



ASARCO Hayden Plant Site

Hayden, Arizona

Community Involvement Plan



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 ASARCO Hayden Plant **site**, EPA's **Community Involvement*** Program helps citizens participate throughout the cleanup process, including the investigation phase and the remedy selection phase. Under the terms of the agreement between ASARCO, EPA and ADEQ, EPA is responsible for overall community involvement, with support from the Arizona Department of Environmental Quality (ADEQ).

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

The cleanup investigation is being conducted by ASARCO under the oversight of EPA and the ADEQ through a legal agreement called an Administrative Order on Consent. Under this order, ASARCO agrees to conduct the environmental studies and cleanup, including support for community involvement, in the same way as if the site was placed on the **National Priorities List** (commonly called the **Superfund** List).

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

1. Provide opportunities for the public to become actively involved
2. Meet the community's information needs
3. Incorporate issues and concerns into cleanup decisions
4. Give feedback to the public on how their issues and concerns were incorporated into the cleanup work

EPA will achieve these goals through various means, including published documents, public meetings, and direct contacts. The content of the public participation activities will be based on the knowledge of the community gained by direct contact.

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 EPA will provide the information the public needs to understand EPA's work, and to show how the public can be actively involved in the cleanup process.

Chapter One of the CIP begins by identifying the issues and concerns raised during the community interviews.

Chapter Two formally presents EPA's Action Plan for addressing the issues and concerns through various activities. The Plan relies on the tools and techniques that EPA has developed over the years, but has the flexibility to add site-specific activities as circumstances dictate. 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 EPA's preliminary schedules for the investigation and cleanup activities. Where appropriate, it lists possible or required community involvement activities.

The CIP concludes with a series of appendixes that provide additional information, such as a detailed site history, the 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, a glossary, prior EPA 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.

**Words in Bold are defined in Appendix 9 on page 29*

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CHAPTER 1

Community Issues and Concerns

In order to understand the communities of Hayden and Winkelman, EPA conducted a number of stakeholder interviews. EPA interviewed local residents, activists, ASARCO personnel, representatives from state and federal agencies, and government officials. Each interview consisted of approximately 20 questions and covered many different topics. The interviews revealed a number of common concerns, which are grouped below.

During the community interviews, residents and other stakeholders expressed a wide range of issues and concerns. Their questions showed a high level of knowledge about the site's history, and about EPA's current and future activities.

Environmental Concerns

The interviewees have concerns about the migration of contaminants from all sources that may impact soil, **surface water, groundwater**, the town, the school, and downstream/downwind landowners.

Human Health Concerns

Some issues and concerns were centered on potential short-term and long-term human health impacts from the site. Questions and concerns about arsenic exposure and toxicity were most frequently noted, including questions about arsenic in drinking water and in dust.

Many individuals expressed concerns about health impacts on students and children from potential contamination in the dust.

Questions were raised about what EPA's health standards are for the contaminants at the Site.

A number of interviewees were concerned about dust impacting residents downwind of the site. People would like to know about the local air quality and to what extent the tailings may be causing an air quality problem. Many interviewees wanted to know what is in the dust and if they should be concerned about breathing the dust.

A number of those interviewed have health problems and wondered if the site caused or contributed to their compromised health. The U.S. Agency for Toxic Substances and Disease Registry's (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.

The statement was made that the site needs to be safe for all people (children, workers at the onsite companies, elderly) after EPA's cleanup work is completed.

Communications and Public Education Concerns

EPA understands that transparency in its cleanup process builds public confidence and encourages public participation. Many people requested that EPA provide frequent and informative communication and public education throughout the cleanup process. They said that this communication should involve elected officials and community groups.

Chapter 1

To increase the frequency and intensity of public participation, EPA supports the creation of a Community Advisory Group. Public education can be enhanced by the use of an independent technical advisor through the **Technical Assistance Plan**, funded by ASARCO.

One individual was concerned about the way EPA will communicate the risks to residents. EPA will quantify and explain risk in its fact sheets, public meetings, its web site, and in its direct conversations with the public. In other words, EPA will use many of the Action Plan elements (i.e., a risk communications meeting, a poster session prior to a community meeting, etc.), as requested by the public.

Some interviewees were concerned that most people do not understand the Superfund process and that EPA's presence at the site gives the impression that the entire town is contaminated.

CHAPTER 2

Community Involvement Action Plan

This section describes the specific activities and resources that EPA will use to help the community be actively involved in the cleanup process. Whenever EPA begins work on a site, it identifies at least one point of contact for community questions, issues or concerns. The two principal EPA points of contact for the ASARCO Hayden Plant site are listed below.

John Hillenbrand

Project Manager
(SFD-6-2)
75 Hawthorne St.
San Francisco, CA 94105
415-972-3494 (office)
415-947-3528 (fax)
hillenbrand.john@epa.gov

David Cooper

Community Involvement Coordinator
(SFD-6-3)
75 Hawthorne St
San Francisco, CA 94105
415-972-3245 (office)
415-947-3528 (fax)
cooper.david@epa.gov

Mr. Hillenbrand and Mr. Cooper can also be reached through ***EPA's toll-free message line at 800-231-3075.*** EPA routes all 800-line messages to the appropriate EPA staff person, typically the Project Manager or Community Involvement Coordinator.

In addition to providing an EPA representative to answer questions, EPA employs many tools and techniques to support the community's involvement in EPA's work.

1. Fact Sheets, hand-outs and flyers

Fact Sheets are EPA's principal method of providing site-related information to the community. They are short (2-4 page) documents, written in non-technical language, that are mailed directly to the site's postal mailing list (to be added to the mailing list, contact David Cooper, listed above). Fact sheets often summarize larger, technical documents or announce community meetings. They include EPA contact information as well as the internet and information repository (i.e., library) locations of various technical site documents. EPA will create fact sheets (see Appendix 13 for past fact sheets) as events dictate or in response to community requests for specific kinds of information.

Flyers are 1-2 page notices that are sometimes distributed during door-to-door notifications or posted on community bulletin boards.

Handouts provide supplemental information, for example at community meetings. Some are posted to EPA's web site (see below).

2. Community Meetings

EPA holds public meetings at various milestones and at the request of the community. The public meetings are organized to convey Site information via presentations and discussions, and to answer questions from community members. Each meeting will be structured to fit its purpose by using different formats (e.g. town hall meetings, open houses, informal roundtables, PowerPoint presentations, etc.).

Chapter 2

3. Web Site

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 the proposed cleanup plans as they are developed. EPA will update the webpage on a regular basis. Please visit the website at: <http://www.epa.gov/region09/AsarcoHaydenPlant>.

4. Information Repository and Administrative Record

EPA maintains a local public site file, which is called the "information repository." The information repository contains printed copies of major site documents, fact sheets and other relevant items. Electronic copies on compact disk are available for some documents as well.

To browse or check-out site documents, please visit the information repositories at: Hayden Public Library, 175 5th Street, Hayden, AZ, and Arthur E. Pomeroy Public Library, 912-A Tilbury Road, Kearny, AZ.

The complete official repository is located at the EPA Region 9 office: Superfund Records Center, Suite 403, 95 Hawthorne St, San Francisco, CA 94105. The repository's hours of operation are Monday – Friday, 8:00am to 5:00pm.

When EPA is ready to formally propose a cleanup action, it must collect all of the documents that were used to organize and analyze the proposed action, and offer a summary of the cleanup plan to the public for their formal comment. The collection of the technical documents that support the proposed cleanup action is called the Administrative Record, and it is located in the information repositories. There is a specific Administrative Record for every proposed cleanup action, although some of the documents may be part of several Administrative Records.

5. 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 David Cooper (see contact information on Page 7). Mailing list addresses are compiled through

the return of mailing list coupons from fact sheets, open house/public meeting attendees and other individuals who request to be on the mailing list. ADEQ also maintains a mailing list for the ASARCO Site. All ADEQ **public notices** including fact sheets are mailed to the mailing list.

6. Proposed Plan

When EPA is ready to formally propose a cleanup plan, it creates a special document called a Proposed Plan that summarizes the contamination that has been found, that compares the various ways that the contamination can be cleaned up, and that identifies one of these alternative proposals that EPA thinks balances all considerations to arrive at a preferred cleanup approach. This is the most important time for community input.

EPA distributes the Proposed Plan to its mailing list, holds a minimum 30-day **public comment period** and conducts a public meeting where the Proposed Plan is discussed and public comments are taken.

Sometimes EPA performs temporary, short-term or interim cleanup actions, and the public is notified of these actions through a similar document.

7. Responsiveness Summary for the Proposed Plan Comment Period

When EPA makes a final decision about which cleanup methods it will use, it creates a document that explains how it has addressed the public comments that were received during the Proposed Plan's formal comment period (#6 Proposed Plan). This document is called a Responsiveness Summary, and it is a part of EPA's formal cleanup decision document called a Record of Decision.

8. Formal and Informal Comment Periods

As discussed above (#6 Proposed Plan), EPA holds public comment period for certain documents. Sometimes the comment periods are less formal and not required, but nonetheless EPA wants to get the community's thoughts. These comment periods may be announced in several ways, including a notice in a fact sheet and an announcement at a public meeting. Comments may be received at public

meetings, via e-mail or in writing. They should be directed to EPA's project manager, John Hillenbrand (see contact information, Page 7).

9. Public Notices

For those who are not on the site's mailing list, EPA will announce community meetings and formal comment periods in a display advertisement in the main section of the Copper Basin News.

10. Press Releases/Media contacts

EPA will provide press releases and develop media contacts with the Copper Basin News.

11. Technical Documents

Most of the people EPA interviewed had environmental and health concerns. They wanted to know if the air, soil, surface water and/or groundwater were contaminated, and how EPA planned to address those areas through some cleanup effort. The answers to many of those questions will be in the technical documents that EPA will produce as part of its investigation and cleanup process. EPA will mail out a summary of some documents as a fact sheet. The documents will also be available at the Information Repositories and EPA's web site: <http://www.epa.gov/region09/AsarcoHaydenPlant>.

12. 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 make some residents aware of specific hazards that might be identified once environmental samples have been analyzed.

13. Technical Assistance Plan (TAP)

When a site is placed on the federal Superfund list, a federal grant called a Technical Assistance Grant (TAG) is made available to an incorporated nonprofit organization of community members affected by the site. It is used to fund an environmental professional to: 1) provide an independent technical review of cleanup documents and

2) assist the community in understanding the cleanup documents so that the public can provide their comments as they become involved in the cleanup decision-making process.

At the ASARCO Hayden Plant site, the legal settlement agreement replaces the TAG with a similar program called a Technical Assistance Plan (TAP). Under the TAP provision of the settlement, ASARCO will fund the independent technical advisor to help the community understand technical information about their site. EPA will oversee this process. As of the publication date of this CIP, an applicant has not expressed interest in the TAP. Interested community members may contact David Cooper (see contact information, Page 7) for more information.

