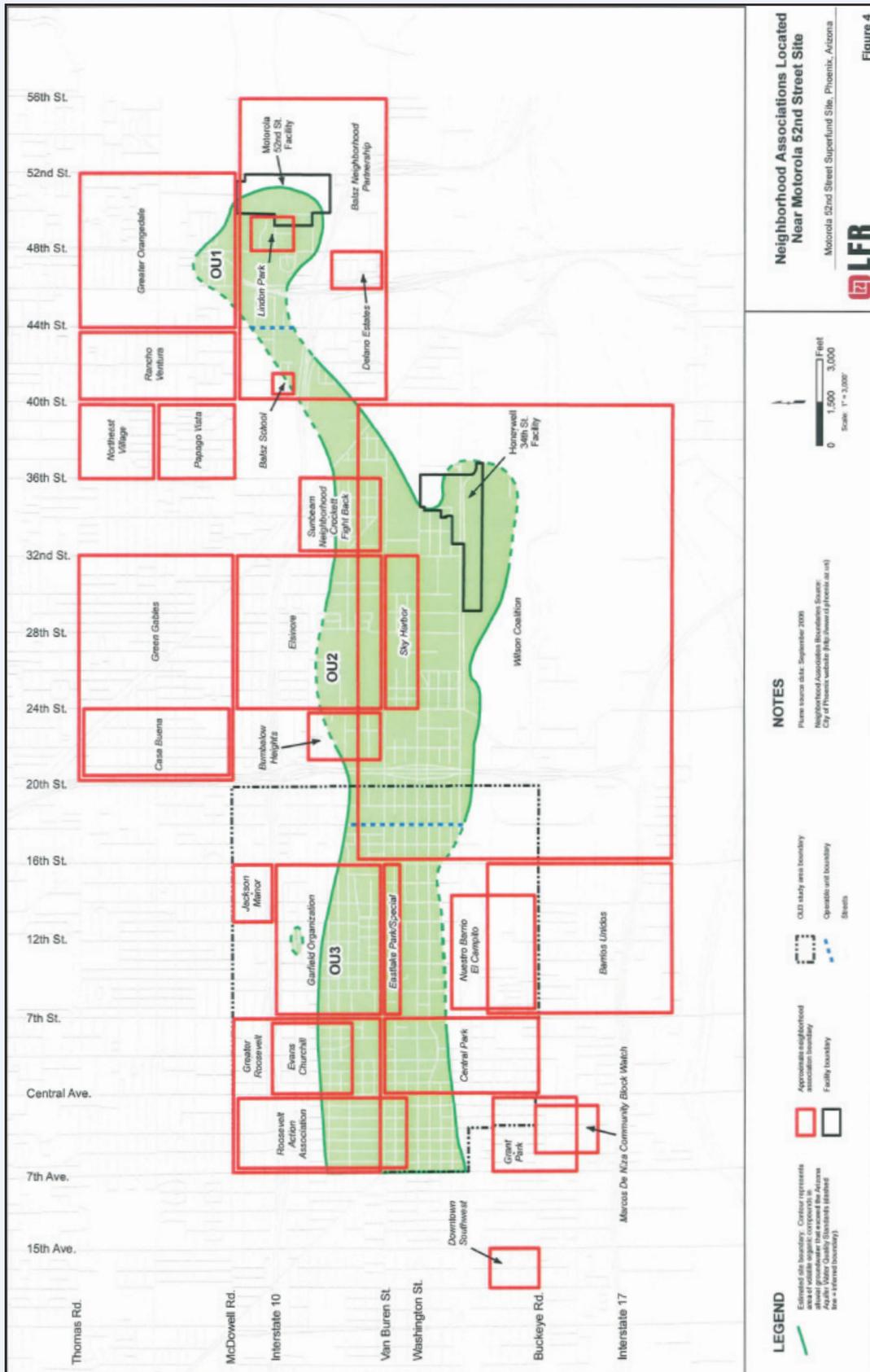
Group Name	Contact	Phone Number & Address
OU1		
Balsz Neighborhood Partnership	Amy Martinez	602-629-6519 4309 E. Belleview St. Phoenix, AZ 85008
Balsz School	Patty Solis	602-629-6400 4309 E. Belleview St. Phoenix, AZ 85008
Delano Estates	Carol Moore	602-273-0407 622 N. 47th Pl. Phoenix, AZ 85008
Greater Orangedale	Richard Avellone	602-952-0611
Lindon Park	Rene Chase-Dufault	602-793-1758 P.O. Box 65572 Phoenix, AZ, 85082
Northeast Village	David Doherty	NA
Papago Vista	Michael Rogers	602-220-9140 3612 E. Palm Lane Phoenix, AZ 85008
Rancho Ventura	David Nance	4141 E. Thomas Rd. Phoenix, AZ 85018

Appendix

Group Name	Contact	Phone Number & Address
OU2		
Bumbalow Heights	Madora Moore	602-244-1085
Casa Buena Neighborhood Association	Roberta Terrazas	602-381-6120 2140 E. Virginia Ave Phoenix, AZ 85006
Elsinore Neighborhood Association	George Hille	602-244-9757 1016 N 32nd St. Phoenix, AZ 85008
Greater Green Gables Neighborhood Association	Josephine Duffy	602-717-4264 2040 E. Hubbell St. Phoenix, AZ 85006
Sky Harbor Neighborhood Association	Ms. Hilaria Lopez	602-275-4670 2833 E. Monroe St. Phoenix, AZ 85034
Sunbeam Neighborhood/Crockett Fight Back	Harold Pickering	602-273-0010 3322 E. Fillmore St. Phoenix, AZ 85008
Wilson Coalition	Antonio Sanchez	602-681-2207 3025 E. Fillmore St. Phoenix, AZ 85008