14. Community Advisory Group (CAG)

A CAG is a self-forming, self-governing stakeholder group that meets periodically, but regularly, to learn about the cleanup process, discuss their issues and concerns, and provide feedback to EPA. EPA is able to provide support to the CAG by attending the meetings, making presentations, procuring a meeting room, advertising the meetings and providing copies of cleanup documents. As of the publication date of this CIP, an applicant has not expressed interest in setting up a CAG. Interested community members may contact David Cooper (see contact information, Page 7) for more information.

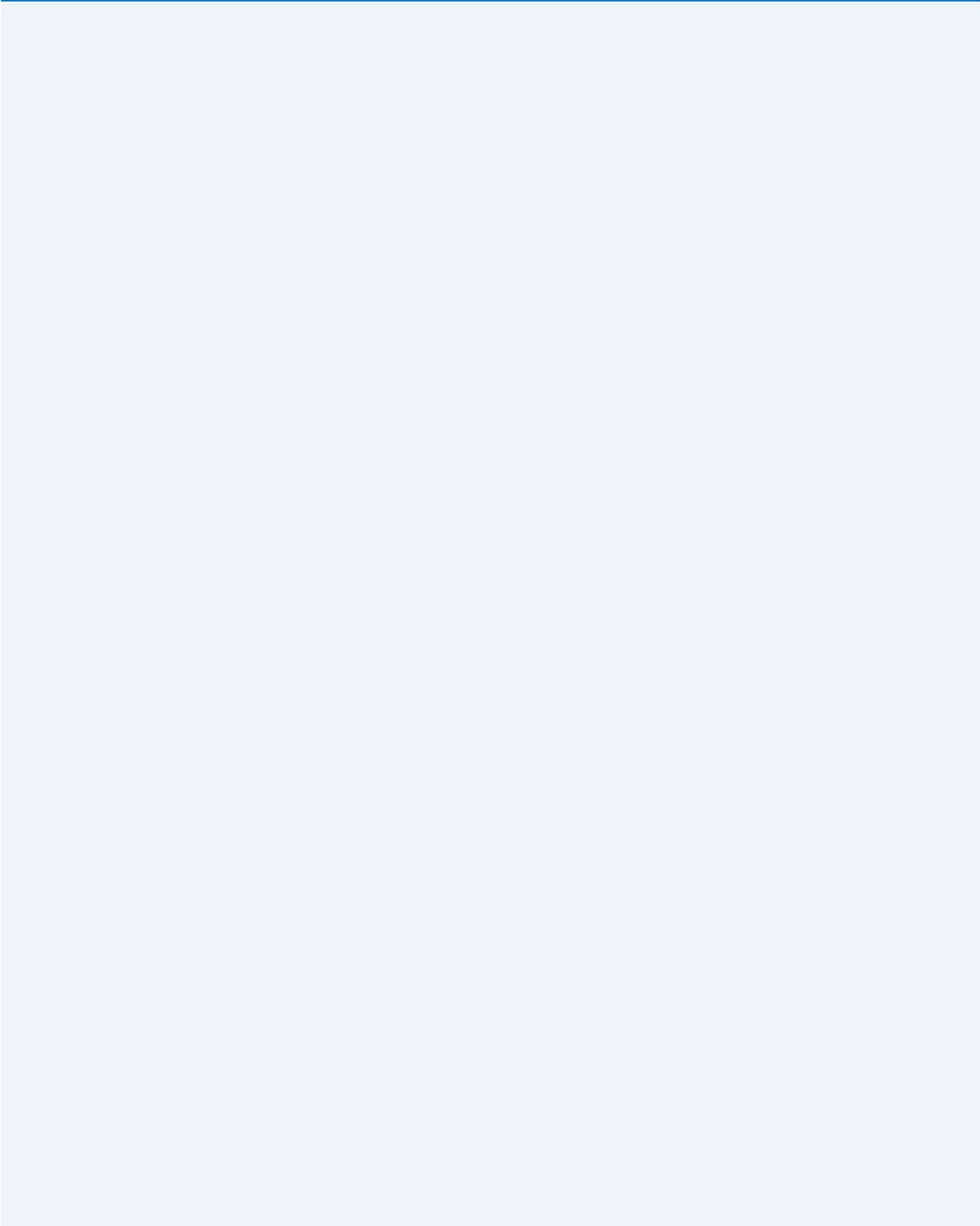
15. Presentations to Groups

EPA staff will be available to make presentations at meetings for local community groups and institutions.

16. Language Translation

When a need arises, EPA provides an interpreter at its community meetings and translates its fact sheets. Currently, no populations of monolingual non-English speakers have been identified.

Chapter 2



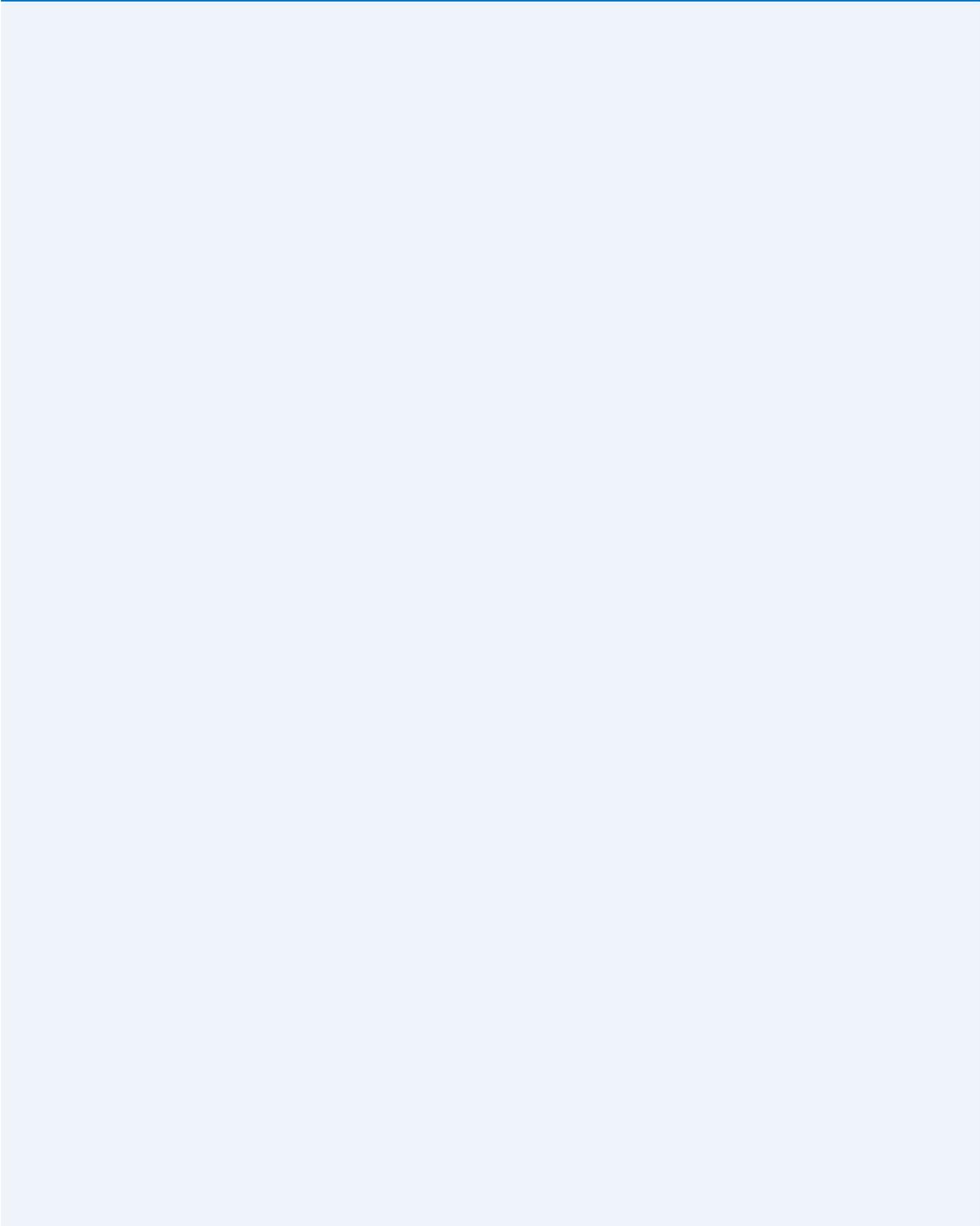
CHAPTER 3

In order to manage the multi-year investigation and cleanup for the ASARCO Hayden Plant site, EPA created a schedule which includes the sampling effort, delivery of technical documents, cleanup decision-making, design of the remedy, construction, and eventually review and evaluation of the results. Future dates are subject to change. Throughout this process there are opportunities for community involvement.

The Cleanup Schedule

Year	Activity	Community Involvement
2006/2007	Field Investigation	Kick-off Community Meeting and Fact Sheet Community Interviews
2008	Remedial Investigation Report	Community meetings and fact sheet
	Human Health Risk Assessment	Community Meeting and Fact Sheet
	Ecological Risk Assessment	
2009	Residential soil removal	Community meetings and fact sheet
2009/2010	Phase II Remedial Investigation workplan	Community Meeting and Fact Sheet
2010/2011	Conduct Remedial Investigation	Community meeting and fact sheet updates
2012	Feasibility Study Report	
	Proposed Plan Fact Sheet	Public Comment Period Public Meeting
	Record of Decision	Responsiveness Summary
2012/2013	Remedial Design	70% Remedial Design Fact Sheet
2013/2014	Remedial Action	

Chapter 3



APPENDIX 1

Site History

The Ray Mine has been mined for copper since approximately 1880. One of the first owners of the mine was Ray Copper Company. This company transitioned to Ray Consolidated Copper Company (RCCC) with the acquisition of Globe Mines Exploration Company, Ltd. and Gila & Ray Copper Mines in 1898 and 1906, respectively.

During this period, the towns of Winkelman and Hayden were founded. Winkelman was founded in 1887 and Hayden was founded in 1909 as a company town to provide housing for workers supporting the mining and smelting operations.

ASARCO constructed its Hayden smelter facility in 1911 and began operations to process ore from the Ray Mine in 1912. A 300-foot stack was built in 1912 to handle reverberatory furnace and roaster (R&R) discharges, and a 250-foot stack was built in 1918 to discharge converter gases from the copper smelter.

In 1933, Kennecott bought the Ray Mine from RCCC. The ASARCO Hayden smelter stopped receiving ore from Ray Mine in 1958, at which time Kennecott began operation of its own Hayden smelter, which included construction of a 600-foot stack. With development of a new type of concentrate haulage cars in conjunction with Southern Pacific Railroad, the ASARCO Hayden smelter was able to receive concentrates from Pima, Duval, Bagdad, Cyprus, Silver Bell, and Mission mines after 1958.