Group Name	Contact	Phone Number & Address
OU3		
Barrio Unidos	Arthur Louera	602-252-1310 1219 S. 9th St.; Phx, AZ 85034
Central Park Neighborhood Assn	Fernando Lopez	602-252-6133 741 S. 1st St Phoenix, AZ 85004
Downtown Southwest Neighborhood Association	Ethel Lane	602-495-1952 730 S. 15th Ave. Phoenix, AZ 85007
Eastlake Park/Special	Philip Blair	602-257-1915 1401 E. Van Buren St. Phoenix, AZ 85006
Evans Churchill	Greg Esser	NA
Garfield Organization	Alice Ruiz	602-252-0142 1029 E. Garfield St.; Phoenix, AZ 85006
Grant Park	Armando Ganderilla	602-525-1764 809 S. 5th Ave. Phoenix, AZ 85003
Greater Roosevelt	Lance Rampy	602-252-3600 1263B E. Maryland Ave. Phoenix, AZ 85014-8037
Jackson Manor	Brenda Chacon	602-254-6828 1422 E. Culver St. Phoenix, AZ 85006
Marcos de Niza Blockwatch	Grace Salinas	602-463-8130 128 W. Mohave St. Phoenix, AZ 85003
Nuestro Barrio/El Campito	Nicholas Cortez	602-754-1078
Roosevelt Action Assn.	Catrina Knoebl	NA

Appendix



APPENDIX 8

Acronyms

ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
AOC	Administrative Order on Consent
ARAR	Applicable or Relevant and Appropriate Requirements
ATSDR	Agency for Toxic Substances and Disease Registry
CAG	Community Advisory Group
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CIG	Community Informational Group
CIP	Community Involvement Plan
EPA	Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study Report
HHRA	Human Health Risk Assessment
NPL	National Priorities List
OSHA	Occupational Safety and Health Administration
OU	Operable Unit
PCE	Tetrachloroethene
PRC	Phoenix Revitalization Corporation
PRP	Potentially Responsible Parties
RI/FS	Remedial Investigation/Feasibility Study
RI	Remedial Investigation Report
ROD	Record of Decision
RPM	Remedial Project Manager
SAP	Sampling and Analysis Plan
TASC	Technical Assistance Services to Communities
TCE	Trichloroethene
TAG	Technical Assistance Grant
UAO	Unilateral Administrative Order
U of A	University of Arizona

Appendix



APPENDIX 9

Glossary

Administrative Order on Consent (AOC): A legal agreement signed by EPA and an individual, business, or other entity through which the violator agrees to pay for correction of violations, take the required corrective or cleanup actions, or refrain from an activity. It describes the actions to be taken, may be subject to a comment period, applies to civil actions, and can be enforced in court.

Administrative Record (AR): The body of documents that forms the basis for the selection of a particular response at a site. For example, the AR for remedy selection includes all documents that were “considered or relied upon” to select the response action. An AR must be available at or near every site to permit interested individuals to review the documents and to allow meaningful public participation in the remedy selection process. The requirement does not apply to other ARs, such as those for deletion.

Agency for Toxic Substances and Disease Registry (ATSDR): This organization, established under section 104(i) of CERCLA, provides technical support and assistance to protect human health and worker safety, determines the toxicological and human health impacts associated with hazardous substances, develops a priority-order list of hazardous substances most frequently found at sites on the CERCLA National Priorities List, and produces toxicological profiles of chemicals.

Alluvial: Relating sand deposited by flowing water.

Ambient Air: Any unconfined portion of the atmosphere: open air, surrounding air.

Applicable or Relevant and Appropriate Requirements: “Applicable requirements” are those cleanup standards, standards of control, and criteria promulgated under Federal or State law that specifically address a hazardous substance, remedial action, location, or other circumstance at a CERCLA environmental restoration site. “Relevant and appropriate requirements” are those same standards mentioned above that, while not applicable at the CERCLA site, address problems or situations sufficiently similar to those encountered at the site that their use is well suited to the particular site.

Aquifer: An underground geological formation, or group of formations, containing water. Are sources of groundwater for wells and springs.

Background: The concentration of a substance in air, water, or soil that occurs naturally or is not the result of human activities.

Cleanup: Cleanup is the term used for actions taken to deal with a release or threat of release of a hazardous substance that could affect humans and/or the environment. The term is sometimes used interchangeably with the terms remedial action, removal action, response action or corrective action.

Community Informational Group (CIG): A CIG is a self-forming, self-governing stakeholder group that meets regularly to learn about the Agency’s cleanup process and provides feedback to the Agencies. Participants represent themselves as individuals and do not provide formal advice.

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Community Involvement Plan (CIP): A document that identifies techniques used by ADEQ and EPA to communicate effectively with the public during the Superfund cleanup process at a specific site. This plan describes the site history, nature and history of community involvement, and concerns expressed during community interviews. In addition, the plan outlines methodologies and timing for continued interaction between the Agencies and the public at the site.

Consent Decree (CD): A legal document, approved by a judge, that formalizes an agreement reached between EPA and potentially responsible parties through which the parties will conduct all or part of a cleanup action at a Superfund site; cease or correct actions or processes that are polluting the environment; or otherwise comply with EPA initiated regulatory enforcement actions to resolve the contamination at the Superfund site involved. The consent decree describes the actions the parties will take and may be subject to a public comment period.

Containment: A remediation method that seals off all possible exposure pathways between a hazardous disposal site and the environment, which generally includes capping (putting an engineered soil cover over a contaminated area) and institutional controls, e.g. deed restrictions.

Contamination: Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use.

Evaluation criteria: The nine evaluation criteria are as follows: 1) Overall protection of human health and the environment, 2) Compliance with ARARs (applicable or relevant and appropriate standards), 3) Long-term effectiveness and permanence, 4) Reduction of toxicity, mobility or volume, 5) Short-term effectiveness, 6) Implementability, 7) Cost, 8) State acceptance, and 9) Community acceptance.

Feasibility Study: Analysis of the practicability of various proposed cleanup methods.

Field Sampling Plan: A project planning document that describes the number, type, and location of samples to be collected. It also describes the type of analysis needed for each sample.

Five-Year Review: A periodic review of a Superfund site conducted after a response action has been initiated; the purpose of a five-year review is to evaluate whether the response action remains protective of public health and the environment.

Groundwater: The supply of fresh water found beneath the Earth's surface, usually in aquifers, which supply wells and springs. Because groundwater is a major source of drinking and irrigation water, there is growing concern over contamination from leaching agricultural or industrial pollutants.

Hazardous Substance: Any material that, because of its quantity, concentration, physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment.

Health Consultation: A review of available information or collection of new data to respond to a specific health question or request for information about a potential environmental hazard. Health consultations are focused on a specific exposure issue. A health consultation is therefore more limited than a public health assessment, which reviews the exposure potential of each pathway and chemical.

Interim Remedy: An interim remedy is a remedial action that is performed prior to the final remedy and often prior to the completion of the Remedial Investigation because timeliness of response is particularly important in order to address a current risk to public health or the environment; protect or provide a supply of water; prevent further release of a contaminant source into the environment; or control or contain contamination where such actions are expected to reduce the scope or cost of the final remedy at the site.

Lead Agency: The agency that provides the personnel who primarily plan and implement cleanup actions conducted under the National Contingency Plan. This includes EPA, state or political subdivisions, other federal agencies, or

Indian Tribes. Other agencies may be extensively involved in the process, but the lead agency directs and facilitates activities related to a site, often including enforcement actions. A state lead agency carries out the same responsibilities delineated for Federal On-Scene Coordinators and/or Remedial Project Managers except coordinating and directing federal agency response actions (40 CFR 300.5).

National Contingency Plan (NCP): The basic policy directive for federal response actions under CERCLA. It sets out the organizational structure and procedures for responding to releases of hazardous substances, pollutants, and contaminants, and contains the Hazard Ranking System and the National Priorities List as appendices.

Operable Unit (OU): A designation for a portion of a site with defined boundaries and at which site actions are uniquely planned, executed, and tracked. A discrete part of the entire response action that decreases a release, threat of release, or pathway of exposure (40 CFR 300.5).

Plume: A well defined area of contamination in groundwater, soil or the air, often used to describe the dispersion of contamination in soil and/or groundwater.

Potentially Responsible Party (PRP): A PRP is an individual or company that is potentially responsible for all or part of the contamination problems at a State or Federal Superfund site. Whenever possible, EPA or ADEQ requires PRPs, through administrative and legal actions to cleanup or pay for the cleanup of their portion of hazardous substances sites they have contaminated.

Pump and Treat: A pump and treat system is a remedial action that involves installing wells at strategic locations to extract contaminated groundwater, treating it above-ground to remove the contaminants, and reinjecting it into the aquifer. Other uses for the water or part of the water may be an option such as watering golf courses and dust control.

Record of Decision: A public document that explains which cleanup alternative(s) will be used at National Priority List Sites.

Remedial Action Plan (RAP): A plan that details the technical approach for implementing the remedial response. It includes the methods to be followed during the entire remediation process, from developing the remedial design to implementing the selected remedy through construction.

Remedial Investigation: An in-depth study designed to gather data needed to determine the nature and extent of contamination at a Superfund site.

Remediation: Cleanup or other methods used to remove or contain a toxic spill or hazardous materials.

Remedy: Long-term action that stops or substantially reduces a release or threat of a release of hazardous substances.

Risk Assessment: Qualitative and quantitative evaluation of the risk posed to human health and/or the environment by the actual or potential presence and/or release of specific pollutants.

Sediment: Topsoil, sand, and minerals washed from the land into water, usually after rain or snow melt.

Site Investigation: Samples are taken and research conducted to determine if the site has polluted soil and/or water.

Solvent: A substance, usually a liquid, which is capable of dissolving or dispersing one or more other substances. PCE is a common solvent used in the dry cleaning business and in cleaning auto and airplane parts.

Superfund: The program operated under the legislative authority of CERCLA and SARA that funds and carries out EPA solid waste emergency and long-term removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Technical Assistance Grant (TAG): A grant of up to \$50,000 to enable citizens to hire independent technical advisors to help them understand information related to cleanup of a specific Superfund site.

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Toxicity: The degree to which a substance or mixture of substances can harm humans or animals.

Unilateral Administrative Order: EPA can order parties to perform cleanup work if the parties do not agree to perform the cleanup work through a consent decree or an administrative order on consent, or refuse to perform work they previously agreed to perform under a settlement agreement. These orders, known as Unilateral Administrative Orders, require parties to undertake a response action, either a short or long-term cleanup. EPA can issue a unilateral administrative order when it finds there may be an imminent and substantial endangerment to the public health or the environment.

Vapor Intrusion: Vapor intrusion is the migration of volatile chemicals from the subsurface into overlying buildings. Volatile chemicals in buried wastes and/or contaminated groundwater can emit vapors that may migrate through subsurface solid and into air spaces of overlying buildings.

Volatile Organic Compounds (VOCs): A large group of carbon-containing compounds that are easily dissolved into water, soil, or the atmosphere and evaporate readily at room temperature. Examples of VOCs include tetrachloroethene, trichloroethene, benzene, toluene, ethylbenzene, and xylene (BTEX). These contaminants are typically generated from metal degreasing, printed circuit board cleaning, gasoline, and wood preserving processes.

APPENDIX 10

Key Contacts

U.S. EPA

Rachel Loftin

Remedial Project Manager for OU1 & OU2
75 Hawthorne St. (SFD-6-2)
San Francisco, CA 94105
(415) 972-3253 (office)
(415) 947-3528 (fax)
loftin.rachel@epa.gov

Zizi Searles

Remedial Project Manager for OU2
75 Hawthorne St. (SFD 6-2)
San Francisco, CA 94105
(415) 972-3178 (office)
(415) 947-3528 (fax)
searles.zizi@epa.gov

Carlin Hafiz

Community Involvement Coordinator
600 Wilshire Blvd., Suite 1460
Los Angeles, CA 90017
(213) 244-1814 (office)
(213) 244-1850 (fax)
Hafiz.Carlin@epa.gov

Arizona Department of Environmental Quality

Patrick Shinabery

Project Manager for OU1
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-6801
shinabery.patrick@azdeq.gov

Brian Stonebrink

Project Manager for OU2 and site-wide
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-4197
stonebrink.brian@azdeq.gov

Wendy Flood

Community Involvement Coordinator
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-4410
flood.wendy@azdeq.gov

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U.S. Senators

John McCain

2201 East Camelback Road
Suite 115
Phoenix, AZ 85016
Main: (602) 952-2410
Fax: (602) 952-8702

Jeff Flake

2200 East Camelback, Suite 120
Phoenix, AZ 85016-3455
(602) 840-1891

U.S. Representatives

Ed Pastor

Phoenix District Office
411 North Central Avenue
Suite 150
Phoenix, AZ 85004
(602) 256-0551
Fax: (602) 257-9103