In 1974, the 1,000-foot double-shell concrete stack was built by ASARCO to discharge exhaust gases from the smelting operations, which replaced the 300-foot R&R stack and 25-foot converter stack. The Kennecott smelter was shut down in 1982 and selected structures were recently demolished by ASARCO.

ASARCO completed modernization of its Hayden smelter in 1983, which included installation of an oxygen flash smelting furnace, construction of an oxygen plant to produce oxygen for the new furnace, construction of a second sulfuric acid plant to capture and reuse sulfur dioxide (SO₂) emissions produced during smelting, and construction of a wastewater treatment plant to recover process water from the sulfuric acid plant for reuse.

ASARCO's smelter renewed processing of ore from the Ray Mine in 1983, and ASARCO bought the Ray Mine Division from Kennecott in 1986. The ASARCO Ray Complex was created from control of both the mine and processing operations. In 1996, the Hayden concentrator modernization was completed.

Tailings disposal in the area, now known as Tailings Impoundment AB/BC, started in 1910 at a rate of approximately 4,000 tons per day (tpd). By 1952, the rate had increased to approximately 16,000 tpd, followed by an increase to 21,000 tpd in 1960. A single-point discharge system was initially used for tailings disposal. By 1958, individual basins, separated by berms, were present.

A geotechnical evaluation reported on excess seepage at the contact between spigotted materials (coarser grained), and previously deposited materials (finer grained) deposited by the single-point discharge system. The tailings seepage concern was evident mainly along the western half of the tailings impoundments. The discontinuity eventually caused a slope failure in 1972 that resulted in a slope failure 500 feet across and 30 to 50 feet deep. Another failure occurred in 1973. At the time of failure, water was seeping out of failed portions of the impoundment, and active piping was observed.

Appendix

In 2008, EPA conducted a reconnaissance level analysis of the tailings facility and concluded that catastrophic failure of a large section of the tailings pile was not likely and that the greatest threat was from surface erosion or river bank erosion.

APPENDIX 2

Community Profile

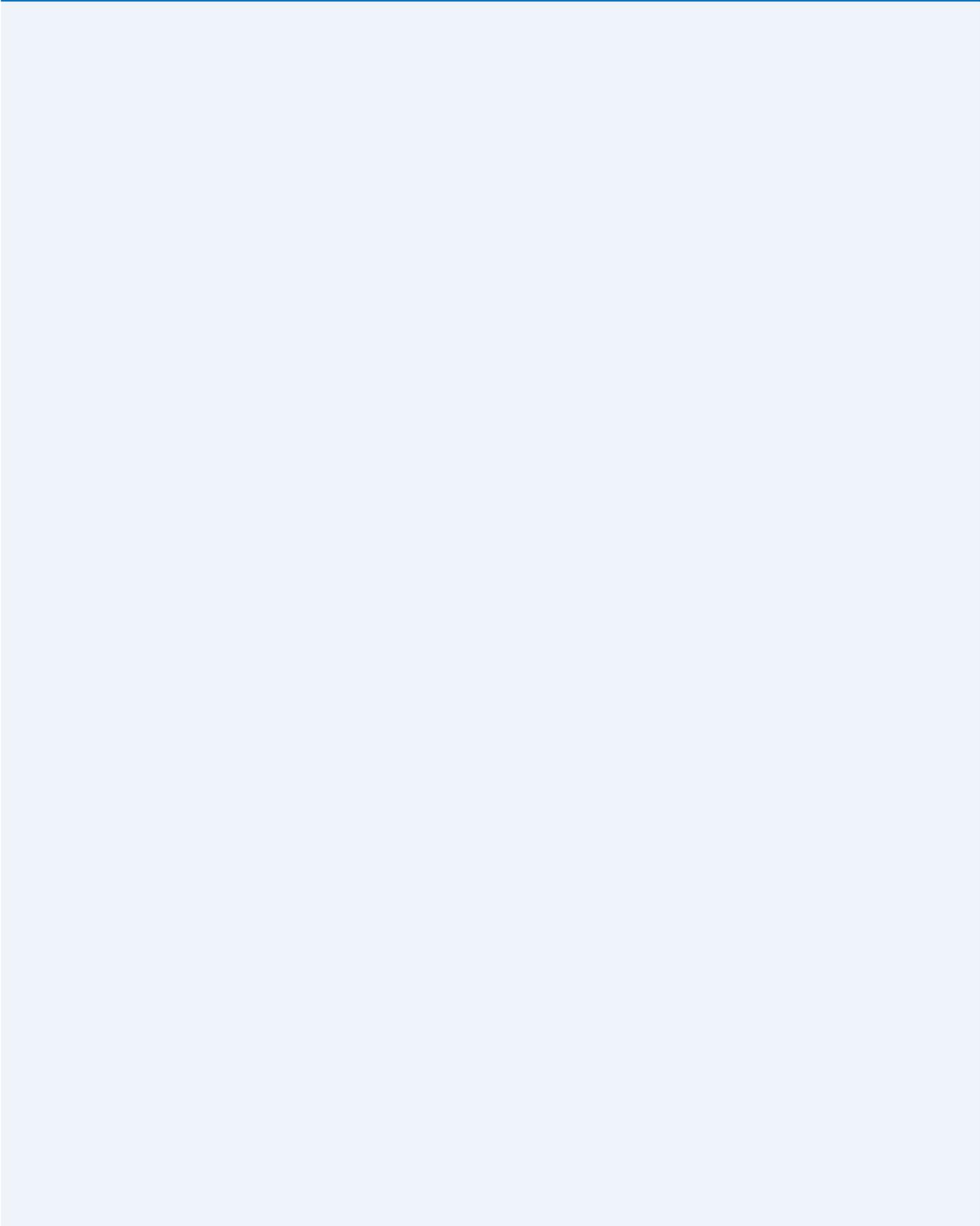
The towns of Hayden and Winkelman are located among the mineral-rich Arizona mountains approximately 100 miles east and south of Phoenix, AZ, and 70 miles north of Tucson. The towns are adjacent to the ASARCO smelter plant in a region of significant mining operations.

The smelter is the only large private employer, with the grade and high school being the other significant employers. Hayden has no grocery store or significant retail; Winkelman has a few small businesses and a small store.

The population of Winkelman is approximately 444, of which 75% are Hispanic and over 25% live below the poverty line. The Town is approximately .7 square miles and is principally single-family detached housing. Median household income is just over \$25,000 per year.

The Town of Hayden has approximately 892 residents, of which over 85% are Hispanic and 27% live below the poverty line. A third of the population is under 18 years old. The Town is approximately 1.3 square miles and is principally single-family detached housing, most of which originated as company housing built more than 40 years ago. The median household income is just under \$25,000 per year.

Appendix



APPENDIX 3

Superfund Cleanup Program Overview

During community interviews, many people had questions about how EPA cleans up sites. This section covers the normal Superfund cleanup process that EPA follows when it has the lead for cleanup.

In the case of the ASARCO Hayden Plant site, EPA and ADEQ signed an agreement with ASARCO for the company to perform a Superfund-level cleanup without adding ASARCO to the federal National Priorities List. This agreement includes ASARCO performing activities identified in Numbers 4 and 5, and 7-9 listed below. EPA and ADEQ will provide oversight of ASARCO's performance of the cleanup activities identified above, however, EPA will produce the Proposed Plan (Number 6).

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 times, and some times 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 or PA/SI.

3. National Priorities List (NPL) Process

If the information warrants it, EPA then goes through the National Priorities Listing (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. At Hayden, ASARCO has signed an agreement for the site to be cleaned up as if it was on the NPL without actually being listed.

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 the agreement to clean up the ASARCO site as if it was a Superfund site, EPA designed 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.

Appendix

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. Some times 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.

Some times 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 Feasibility Study 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, identifies EPA's preferred alternative, and explains how to provide public comments.

7. Remedial Design (RD)

Remedial Design is the development of engineering drawings and specifications for a site cleanup. This phase follows

the remedial investigation/feasibility study. A fact sheet is distributed when the design work is at 70% complete.

8. 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.

9. Five Year Review

When contamination is left on site, an analysis is 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 it has 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.

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 sometimes results in a public participation process similar to the Proposed Plan process that leads to a Record of Decision.

2. ROD Amendment/Explanation of Significant Differences

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

APPENDIX 4

Site Contaminants

Due to current and past smelting operations, arsenic, lead, and other metals have contaminated air, soil, sediments, surface water and groundwater at the site. Water sampling results from some private drinking water wells and municipal wells show arsenic above drinking water standards (Maximum Contaminant Levels or MCLs). The towns of Hayden and Winkelman receive their drinking water from municipal wells that indicate low impact from the effects of ASARCO's Hayden Plant operations.

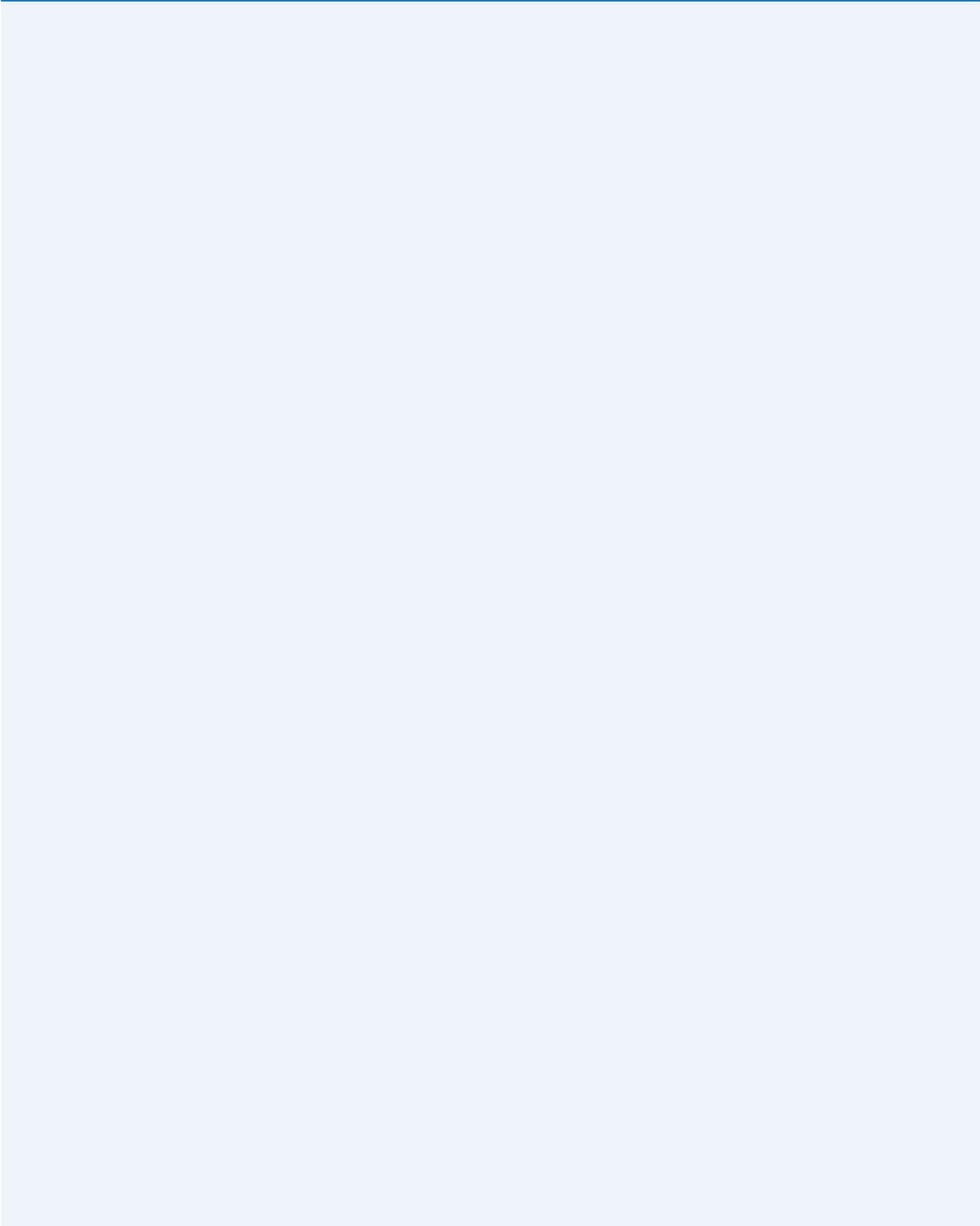
Arsenic can enter the body through direct skin contact, breathing and ingestion. Children are also at risk of ingesting arsenic through eating dirt (also known as soil pica) that contains arsenic levels above those naturally found in the soil.

The health effects of arsenic when inhaled include respiratory irritation, nausea, skin effects and increased risk of lung cancer. Oral ingestion of arsenic may cause nausea, vomiting, and diarrhea following acute high dose exposure. Long-term oral exposure to low levels of arsenic may cause effects to skin such as hyperpigmentation (darkening of the skins or nails) and hyperkeratosis (thickening of the skin); corns and warts; peripheral neuropathy characterized by numbness in the hands and feet that may progress to a painful "pins and needles" sensation. Chronic oral exposure to arsenic may cause increased risk of skin cancer, bladder cancer and lung cancer.

Because lead is a natural element, it normally does occur in small quantities in soil, water, and food. At Hayden, lead is brought into the area as part of the smelting process. This has resulted in concentrations in the air and soil above background concentrations. In addition to these natural sources of lead, its presence in manufactured products can result in additional exposure. Lead paint, and lead solder, which were both commonly used in households, are examples of this. Lead can enter the body through direct skin contact, breathing and ingestion.

Young children under the age of six are especially vulnerable to lead's harmful health effects, because their brains and central nervous system are still being formed. For them, even very low levels of exposure can result in reduced IQ, learning disabilities, attention deficit disorders, behavioral problems, stunted growth, impaired hearing, and kidney damage. In adults, lead can increase blood pressure and cause fertility problems, nerve disorders, muscle and joint pain, irritability, and memory or concentration problems.

Appendix



APPENDIX 5

Prior Cleanup Actions at Hayden and Winkelman

Based on sampling results, EPA and ADEQ determined that a significant number of residential properties in Hayden and Winkelman had soil contamination that required immediate action.

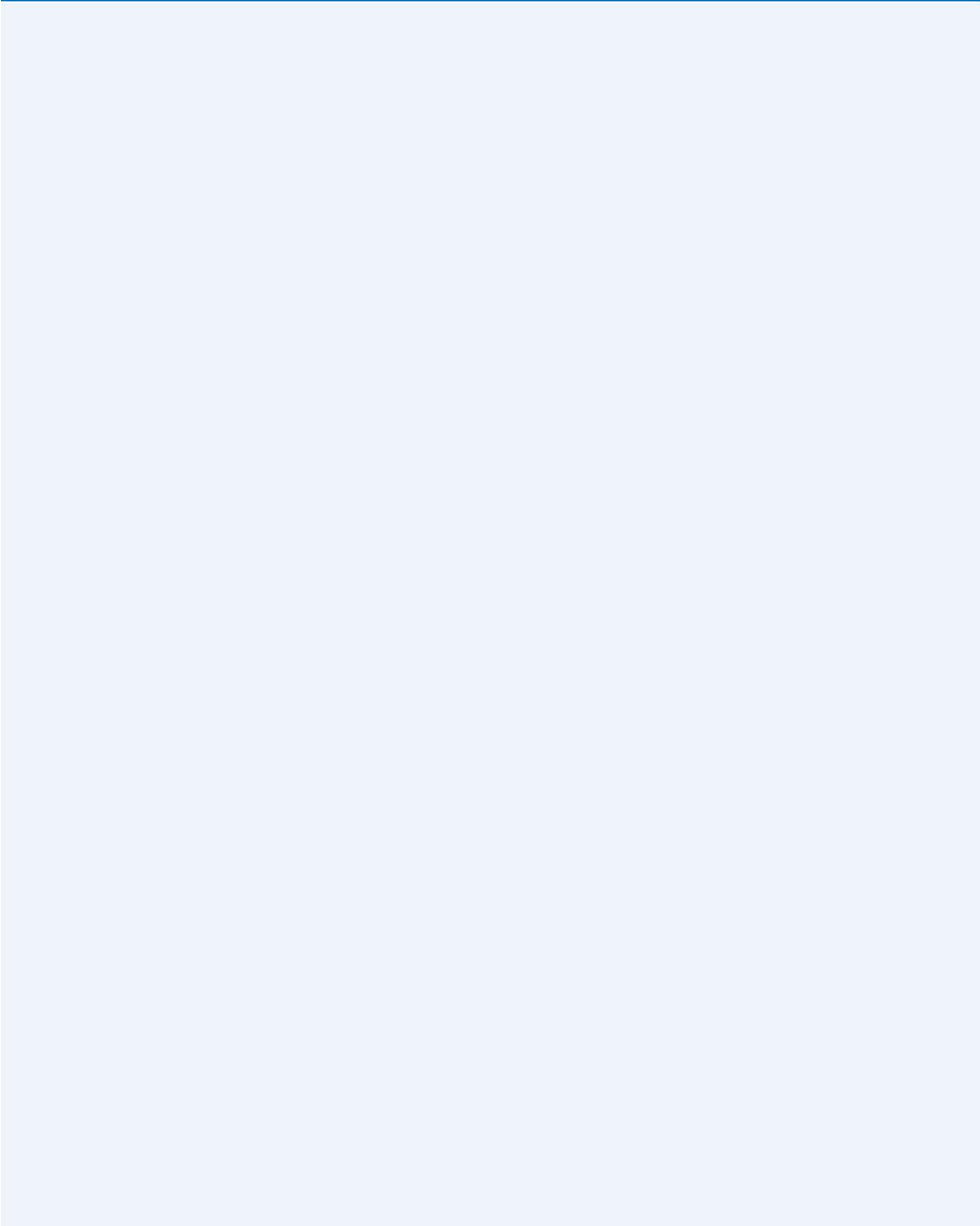
Under an agreement with EPA and ADEQ, ASARCO undertook a yard removal project that resulted in 260 properties being cleaned up. Fifteen homes that had the highest levels were addressed in a first phase, followed later by the rest of the properties.

A soil cleanup goal of 23 parts per million (ppm) arsenic, 400 ppm lead and 9300 ppm copper was established by EPA. The agreement required ASARCO to clean up to these concentrations or to a depth of four feet.

Excavated soils were transported to the ASARCO property for disposal. Disposed soil was graded flat at the disposal site.

EPA collected confirmation samples of soils at the base of the excavated area to determine the effectiveness of the removal action. Samples were collected in a systematic random grid fashion and analyzed for arsenic, lead and copper. For those yards where concentrations at a depth of four feet exceeded the standards, a colorful barrier was laid at the bottom to alert anyone digging that the soil below the netting was still contaminated. The remediated properties were backfilled with clean soil, graded, and restored to original landscaped conditions.

Appendix



APPENDIX 6

Historic Community Involvement Activities

The ASARCO site has a long history of community interest regarding environmental conditions, however, EPA's involvement is fairly recent. Under the terms of the agreement between ASARCO, EPA and ADEQ, EPA is responsible for overall community involvement, with support by ADEQ.

Prior to the agreement, EPA found sufficient evidence of environmental contamination to propose that the ASARCO site be added to EPA's Superfund List (more formally, the National Priorities List or NPL). EPA notified the community of the proposed listing and received comments supporting EPA's potential action. However, negotiations

with ASARCO resulted in an agreement that allowed the site to be cleaned up as if it was on the NPL without actually placing it on the Superfund List.

Following the agreement, EPA conducted a number of public meetings, specifically about the cleanup of contaminated yards, but including information about EPA's overall cleanup process and such items as community Technical Assistance Grants (TAG) and Community Advisory Groups (CAG).