APPENDIX 11

Media Contacts

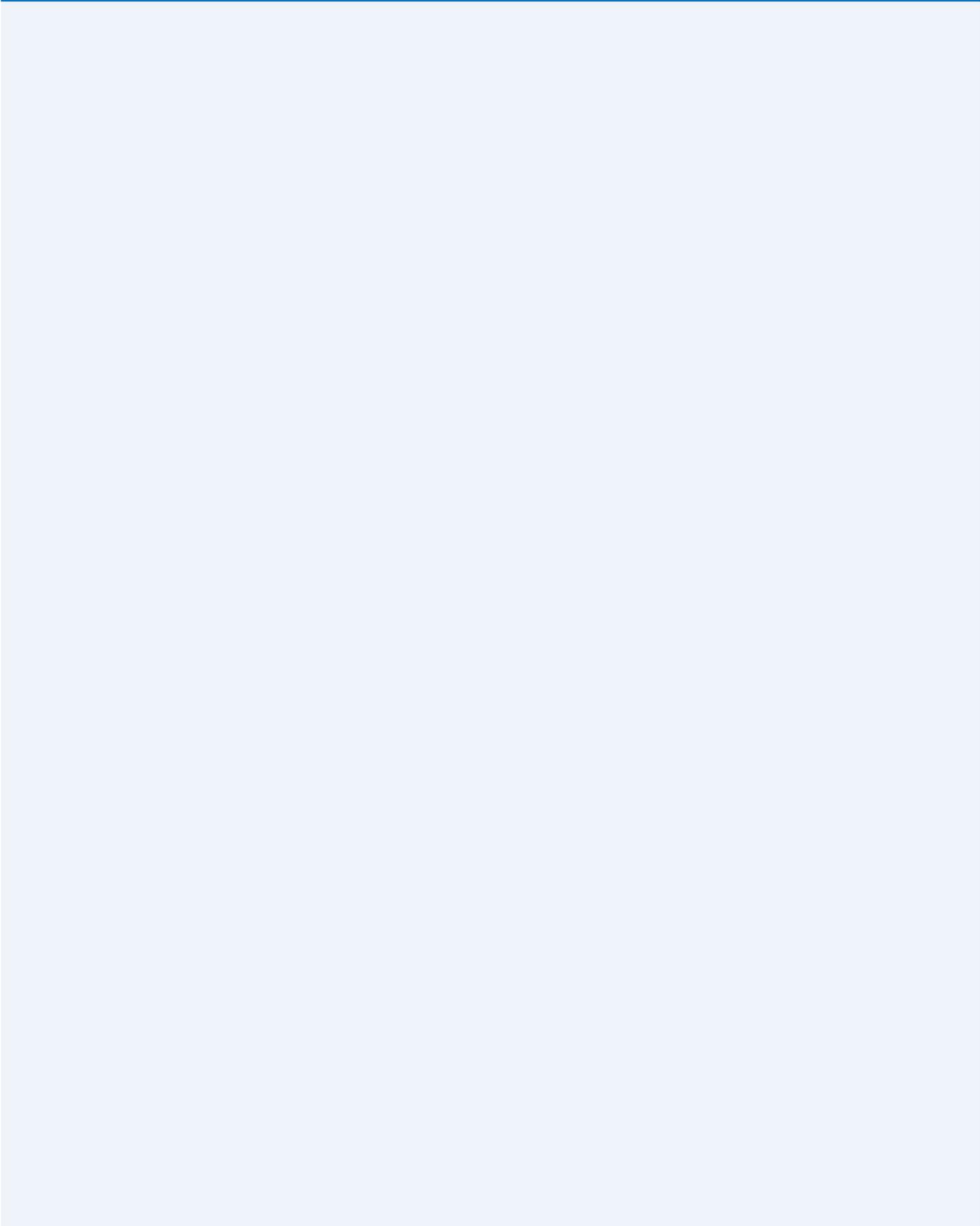
The Arizona Republic

200 East Van Buren
Phoenix AZ 85004
(602) 444-8000

La Voz

800 N 1st Avenue
Phoenix , AZ 85003
(602) 253-9080 (Telephone)
(602) 252-1476 (Fax)

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APPENDIX 12

Information Repositories and Websites

<http://www.epa.gov/region09/motorola52ndst>

<http://www.azdeq.gov/environ/waste/sps/phxsites.html#mot52a>

Burton Barr Library (hard copies)

1221 N. Central Avenue

(602) 262-4636

<http://www.phoenixpubliclibrary.org>

Phoenix Public Library, Saguaro Branch (Files on CDs)

2802 North 46th St.

(602) 262-6801

<http://www.phoenixpubliclibrary.org>

ADEQ Records Management Center

(M-F 8:30 am - 4:30 pm)