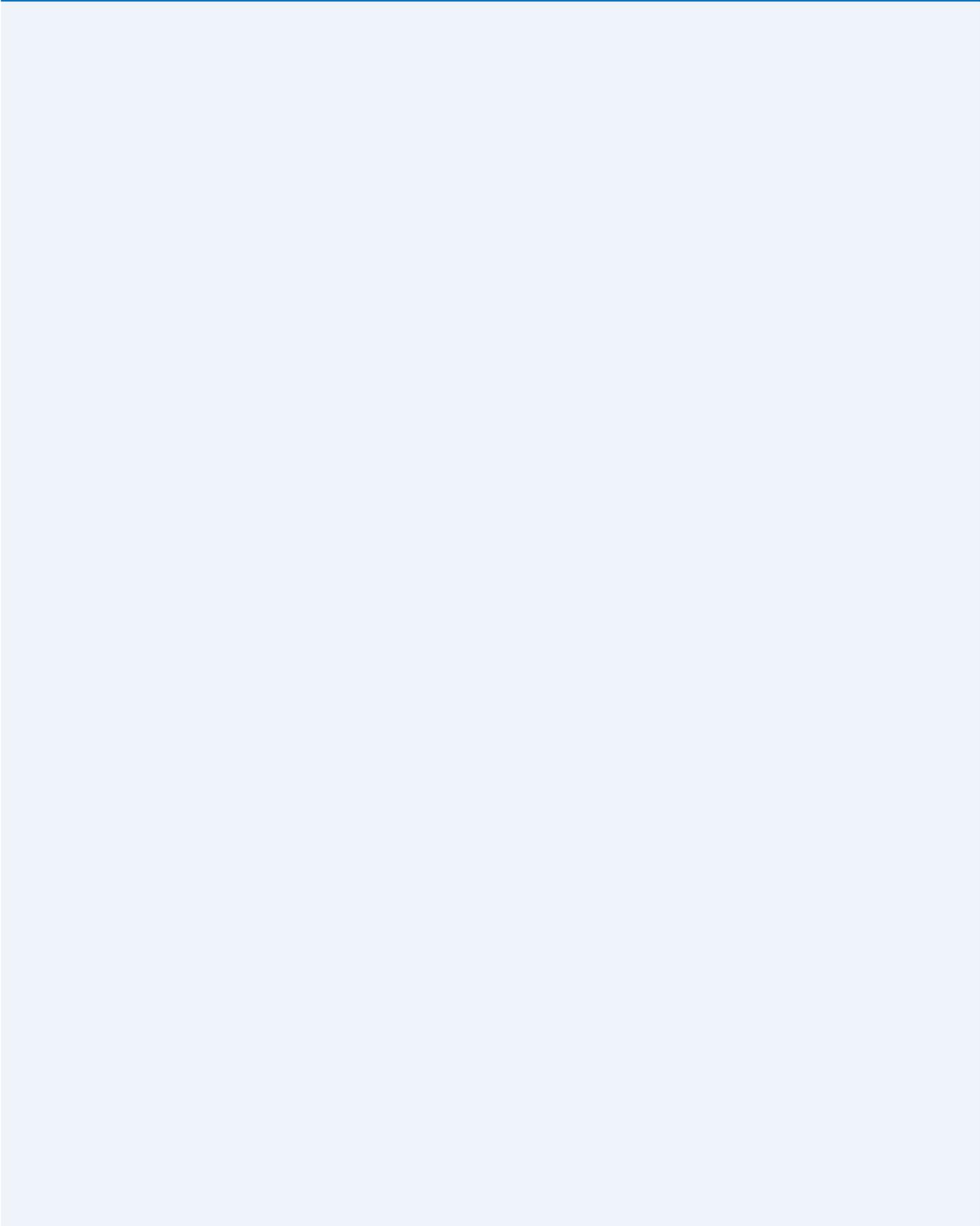
Because many people work shifts at the ASARCO smelter plant, recently EPA's public meetings were conducted once in the day and later in the evening.

Appendix 13 has copies of fact sheets used to announce public meetings and significant cleanup milestones.

ASARCO Fact Sheets to Date

Date	Purpose	Community Meeting
2/2005	Results of Soil Sampling in Kearny, Hayden and Winkelman	3/16/2005 3/17/2005
8/2005	Next Step of Environmental Investigation	8/17/05
2/2006	Environmental Investigation In Hayden and Winkelman	
3/2007	Update On Recent Activities At Asarco Hayden Smelter	
4/2008	EPA, ADEQ, and ASARCO, LLC Sign Cleanup Agreement	5/13/2008 5/14/2008
9/2008	EPA Releases ASARCO Hayden Plant Investigation Results	9/11/2008 9/12/2008
12/2008	Hayden and Winkelman Yard Cleanup Update	
7/2009	Public Meeting: Residential Yard Cleanup and Future Activities	7/21/2009 7/22/2009

Appendix



APPENDIX 7

Public Meeting Locations

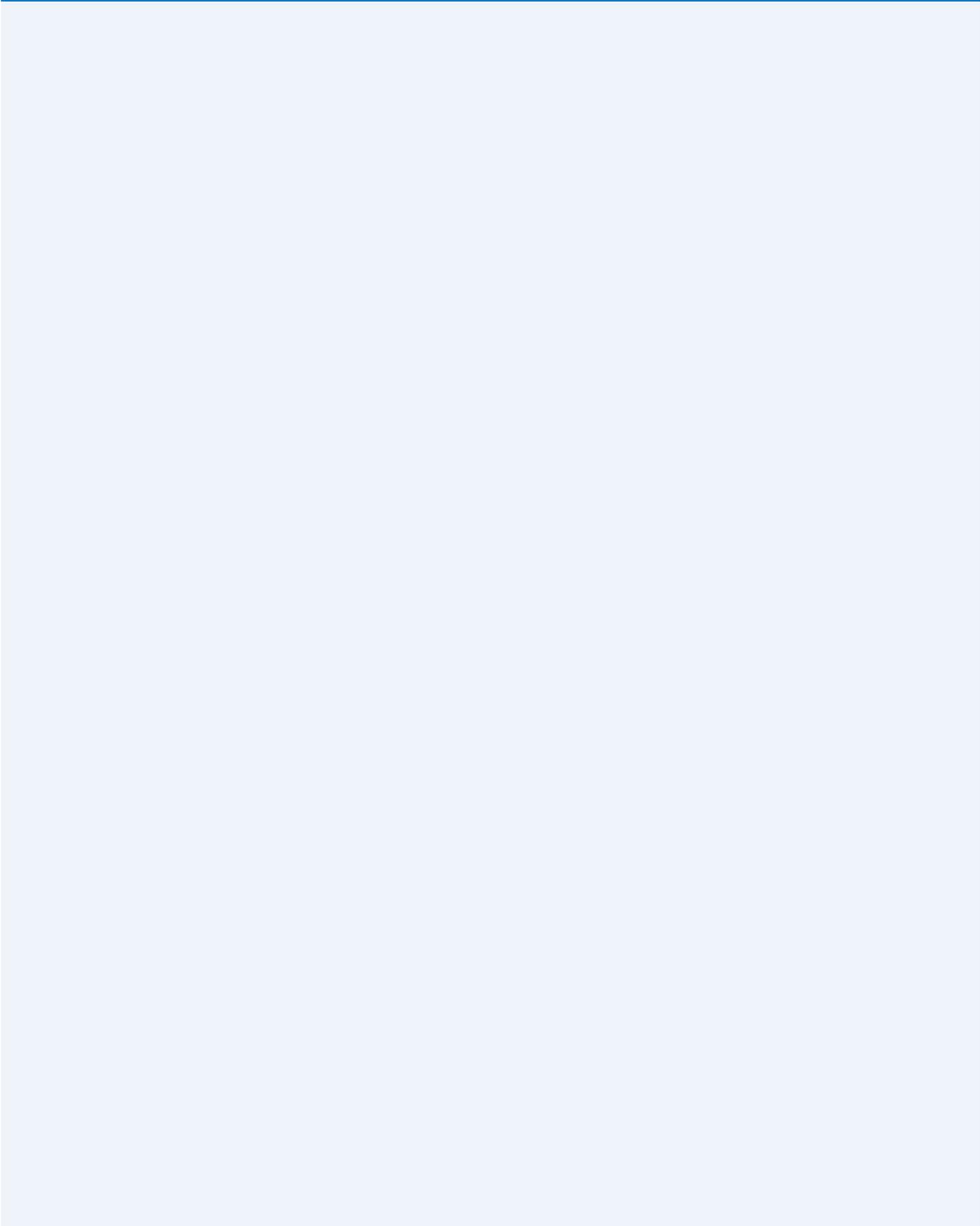
Hayden Senior Center

520 Velasco Ave
Hayden, AZ

Hayden High School

824 Thorne Ave
Winkelman, AZ

Appendix



APPENDIX 8

Acronyms and Abbreviations

ADEQ	Arizona Department of Environmental Quality
AOC	Area of Concern
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CIP	Community Involvement Plan
EPA	U.S. Environmental Protection Agency
IR	Information Repository
ROD	Record of Decision
TAG	Technical Assistance Grant
TAP	Technical Assistance Plan

Appendix



APPENDIX 9

Glossary

Community Involvement Plan (CIP) – A site-specific plan prepared by EPA that identifies community involvement objectives at a site and proposes community outreach activities to help EPA meet its objectives.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – A federal law adopted in 1980 and subsequently amended (Public Law 96-510, as amended) that provides for liability, cleanup, and emergency response for hazardous substances released into the environment.

Community Involvement – The EPA effort to establish two-way communication with the public to create understanding of EPA programs and related actions, to ensure public input into decision-making processes related to affected communities, and to make certain that the Agency is aware of and responsive to public concerns. Specific community relations activities are required in relation to Superfund remedial actions.

Contaminant of Concern (COC) – Specific chemicals that are identified for evaluation in the site assessment process.

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. Also applies to surfaces of objects, buildings, and various household and agricultural use products.

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 water, there is growing concern over contamination from leaching agricultural or industrial pollutants or leaking underground storage tanks.

Endangered Species – Animals, birds, fish, plants, or other living organisms threatened with extinction by anthropogenic (man-caused) or other natural changes in their environment. Requirements for declaring a species endangered are contained in the Endangered Species Act.

Environmental Assessment – An environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a federal action would significantly affect the environment and thus require a more detailed environmental impact statement.

Habitat – The place where a population (e.g., human, animal, plant, microorganism) lives and its surroundings, both living and non-living.

Health Assessment – An evaluation of available data on existing or potential risks to human health posed by a Superfund site. The Agency for Toxic Substances and Disease Registry (ATSDR) of the Department of Health and Human Services (DHHS) is required to perform such an assessment at every site on the National Priorities List.

Human Health Risk – The likelihood that a given exposure or series of exposures may have damaged or will damage the health of individuals.

Impacted Area – Any area with a reasonable possibility of containing toxic chemicals/elements in excess of natural background

National Priorities List – EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under the Superfund Program. A site must be on the NPL to receive money from the federal Trust Fund for remedial action.

Preliminary Assessment – The process of collecting and reviewing available information about a known or suspected waste site or release.

Appendix

Public Comment Period – The time allowed for the public to express its views and concerns regarding an action by EPA (for example, a cleanup decision).

Public Notice – A display advertisement in a local newspaper informing the public of Agency actions such as a public meeting or a formal public comment period on a proposed cleanup action.

Release – Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of a hazardous or toxic chemical or extremely hazardous substance.

Remedial Investigation – Actions undertaken to characterize the full nature and extent of contamination at a site, including the evaluation of human health and ecological risks.

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 use of specific pollutants.

Site – Any installation, facility, or discrete, physically separate parcel of land, or any building or structure or portion thereof, that is being considered for survey and investigation.

Stakeholder – Any organization, governmental entity, or individual that has a stake in or may be impacted by a given approach to environmental regulation, pollution prevention, energy conservation, etc.

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 investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.

Surface Water – All water naturally open to the atmosphere (rivers, lakes, reservoirs, ponds, streams, impoundments, seas, estuaries, etc.)

Technical Assistance Plan – Services paid for by ASARCO for the community to use an independent technical advisor to help interpret and comment on site-related information.

Topography – The physical features of a surface area including relative elevations and the position of natural and man-made (anthropogenic) features.

APPENDIX 10

Key Contacts

EPA

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hayden@theriver.com

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skerlock@townofwinkelman.com

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Globe, AZ 88501

Pinal County

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Building A

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Rebecca Rios

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Room 213

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Fax Number: (602) 417-3167

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Phoenix, AZ 85016

(602) 840-1891

US Congress

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Casa Grande, AZ 85122

Phone: (520) 836-3226

APPENDIX 11

Media Contacts

Copper Basin News

366 Alden Rd

Kearny, AZ

Tel: (520) 363-5554

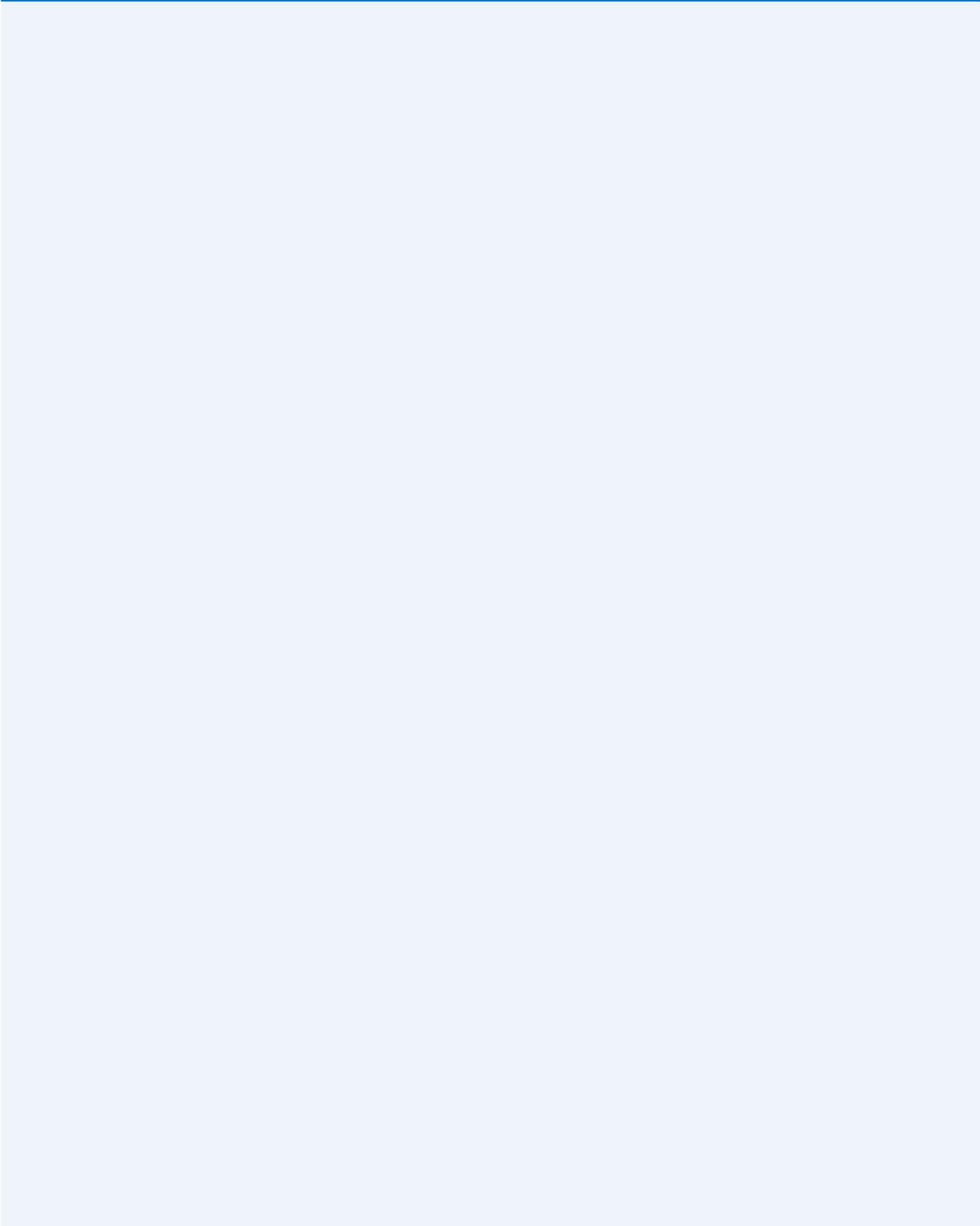
The Arizona Republic

1410 N. Broad

Globe, AZ 85501

Phone: (928) 425-2002

Appendix



APPENDIX 12

Information Repositories, EPA Web Site and ADEQ Web Site

EPA has established two local places where residents and interested parties can view investigation and cleanup documents.

Hayden Public Library

175 5th Street
Hayden, AZ
(520) 356-7031

Hours: Monday, Wednesday-Friday 9a.m. to 5p.m.
Tuesday 9a.m. to 5p.m., 7p.m. to 8:30 p.m.
Closed on Saturday and Sunday.

Arthur E. Pomeroy Public Library

912-A Tilbury Road
Kearny, AZ
(520) 363-5861

Hours: Monday-Thursday 10a.m.-5 p.m.
Friday 10 a.m. to 4 p.m.
Closed on Saturday and Sunday.

A number of the documents at EPA's information repositories are also available electronically at EPA's and ADEQ's web sites for the ASARCO investigation and cleanup.

The EPA's ASARCO web address is:

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

ADEQ's ASARCO web address is:

<http://www.azdeq.gov/environ/waste/sps/statesites.html#asarco>

Appendix



APPENDIX 13

EPA fact sheets

- Results of Soil Sampling in Kearny, Hayden and Winkelman
- Next Step of Environmental Investigation
- Environmental Investigation In Hayden and Winkelman
- Update On Recent Activities At Asarco Hayden Smelter
- EPA, ADEQ, and ASARCO, LLC Sign Cleanup Agreement
- EPA Releases ASARCO Hayden Plant Investigation Results
- Hayden and Winkelman Yard Cleanup Update
- Public Meeting: Residential Yard Cleanup and Future Activities

Appendix



Results of Soil Sampling in Kearny, Hayden and Winkelman

U.S. ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • FEBRUARY 2005

The United States Environmental Protection Agency (EPA), in coordination with the Arizona Department of Environmental Quality (ADEQ), conducted surface soil sampling in the areas of Kearny, Hayden, and Winkelman, Arizona. EPA was concerned that possible soil contamination could pose a threat to human health. In October 2004, over 200 samples were collected from public areas and residences in the three towns.

This fact sheet summarizes the sampling results, discusses EPA next steps, and provides information about the upcoming public meetings. The final report includes all of the results and is available for review at the information repositories listed on page 3. Due to privacy concerns, the final report does not list the address of sample locations on residential property.

The Results at a Glance...

- The surface soil samples were analyzed for 17 metals, many of which are naturally occurring in the area. EPA was specifically concerned with potentially elevated levels of arsenic, lead and copper.
- After analysis and review of all the sample results, EPA has determined that the metal concentrations detected in soil do not pose an immediate human health concern in any of the three towns.
- Although not posing an immediate human health concern, samples from areas in Hayden and Winkelman had levels of arsenic and copper that could increase the potential for health effects over the long term.
- EPA, in coordination with the ADEQ and ADHS, is planning a comprehensive environmental investigation in Hayden and Winkelman later this year.

Upcoming EPA Public Meetings

We are offering two meetings to discuss the soil sampling results and EPA next steps. Please note that both meetings will present the same information and offer the same opportunity for discussion. There will be an Open House beginning at 4:30 p.m., followed by an EPA presentation and discussion period from 6:00 p.m. to 7:30 p.m. We look forward to seeing you at one of the public meetings.

Wednesday, March 16, 2005

Hayden/Winkelman School District Office
824 Thorne Ave
Winkelman, AZ 85292

Thursday, March 17, 2005

Constitution Hall (Senior Center)
912-E Tilbury Dr.
Kearny, AZ 85237



What Are Screening Levels?

EPA uses “screening levels” developed by the state or EPA to quickly evaluate and screen for possible health risks from a contaminant in soil and water. Screening levels are set at very low levels and are designed to be protective of human health. If a contaminant is below the screening level, then cleanup is not necessary. If a contaminant is above the screening level, it does not necessarily mean it poses a significant health risk or requires action.

For Hayden and Winkelman, EPA has determined that further investigation is needed to determine whether the levels of arsenic and copper increase the potential for health effects over the long term.



The Results for each town

The sample results were compared to screening levels set by the state of Arizona. The Arizona health based screening levels, Residential Soil Remediation Levels (R-SRLs), are specific to each metal and are set at the levels that are naturally occurring in soil throughout the state of Arizona. The R-SRLs for arsenic, lead and copper are 10 mg/kg, 400 mg/kg, and 2800 mg/kg, respectively.

What EPA found in Kearny

In Kearny, 89 samples were taken. In all, the detections above screening levels were at low concentrations. Therefore, there is no indication from the samples that residents in Kearny are being exposed to levels of metals that are significantly above what is naturally occurring in Arizona.

Of the samples, arsenic was detected slightly above its screening level (R-SRL) in nine samples with concentrations ranging from 10.1 to 26 mg/kg. Lead was only detected once above its R-SRL and copper was not detected above its R-SRL at any locations in Kearny.

What EPA found in Hayden

In Hayden, 51 samples were taken. Although above screening levels, the arsenic, copper and lead concentrations detected are not at levels that pose an immediate health concern. The levels indicate that the concentrations are not naturally occurring and could increase the potential for health effects over the long term.

Of the samples, 40 contained contaminants above their respective screening levels. Arsenic was detected most often above its screening level of 10 mg/kg, lead was detected slightly above its R-SRL in one sample, while copper also had elevated levels in a little over half (29) of the samples.

What EPA found in Winkelman

In Winkelman, 69 samples were taken. The arsenic, copper and lead detected in samples were not at levels that pose an immediate health concern, but they are above naturally occurring levels and could increase the potential for health effects over the long term.

Of the samples, arsenic was detected above its screening level 16 times. Lead was found just over the R-SRL of 400 mg/kg in three samples, while copper had elevated levels in seven samples.

Appendix

The Results for Arsenic, Lead, and Copper

This section provides the sample results for the three contaminants of concern.

Arsenic

The table below shows the average, high and low concentrations of arsenic found in the three towns. The results are compared to the background (naturally occurring) levels of the metals that are in the area. The average background for arsenic was 5.7 mg/kg. The sample with the highest concentration of arsenic (320 mg/kg) also had the highest levels of copper and lead. This sample was taken next to railroad tracks used to transport copper ore or concentrate.

	Average sample (mg/kg)	Highest sample (mg/kg)	Lowest sample (mg/kg)
Kearny	6.7	26	3.0
Hayden	21.2	92.4	4.4
Winkelman	14.3	320	1.0

Table 1. Summary of arsenic detections in all samples

Lead

The table below shows that lead is not a widespread metal of concern in any of the three towns. The averages are well below the screening level of 400 mg/kg and the highest recorded levels are only slightly elevated. The average background (naturally occurring) level for lead was 29.5 mg/kg.