1110 W. Washington St.

(602) 771-4380

www.azdeq.gov

Superfund Records Center

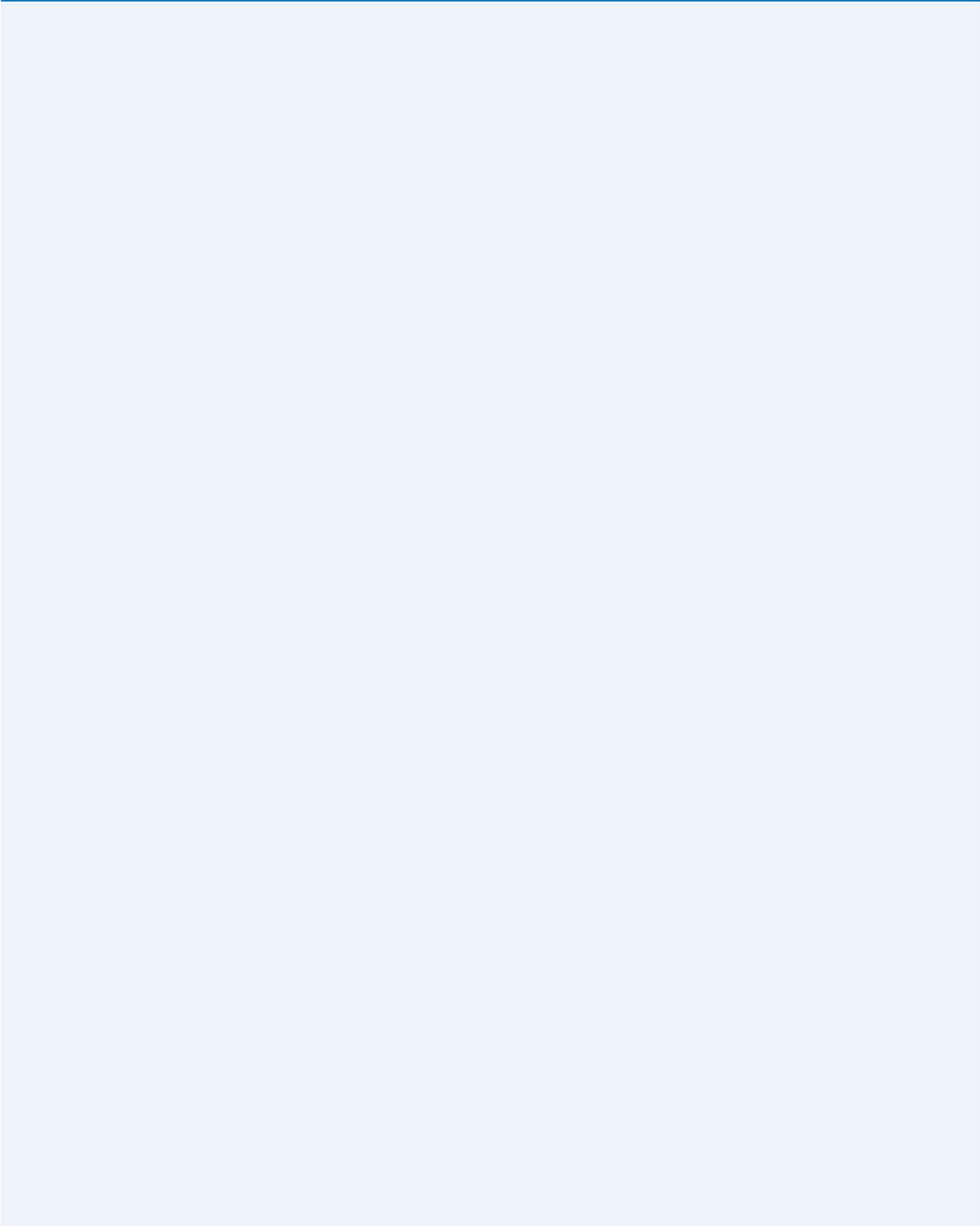
95 Hawthorne St., room 403

San Francisco, CA 94105

(415) 820-4700

www.epa.gov

Appendix



APPENDIX 13

TASC Needs Assessment



Technical Assistance Services for Communities (TASC)

Contract No.: EP-W-07-059

TASC WA No.: TASC-2-Region 9

Technical Directive No.: TASC-2-Region 9-Motorola-15

TASC Technical Assistance Needs Assessment

Site Name: Motorola 52nd Street Superfund Site
Site Location: Phoenix, AZ
Date: May 18, 2010

Introduction

This Technical Assistance Needs Assessment is being conducted for Motorola 52nd Street Technical Assistance Grant (TAG) recipient by Krissy Russell-Hedstrom of E² Inc. at the request of EPA Region 9. It is being conducted under TASC Work Assignment TASC-2-Region 9 and Technical Directive TASC-2-Region 9-Motorola-15. The purpose of this needs assessment is to better understand the technical assistance needs of the Motorola 52nd Street community regarding the remediation of the Motorola 52nd Street Superfund Site. E² Inc. was specifically asked to determine if a community health study is needed at the site.

The recommendations contained in this summary are based on:

- Background information on the site found through the Web and by communications with Leana Rosetti, EPA Community Involvement Coordinator
- An interview with Jennifer Botsford, Arizona Department of Health Services (ADHS), to better understand what health studies have been performed and what health study information has been provided to the community by the state already.
- Telephone interviews with community representatives conducted February 25 – March 31, 2010:
 - Steve Brittle, Don't Waste Arizona
 - Mario Castaneda, LPNA TAG Technical Advisor
- Attendance at a TAG meeting by Krissy Russell-Hedstrom on April 6, 2010 and discussions with community members who attended that meeting:
 - Mary Moore, TAG Coordinator
 - Mario Castaneda, TAG Technical Advisor
 - Walter Mikitowicz
 - Ray Kessler
 - Andrew Ross
 - Tommie G. Progett, Jr.
 - Rene Chase DuFault

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EPA Remedial Project Managers (RPMs) Jamey Watt and Janet Rosati and EPA Community Involvement Coordinator Leana Rosetti also attended the meeting.

Site Background

The Motorola, Inc. Superfund Site is located in east-central Phoenix in mixed residential and commercial area. Discovery of a leaking underground storage tank in 1982 at the former Motorola 52nd Street Plant (now operated by ON-Semiconductor) resulted in soil and ground water contamination of 1,1,1-trichloroethane. After further investigation, the soil and ground water were found to be contaminated with other chlorinated solvents used at the Motorola plant and other facilities in the area, such as the Honeywell 34th Street facility (formerly AlliedSignal). The site was added to the National Priorities List (NPL) in 1989.

Currently, site boundaries are defined by the extent of the ground water contamination plume which has spread westerly from the contamination sources for several miles. The ground water in the area is about 30 to 90 feet below the ground surface and is not used for drinking water purposes. Drinking (tap) water is supplied by the city of Phoenix and is derived from primarily surface water sources.

Arizona Department of Environmental Quality (ADEQ) and EPA are overseeing the cleanup of the site. For remediation purposes, the site is divided into Operable Units (OU) 1-3. There are two ground water treatment facilities, one in OU1 (the Motorola facility itself) and one in OU2 (an area of contaminated ground water downgradient from OU1). OU3 is an area of contaminated ground water extending from 20th Street and 7th Avenue on the east and west and McDowell and Buckeye Roads on the south. OU3 contamination is still under investigation. The Honeywell 34th Street facility is located within OU2 and potential contamination from this facility is being conducted under a separate investigation.

Because exposure to some chlorinated solvents has been shown to increase the risk of certain types of cancers, health studies and risk assessments have been conducted for the site as follows:

- 1988: Public Health Assessment (Agency for Toxic Substances and Disease Registry)
- 1990: Cancer Incidence and Mortality in an East Phoenix Area Overlaying Groundwater Contaminated with Volatile Organic Compounds (Arizona Department of Health Services and Arizona Department of Environmental Quality)
- 1992: Baseline Risk Assessment (Arizona Department of Environmental Quality)
- 1993: Site Review and Update (U.S. Department of Health and Human Services)
- 1996: Report on the Motorola, Inc. 52nd Street Plant (Agency for Toxic Substances and Disease Registry)
- 2002: Health Consultation—Status Verification of Private Drinking Water Wells (U.S. Department of Health and Human Services)

The 1990 report summarized results from an evaluation of cancer incidence (and specifically liver and kidney cancers) and mortality data for census tracts in the area surrounding the site. The results indicated that there was not an elevated risk of cancer in the area at that time. Because the latency period for most cancers is 20 years or greater, new data could be examined

to evaluate whether this is still the case. ADHS will use updated information from the Arizona Cancer Registry to update this report although the timeframe for doing so is unknown.

Community Involvement

The Lindon Park Neighborhood Association (LPNA) was awarded an EPA TAG in 2004. Since that time, Mary Moore, a community member, has led the organizational efforts for the TAG. Mario Castaneda, a professor at nearby Gateway Community College, has served as the Technical Advisor (TA) under the TAG since then as well. The TAG was renewed in October 2009 for a 3-year period. Over the years, the community has been very active in understanding and engaging in dialogue about current cleanup remedies, holding monthly meetings to discuss site progress and community concerns at various locations throughout the affected community. A Community Advisory Group (CAG) previously met in conjunction with the TAG, but has not been operational for some time. Community members have expressed an interest in reinstating the CAG.

In the past, ADEQ has led community involvement efforts at the site, but EPA took over the responsibility in January 2010. A Community Involvement Plan (CIP) was updated in 2009 by ADEQ; it is uncertain if EPA will use the CIP now that it is the lead.

There appears to be some mistrust within the community of the decision makers at ADEQ and ADHS although “on-the-ground” state staff working directly with community members have amicable working relationships with them. Overall, EPA appears to be very well-respected among community members.

Perspectives on Community Technical Assistance Needs

Agency Perspective

EPA and ADHS representatives expressed a desire to address the community’s technical assistance needs, but are uncertain exactly what the needs are. Agency representatives have heard from community members that they are experiencing negative health effects and want to better understand if site contamination is the cause of these health problems. Agency representatives have provided general education to the community (primarily through presentations) on health studies and risk assessments, but feel that the community still has questions. The agencies said that some community members have requested that additional health studies be conducted for the area surrounding the site and agency representatives would like to better understand what the community would like to gain from health studies (e.g., confirmation that particular health problems are attributable to the site) in order to inform what type of study might meet their goals.

Community Perspective

Somewhat surprisingly, the community members interviewed for this needs assessment did not appear to be as interested in health studies as prior conversations with agency representatives indicated. Some of the needs expressed were related to health concerns, but when asked about

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health study needs in particular, the community members interviewed did not have specific comments or suggestions. Community members interviewed appeared to be primarily concerned with enhancing community outreach, suggesting a number of activities that could support this effort.

Recommendations for Technical Assistance

A difference in community needs expressed to agency representatives and to TASC for this needs assessment may be a reflection of different community members providing input or a result of waning community motivation for a health study. Before undertaking a health study solely on behalf of community interest, TASC recommends initiating a significant community outreach effort in order to ensure that such a study is in the best interest of community members. Further, with more engaged citizens, ascertaining community motivation for a health study may more easily guide what type of study is needed. An ADHS community meeting scheduled for June 2010 may be another means for gauging how much community interest still exists for a community health study. After community outreach is underway, additional needs beyond a health study could also be considered.

Enhancing Community Involvement at the Site

Based on community interviews, specific recommendations for enhancing community involvement include:

1. Provide site awareness and access to general site information to community members.
 - Initiate an outreach campaign to educate citizens about site (possibly getting volunteer “block captains” to assist).
 - Create an easy-to-understand document of the history of the Site in English and Spanish for distribution to community members. The document could be used to engage new community members and updated over time.
 - Create a bilingual community website to enhance communication about the site and publicize the website’s URL. Such a website could contain meeting information, site updates, and links to important site documents (such as monitoring reports and decision documents) as well as allow for exchange of ideas through blog-type posting. Gateway Community College has offered the community hosting space through its “Blend” system which could meet community needs effectively.
 - Consider providing information to community members at a booth at a local health fair.
2. Produce quarterly community newsletters to give site updates from a community perspective. Newsletters could be distributed through block captains or posted on the community website. One focus of the newsletters could be on presenting information on common perceptions about living on the site through a series of informational “nuggets.” Possible topics could include:
 - Why are many trees in the area stunted in growth?
 - Is it safe to eat food produced in gardens in the area?
 - Is boron concentrated in grapefruit grown in the area?

- Does site-related drilling cause cracks in foundations and walls of homes in the area?
- 3. Consider reinstating a CAG or similar advisory committee. Such a group could provide input to decision-makers on behalf of the community.
 - Support a new advisory committee by creating a technical summary of site activities (in both English and Spanish) that have been completed since the last time the CAG met in 2007.

These activities could be initiated immediately by the TAG recipient with the assistance of its TA.

Other Technical Assistance Needs

After community outreach efforts are underway, TASC recommends gauging citizen interest for fulfilling the other needs expressed in the community interviews below. Depending on the timeliness of the community outreach effort, some of these needs (in particular, providing community education on vapor intrusion) may be met while outreach activities are ongoing. Other needs may come to light through additional community involvement and they can be integrated into this list and prioritized. Technical assistance needs communicated by the community include the following:

1. Provide community education on vapor intrusion given that a vapor intrusion study is to start soon. Particular focus on testing expectations may be important.
2. Provide a better understanding of the assumptions that go into risk assessments (e.g., origin of risk assessments).
3. Provide some education on what health surveys look like including how one should be conducted and what type of health survey might be appropriate for this site. A health study specialist could be brought in to provide an independent perspective.
4. Publish an online data repository for all past and present data collected at the site to enhance transparency of work being performed at the site.
5. Initiate a panel discussion with responsible parties and agencies so that the community can ask questions about the site. This activity might work best in conjunction with an advisory board.