	Average sample (mg/kg)	Highest sample (mg/kg)	Lowest sample (mg/kg)
Kearny	51	476	10.1
Hayden	130	463	17.7
Winkelman	75	485	5.8

Table 2. Summary of lead detections in all samples

Copper

The table below shows the levels of copper in the three towns. In general, higher copper levels were found with the higher arsenic levels for samples in Hayden and Winkelman. The average background for copper was 585 mg/kg.

	Average sample (mg/kg)	Highest sample (mg/kg)	Lowest sample (mg/kg)
Kearny	327	1740	21.8
Hayden	3,895	11,400	300
Winkelman	967	19,000	36.4

Table 3. Summary of copper detections in all samples

What will the comprehensive environmental investigation include?

The purpose of the environmental investigation will be to determine whether the levels of contaminants in Hayden and Winkelman increase the potential for health effects over the long term and also to identify possible sources of the contamination.

The investigation will include air and water monitoring and further soil testing in the Hayden and Winkelman towns and surrounding areas. Potential source areas that will be examined include the tailings, smelters and concentrator as well as other industrial related areas that could be a source. Non-industrial activities and naturally occurring metals may be other sources.

EPA is expecting to have the investigation plan available for public comment in late March.

For more information...

EPA has established two information repositories for community members. A copy of the EPA October 2004 Sampling final report is available for review at:

Hayden Public Library

520 Velasco Avenue
Hayden, AZ 85235

Arthur E. Pomeroy Public Library

912-A Tilbury Road
Kearny, AZ 85237



Results of Soil Sampling in Kearny, Hayden and Winkelman

CONTACT INFORMATION

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Hector Aguirre

Community Involvement Coordinator (SFD-3)
(415) 972-3238
Email: aguirre.hector@epa.gov

U.S. EPA
75 Hawthorne Street
San Francisco, CA 94105

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and we will return your call.

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San Francisco, CA 94105-3901
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Appendix



Environmental Investigation in Hayden and Winkelman

U.S. ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • AUGUST 2005

Next Steps of Environmental Investigation

The U.S. Environmental Protection Agency (U.S. EPA), in coordination with the Arizona Department of Environmental Quality (ADEQ), has been conducting an environmental investigation in the areas of Hayden, Winkelman, and Kearny, Arizona. The next steps of the investigation will determine whether current environmental conditions in Hayden and Winkelman could increase the potential for health effects over the long term and whether they require any U.S. EPA action (see Background). To ensure community input, U.S. EPA is inviting the public to comment on the scope of the investigation as outlined in the U.S. EPA Hayden Winkelman Environmental Investigation Workplan (Workplan). The preparation of the workplan included public input received at the March 2005 public meetings in Winkelman and Kearny, AZ.

U.S. EPA will be accepting comments on the Workplan through September 6, 2005. Comments can be submitted at the August 17, 2005 public meeting or in written form to John Hillenbrand, U.S. EPA Project Manager, listed on the back page. A copy of the Workplan is available for review at the Hayden Public Library, 520 Velasco Ave, Hayden, AZ 85235 and the Arthur E. Pomeroy Public Library 912-A Tilbury Road, Kearny, AZ 85237.

Open House

An Open House is being held to review the Workplan and respond to questions and comments. It will be held on:

Wednesday, August 17, 2005

5:00 p.m. - 7:30 p.m.

Hayden/Winkelman

School District Office

824 Thorne Ave.

Winkelman, AZ 85292

The Open House will begin at 5:00 pm, followed by a U.S. EPA presentation on the Workplan from 6:00-6:30 p.m., and a discussion period from 6:30-7:30 p.m.



Background

U.S. EPA conducted residential surface soil sampling in Kearny, Hayden, and Winkelman, AZ in October 2004. Based on the sampling results reported in the February 2005 fact sheet and March 2005 public meetings, U.S. EPA determined that the concentrations of metals such as arsenic and copper detected in soil do not pose an immediate human health concern in any of the three towns. However, the levels detected in Hayden and Winkelman are above levels that exist naturally in Arizona soil. For this reason, U.S. EPA has planned a more comprehensive investigation in Hayden and Winkelman that includes further soil sampling, and air and water sampling to address other possible exposure pathways. U.S. EPA included public input received at the March 2005 public meetings in planning the investigation. Taken together, the results will provide the basis for assessing the risk for the residents in town.

What will the environmental investigation include?

The investigation will include air, soil, and water sampling in Hayden and Winkelman, AZ.

All of the sampling will be for a variety of metals but will focus on arsenic and copper concentrations since those were found to be of most concern during the October 2004 sampling.

How will the air be sampled?

Beginning in November 2005, air quality data will be collected from four monitoring stations located in Hayden and Winkelman. The stations will measure background concentrations and levels of airborne pollutants at different times of the day and during high and low wind conditions. Airborne pollutants such as dust and particulate matter* can come from various sources that may include: tailings piles, the smelter stack, and general emissions from the concentrator and smelters. To measure possible indoor exposure to contaminants in the air, attic dust samples will be taken from a total of 20 residences.

Possible locations for the air monitoring stations include: near the Hayden Jail, by the schools in Winkelman, the golf course area and Montgomery Ranch. These locations were chosen to assess potential sources in the town that may affect residences.

What additional soil sampling will be done?

Beginning in January 2006, we will offer to sample all residential yards in Hayden and most of Winkelman. At each residence, three samples will be taken on the surface (0-2 inches) and one at 12 inches in each yard.

Sampling will also be conducted in areas surrounding residential properties that can be accessed by residences such as tailings piles and roadways. Samples will not be taken at the concentrator and smelter facilities, except in those specific areas where material could move to residential properties or could be accessed by the public.

Soil and sediment samples will also be collected along the Gila River floodplain to assess potential effects on the environment.

How and why will the water be sampled?

To date, drinking water wells in Hayden and Winkelman have been found safe to drink. Beginning in November 2005, in addition to sampling the drinking water wells once more, samples will also be taken from groundwater monitoring wells. These groundwater monitoring wells are located upgradient from the drinking water wells and will be used to assess whether contaminated groundwater near industrial areas could affect the drinking water wells.

In addition to the existing 13 groundwater monitoring wells, an additional six groundwater wells will be installed and sampled in the following areas: below the slag dumps near highway 77, upgradient of the demolished smelter, near the Hayden Well field, at the lower end of San Pedro Wash, and downstream of main tailings ponds.

***Particulate matter** (PM) is a mixture of solid and liquid particles found in the air. While some particles can be seen as dust or dirt, others are about one-seventh the diameter of a human hair (PM₁₀) or even smaller (PM_{2.5}).

Appendix

When will the results of the investigation be available?

Results of the sampling are expected by Fall 2006, and will be reported to the community via fact sheet and public meetings in the late Fall. These results will be used to determine an estimate of the potential risk posed to residents.

Next Steps

- A Public Meeting to discuss the Workplan and accept public comment on August 17, 2005
- Public Comment on the Workplan will be accepted through September 6, 2005
- A fact sheet summarizing the Final Workplan and providing more detailed information on the schedule of sampling activities will be available in the late Fall 2005.



MAILING LIST COUPON

U.S. EPA plans to send future information to Hayden and Winkelman residents only. As a Kearny resident, if you would like to be included on the mailing list, please fill out the coupon and return to the address below:

André Villaseñor, Community Involvement Coordinator
 U.S. Environmental Protection Agency Region 9
 75 Hawthorne Street (SFD-3)
 San Francisco, CA 94105

(PLEASE PRINT ALL INFORMATION)

NAME: _____

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

*PHONE: _____ *FAX: _____ *E-MAIL: _____

*ORGANIZATIONAL AFFILIATION _____

*(Optional items)

You may also provide the above information by e-mail to: villasenor.andre@epa.gov or by fax: (415) 947-3528

Environmental Investigation in Hayden and Winkelman

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Community Involvement Coordinator
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U.S. EPA
75 Hawthorne Street
San Francisco, CA 94105
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San Francisco, CA 94105-3901
Attn: André Villaseñor (KWH 7/05)

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Appendix



Environmental Investigation in Hayden and Winkelman

U.S. ENVIRONMENTAL PROTECTION AGENCY • REGION 9 • FEBRUARY 2006

Soil Investigation

The U.S. Environmental Protection Agency (U.S. EPA), in coordination with the Arizona Department of Environmental Quality (ADEQ), has been conducting an environmental investigation in the areas of Hayden and Winkelman, Arizona. U.S. EPA completed residential surface soil sampling in Kearny, Hayden, and Winkelman, AZ in October 2004. Based on the sampling results reported in the February 2005 fact sheet and March 2005 public meetings, U.S. EPA determined that the concentrations of metals such as arsenic and copper detected in soil do not pose an immediate human health concern in any of the three towns.

However, the levels detected in Hayden and Winkelman are above levels that exist naturally in Arizona soil. For this reason, U.S. EPA is conducting a more comprehensive investigation in Hayden and Winkelman that includes further soil sampling, and air and water sampling to address other possible exposure pathways.

U.S. EPA included public input received at the March and August 2005 public meetings in planning the investigation. A copy of the Workplan is available for reference at the Hayden Public Library, 520 Velasco Ave, Hayden, AZ 85235 and the Arthur E. Pomeroy Public Library, 912-A Tilbury Road, Kearny, AZ 85237.

The next steps of the investigation will determine whether current environmental conditions in Hayden and Winkelman could increase the potential for health effects over the long term and whether they require any U.S. EPA action.

What additional soil sampling will be done?

Beginning on January 30, 2006, and continuing through late February, we will offer to sample many residential yards in Hayden and most of Winkelman. At each residence, nine samples will be taken on the surface (0-2 inches) and one at 12 inches in each yard.

Sampling will also be conducted in areas surrounding residential properties that can be accessed from residences such as tailings piles and roadways. Samples will not be taken at the concentrator and smelter facilities, except in those specific areas where material could move to residential properties or could be accessed by the public. All of the sampling will be for a variety of metals but will focus on arsenic and copper concentrations since those were found to be of most concern during the October 2004 sampling.

Soil and sediment samples will also be collected along the Gila River floodplain to assess potential effects on the environment.

When will the results of the investigation be available?

Results of the sampling are expected by late 2006 or early 2007, and will be reported to the community via fact sheet and public meetings at that time. These results will be used to determine an estimate of the potential risk posed to residents.

Environmental Investigation in Hayden and Winkelman

Contact Information

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U.S. EPA, Region 9

75 Hawthorne St.
San Francisco, CA 94105

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Appendix



ASARCO HAYDEN SMELTER SITE

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • March 2007

UPDATE ON RECENT ACTIVITIES AT ASARCO HAYDEN SMELTER

Welcome to the latest fact sheet on the Asarco Hayden Smelter.
In it you will find information on current and planned activities.