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APPENDIX 14

Federal, State, and Local Environmental Resources

This guide provides you with a variety of organizations and agencies you may contact with environmental-related issues.

U.S. Environmental Protection Agency, Region 9

Includes Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations

75 Hawthorne St.
San Francisco, CA 94105

Regional Receptionist
(415) 947-8021

24-Hour Environmental Emergencies
(800) 300-2193

Superfund Community Involvement Office
(800) 231-3075

Office of Environmental Justice
(800) 962-6215

Environmental Information Center
(866) EPA-WEST

Arizona Department of Environmental Quality

Phoenix Main Office
1110 W. Washington St.
Phoenix, AZ 85007
(602) 771-2300
toll free (800) 234-5677

Air Quality

U.S. Environmental Protection Agency

Air Division Contacts – Region 9
<http://www.epa.gov/region/air/r9contacts.html>

Community Based Air Toxics Projects
www.epa.gov/air/toxicair/community

Improving Air Quality in Your Community
www.epa.gov/air/community

Plain English Guide to the Clean Air Act
www.epa.gov/air/caa/peg

Indoor Air Quality Tools for Schools – Managing Asthma in the School Environment
(415) 947-4189
www.epa.gov/iaq/schools/managingasthma.html

Permits Office
(415) 972-3966
<http://www.epa.gov/region/air/permit/index.html>

Arizona Department of Environmental Quality

Air Pollution Current Values
(602) 771-2367
<http://www.maricopa.gov/aq/divisions/monitoring/Default.aspx>

Air Quality Monitoring
(602) 771-2308
www.azdeq.gov/environ/air/index.html

Vehicle Emission Inspection Program and Testing
(877) 692-9227
<http://www.azdeq.gov/environ/air/vei/index.html>

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Arizona Department of Health Services

(602) 364-3118
www.azdhs.gov/phs/oeh/invsurv/air_qual/index.htm
 Air Quality Complaints – Indoor

Maricopa County Air Quality Department

(602) 506-6010
<http://www.maricopa.gov/aq/>

Permit Office

http://www.maricopa.gov/aq/divisions/permit_engineering/Default.aspx

City of Phoenix Air Quality Program

(602) 256-5669
<http://phoenix.gov/ENVPGM/airqual.html>

Brownfields

U.S. Environmental Protection Agency

www.epa.gov/brownfields
 Brownfields and Revitalization Program

Arizona Department of Environmental Quality – Waste Programs

(602) 771-4401
www.azdeq.gov/environ/waste/cleanup/brownfields.htm

City of Phoenix Brownfields Land Recycling Program

(602) 256-5669
<http://phoenix.gov/BROWNFLD/brownfld.html>

Citizen Rights

Arizona Secretary of State

(602) 542-4751
www.azsos.gov/public_services/
 Arizona Laws and Statutes

Arizona State Legislature Ombudsman

(602) 277-7292
www.azleg.gov/ombudsman/Open%20%Meeting%20%Law%2101.pdf
 Arizona Open Meeting Law

Community Reporting

Arizona Department of Environmental Quality

(800) 234-5677
<http://www.azdeq.gov/function/compliance/complaint.html>

Report a suspected violation of environmental law or rule

Maricopa County Air Quality Department

(602) 372-2703
http://www.maricopa.gov/aq/contact_us/report_violation.aspx

Report an air pollution violation

Maricopa County Environmental Services

(602) 506-6616
<http://www.maricopa.gov/EnvSvc/Complaints/Forms/ComplaintInput.aspx>

Report environmental issues and concerns

Environmental Justice

U.S. Environmental Protection Agency – Office of Environmental Justice

(415) 947-4194
www.epa.gov/care/libarary/guide_vol_progs_2008.pdf
 Community Guide to EPA's Voluntary Programs, as well as more resource listings, funding resources, and tools

Grants and Funding

Federal Government Grants

(800) 518-4726
www.grants.gov
 Find and apply for federal government grants

U.S. Environmental Protection Agency – Grants and Interagency Agreements Program

(202) 564-5315
www.epa.gov/ogd
 Funding opportunities, information on how to apply, new recipient training

U.S. Environmental Protection Agency – Environmental Justice Grants

www.epa.gov/oecaerth/environmentaljustice/grants

**U.S. Environmental Protection Agency – Region 9
Request for Proposals**

www.epa.gov/region09/funding/rfps.html

Hazardous Waste

U.S. Environmental Protection Agency

Technical Assistance for Communities

(415) 972-3237

www.epa.gov/superfund/community/tasc

Toxics Release Inventory

(415) 972-3848

www.epa.gov/tri

Database with information on toxic chemical releases

**Arizona Department of
Environmental Quality**

Underground Storage Tank Program

(602) 771-4303

www.azdeq.gov/environ/ust/index.html

Waste Program Contacts

<http://www.azdeq.gov/function/about/waste.html>

Waste Programs Outreach

(602) 771-4294

www.azdeq.gov/environ/waste/sps/community.html

**Superfund Community Involvement
Arizona Department of Environmental Quality Solid
Waste Management**

(602) 771-4673

www.azdeq.gov/environ/waste/solid/index.html

Medical Waste

(602) 771-4673

www.azdeq.gov/environ/waste/solid/ic.html#sharps

Petroleum Contaminated Soils

(602) 771-4698

<http://www.azdeq.gov/environ/waste/solid/special.html>

Used Oil

(602) 771-4140

www.azdeq.gov/environ/waste/solid/oil.html

**Maricopa County Water and Waste
Management Division**

(602) 506-6666

<http://www.maricopa.gov/EnvSvc/WaterWaste/>

**City of Phoenix – Hazardous Waste/Waste
Management**

City Hazardous Waste Management – Personnel Safety

(602) 262-7555

City Asbestos Abatement Program – Engineering

(602) 534-3906

**City Community Right to Know Reporting Program –
Personnel Safety**

(602) 262-7555

Household Hazardous Waste Program – Public Works

(602) 256-3310

Health

**U.S. Environmental Protection Agency
Agency for Toxic Substances and Disease Registry**

(800) 232-4636

www.atsdr.cdc.gov/publications/Citizens

GuidetoRiskAssessments.html

Health Assessments and Consultations

Arizona Department of Health Services

(602) 542-1001

www.azdhs.gov

Cancer Registry for Arizona

(602) 542-1025

www.azdhs.gov/phs/phstats/acr/index.htm

Health Assessments and Consultations

(602) 524-1025

www.azdhs.gov/phs/oeh/atsdr.htm

Appendix

Homeowner Concerns

Arizona Department of Agriculture

(602) 542-3578
www.azda.gov/Main/faq.htm
Pesticides

Arizona Department of Pest Management

(602) 255-3664
www.sb.state.az.us/
Pesticides

Arizona Association of Realtors

(602) 771-7799
www.aaronline.com/ForRealtors/forms/SampleForms/spds_samp.pdf
Real Estate Seller Disclosures

Maricopa County Assessor

(602) 506-3011
www.maricopa.gov/Assesor/RealProperty.aspx
Property Values

Maricopa County Attorney's Office – Slumlord Hotline

(602) 372-7586
www.maricopacountyattorney.org/
Landlord Problems

City of Phoenix Neighborhood Services Department

(602) 262-7344
www.phoenix.gov/nsd
Landlord Problems

City of Phoenix Development Services

(602) 262-7884
www.phoenix.gov/residents/building/index.html
Residential Building Permits

Illegal Dumping

Arizona Department of Environmental Quality – Solid Waste Program

(602) 771-2221
www.azdeq.gov/environ/waste/dumping/index.html

City of Phoenix Solid Waste Management

(602) 262-7251

Water Quality

Arizona Department of Environmental Quality Drinking Water Program

(602) 771-4651
www.azdeq.gov/environ/water/dw/index.html
Drinking Water

Water Conservation Alliance of Southern Arizona

(520) 792-9591
www.watercasa.org
Graywater

Arizona Department of Water Resources

(602) 771-8500
www.azwater.gov/azdwr/WaterManagement/Wells/default.htm
Water Wells

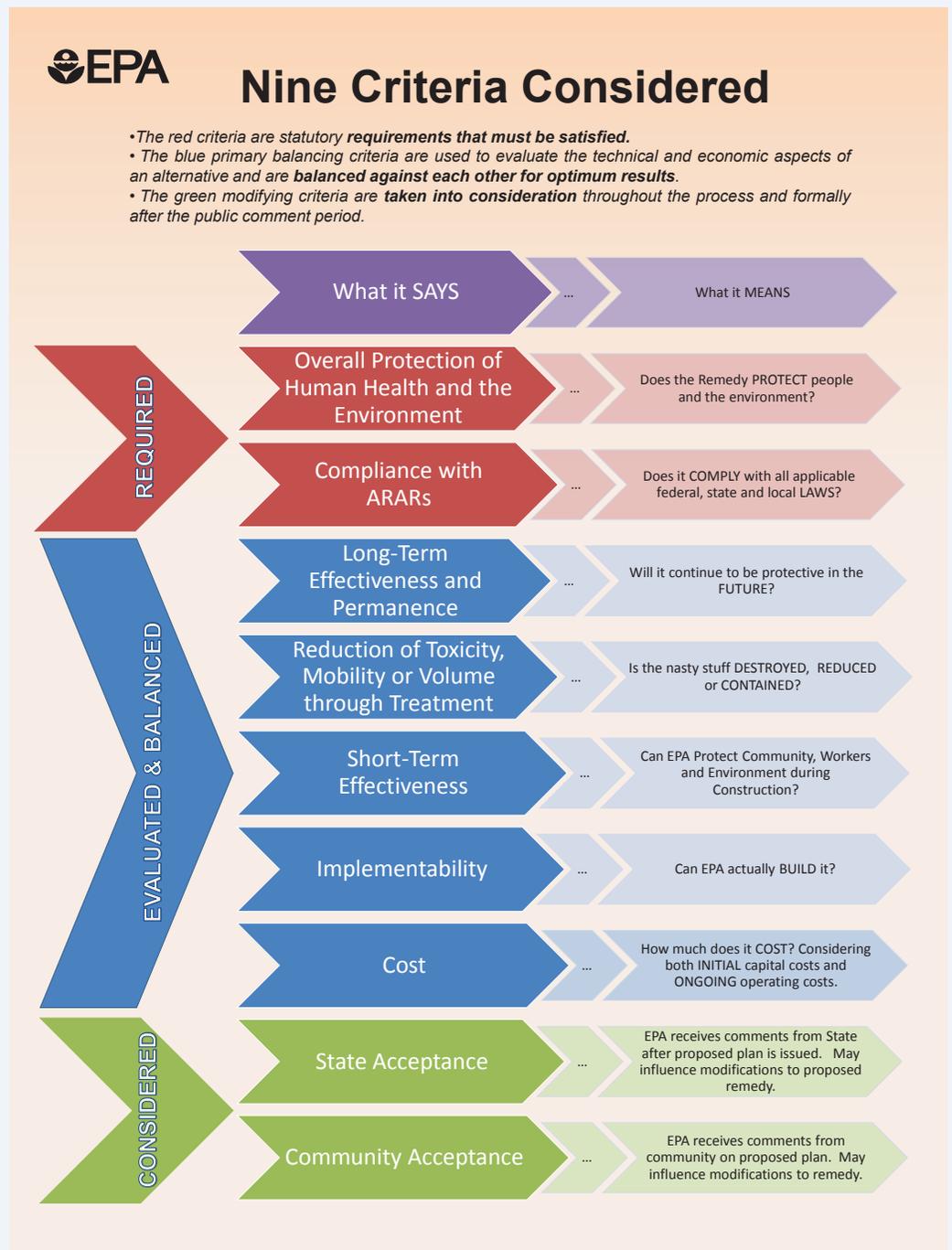
City of Phoenix Water Services

(602) 262-6251
www.phoenix.gov/menu/resutilgarbfees.html
Drinking Water

APPENDIX 15

EPA and ADEQ use the following nine criteria when choosing a remedy:

These criteria are emphasized in the Proposed Plan (Item 8, Page 22) and Feasibility Study (Item 14, Page 24). They were used to decide the best option for both Interim Remedies and will also be used to evaluate the options proposed for the final remedy of the site.



Appendix