Site Investigation

The U.S. Environmental Protection Agency (U.S. EPA) conducted residential surface soil sampling in Kearny, Hayden, and Winkelman in October 2004. Based on the sampling results, U.S. EPA determined that the concentrations of metals such as arsenic and copper detected in soil do not pose an immediate human health concern in any of the three towns.

However, the levels detected in Hayden and Winkelman were above levels that naturally exist in Arizona soils. For this reason, U.S. EPA is currently conducting a more comprehensive remedial investigation study in these two towns that includes more soil, air and water sampling to investigate other possible exposure pathways.

The U.S. EPA, in coordination with the Arizona Department of Environmental Quality (ADEQ), is currently completing the final sample-gathering phase of the remedial investigation. Following that, we will analyze and compile the soil, air and water data and write the Remedial Investigation Report.

U.S. EPA included public input received at the March and August 2005 public meetings in planning the current remedial investigation. A copy of the Workplan is available for reference at the Hayden Public Library, 520 Velasco Ave., Hayden, AZ 85235 and the Arthur E. Pomeroy Public Library, 912-A Tillbury Rd., Kearney, AZ 85237.

Soil Sampling

Beginning in February 2006, U.S. EPA sampled residential yards in Hayden and most of Winkelman. Each residential yard had nine samples taken on the first 0 to 2 inches and one taken at 12 inches of soil.

Sampling was also done in concentrator and smelter facilities to assess possible source areas for material that could be transported by wind or water to surrounding residential properties. Samples were also taken in non-residential areas if there was a possibility that the area could be accessed from residences such as tailings piles or the industrial facilities related to the smelter or concentrator. All of the sampling was for a variety of metals but focused on arsenic, lead and copper concentrations since those were found to be of the most concern during the October 2004 sampling.

Soil and sediment samples were also collected along the Gila River floodplain to assess potential effects on the environment.

Water and Air Sampling

U.S. EPA has completed sampling the water in the Gila River and drinking water supply wells that serve the towns of Hayden and Winkelman. We also sampled the groundwater around Hayden and the concentrator and smelter facilities.

U.S. EPA is currently sampling air quality for the volume of particulates in the air and the concentrations of various metals that make up the dust. The air sampling will continue for many months to determine the effects of different wind conditions.

When will the Results be Available?

Results of the sampling will be compiled and analyzed in a Remedial Investigation Report expected to be finished in late 2007 and will be available to the community and reviewed through public meetings. These results will be

used to determine an estimate of the potential risk posed to residents. Home owners who had testing done on their property will receive the sampling results via mail in Summer 2007.

Next Steps

Based on the information from the remedial investigation, U.S. EPA is beginning a risk assessment to determine community members' risk from air, soil and water exposure in and around Hayden and Winkelman. U.S. EPA is also assessing the risk to the ecosystem in and around the Gila River. When the results are completed, U.S. EPA will hold a public meeting to discuss the results.

Community members will be notified of the completion of the remedial investigation and risk assessment through a fact sheet. Copies of both studies will be available for public review around the time of the public meeting in the Fall of 2007.



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Contact Information

John Hillenbrand

Project Manager
U.S. EPA, Region 9
75 Hawthorne St.
San Francisco, CA 94105
415-972-3494
Hillenbrand.john@epa.gov



Lauren Berkman

Community Involvement Coordinator
U.S. EPA, Region 9
75 Hawthorne St.
San Francisco, CA 94105
415-972-3292
Berkman.lauren@epa.gov

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For more site information, visit the EPA Region 9 web page at <http://www.epa.gov/region09/waste/sfund/>

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Appendix



Asarco Hayden Plant Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • April 2008

EPA, ADEQ, and ASARCO, LLC Sign Cleanup Agreement

EPA invites you to an Open House and Community Meeting to update the public on current site activities and a new settlement agreement with ASARCO, LLC and Arizona Department of Environmental Quality (ADEQ). The event will be held twice, once on May 13 in the evening, and once on May 14 during the day. The meetings will be held at the Hayden High School District Lobby, 824 N. Thorne Avenue, Winkelman, AZ.

During the Open House, residents will be able to view posters and other information, and meet with representatives from EPA one-on-one. Following the Open House, EPA will conduct a public meeting with presentations on current and future site work, and answer community questions. A portion of the meeting will be set aside as an open forum for the community's general comments.

Remedial Investigation

The first phase of EPA's detailed sampling and analysis, called a Remedial Investigation (RI) is nearly complete. The Phase I RI focused on collecting data to assess the soil and air in Hayden and Winkelman. As part of the Phase I RI, EPA sampled 1/3 of the residential yards in Hayden and many in Winkelman.

EPA has also sampled a small portion of the non-residential areas in and around Hayden and Winkelman as well as small areas of the ASARCO facility. The preliminary results of this Phase I Remedial Investigation were presented to the community on January 9 and 10.

Public Meetings

Tuesday – May 13

Open House and Poster Sessions
6:00 p.m. to 7:00 p.m.
Community Meeting
7:00 p.m. to 8:00 p.m.

Wednesday – May 14

Open House and Poster Sessions
10:00 a.m. to 11:00 a.m.
Community Meeting
11:00 a.m. to 12:00 p.m.



Community Meeting Proposed Agenda

1. Welcome and Introductions
2. Opening comments
3. 15-Yard Removal Update
4. Remedial Investigation Update
5. Presentation on proposed Settlement Agreement
6. Open Forum



Based on this sampling, EPA believes that most of the yards that were sampled should be cleaned up. EPA also believes that the ASARCO facility and offsite areas should be more thoroughly investigated and that long term remedies may also be needed.

EPA has also sampled air quality in Hayden and Winkelman and found elevated levels of arsenic, chromium and cadmium.

Current Soil Removal

Under an agreement signed in March 2008, EPA began overseeing ASARCO's removal of contaminated soil at 15 residential yards in Hayden and Winkelman.

This cleanup action follows EPA's RI sampling results that identified elevated copper, arsenic and lead in yards in Hayden and Winkelman. The work is being performed and funded by ASARCO, and will be completed by this summer.

Administrative Settlement Agreement and Order on Consent

On April 15, 2008, EPA, ADEQ and ASARCO, LLC signed a second agreement to perform additional investigation and cleanup work in the towns of Hayden and Winkelman.

The agreement, titled as an Administrative Settlement Agreement and Order on Consent (AOC), is subject to public comment and United States Bankruptcy Court approval. The AOC is a legal agreement that describes the investigation and cleanup responsibilities of ASARCO.

In the AOC, ASARCO agrees to clean yards at all residences where levels exceed 23.6 parts per million (ppm) Arsenic, 400 ppm Lead, and 9300 ppm Copper. Of the 99 yards sampled in Hayden, 70 exceed these standards. Of the 31 yards sampled in Winkelman, four exceed these standards. The remaining 200 yards of occupied residences in Hayden and approximately 30 properties in southern Winkelman will be sampled and addressed, if necessary. Other yards and public areas in residential areas will be assessed and, if needed, addressed as part of the larger investigation and cleanup.

In residential yards, soil will be excavated to 12 inches (or as little as 6 inches if EPA determines that field conditions warrant), at which point a sample will be taken. If the remaining soil still exceeds the cleanup levels listed above, another foot of soil will be removed. Excavation will not exceed 24 inches. Clean fill will be brought in and the yards will be restored. The interiors of homes will also be addressed and they will be cleaned, if necessary. Residents will be offered temporary relocation while work proceeds at their homes.

At the same time as the yard cleanups, an additional RI and a feasibility study (FS) will be performed for the entire

site, including property owned by ASARCO and other property. This Phase II RI will look at areas not investigated as part of the Phase I RI. The FS will evaluate different cleanup methods for addressing contamination identified in both the Phase I and II RIs and not already cleaned up.

Under the agreement, ASARCO will fund a Technical Assistance Plan, which will provide independent technical expertise to help the community understand the cleanup documents and proposed cleanup action. The environmental expert will review Site documents, explain them to the community, and help residents frame their issues and concerns back to EPA and ASARCO.

If you wish to make public comments on the ASARCO AOC, they must be postmarked by May 19, 2008. You can find the Settlement Agreement on the Department of Justice website:

http://www.usdoj.gov/enrd/Consent_Decrees/ASARCO_Hayden/r_ASARCO_Hayden_Plant_Site_AgrFinal.pdf

A copy of the Settlement Agreement may also be obtained by mail: ***

Consent Decree Library

P.O. Box 7611, U.S. Department of Justice
Washington, D.C. 20044-7611

***You may also obtain a copy by faxing or e-mailing a request to:

Tonia Fleetwood

tonia.fleetwood@usdoj.gov
fax (202) 514-0097
phone confirmation (202) 514-1547

If you wish to make public comments on the ASARCO AOC, they should be postmarked by May 19, 2008, and addressed to:

Assistant Attorney General

Environment and Natural Resources Division
P.O. Box 7611, U.S. Department of Justice
Washington, D.C. 20044-7611

Please refer to In Re Asarco, LLC, Case No. 05-21207 (S.D. Tex. Bankr.), DOJ Ref. 90-11-3-08633

*** Please enclose a check for \$11.25 to cover reproduction costs.

Appendix

Community Involvement

EPA is committed to involving the public in the cleanup decision-making process. Its Community Involvement Program focuses on answering the community’s questions about the cleanup effort, providing information to the community about site activities, and incorporating community issues and concerns into Agency decisions, particularly when a cleanup remedy is proposed.

This effort is organized and formalized in a Community Involvement Plan (CIP). The CIP uses information gathered from interviews with residents and other interested parties to create two-way communication that engages the public in the cleanup work. The CIP identifies community issues and concerns, places to hold public meetings, media outlets for public notices, and gives a general outline of the cleanup work to be done, with certain milestones.

If you are interested in being interviewed for the CIP, please contact the Community Involvement Coordinator (CIC) listed below.

Over the course of the cleanup effort, there will be a number of public meetings and a formal comment period when EPA’s preferred cleanup method is identified. These meetings and comment period will be announced through fact sheets and through public notices advertised in the local paper.

If you or others are interested in being added to EPA’s mailing list for fact sheets and meeting notices, please fill out the attached mailer and mail it to the CIC. To learn more about the ASARCO cleanup, you may find the documents at the two Information Repositories in Hayden and Kearny. Their addresses and hours are listed on the back page.

For Further Information:

If you have questions or concerns, please contact the following individuals:

For the current 15-home soil removal:

Martin Powell
On-Scene Coordinator
602-771-4591
powell.martin@epa.gov

For the AOC and RI/FS:

John Hillenbrand
Remedial Project Manager
415-972-3494
hillenbrand.john@epa.gov

For other issues:

David Cooper
Community Involvement Coordinator
(415) 972-3245
cooper.david@epa.gov



You can also call toll-free (800) 231-3075. Leave a message and your call will be returned.



Mailing List Coupon

If you are not already on the ASARCO Hayden Plant mailing list and would like to be, please fill out the coupon below and return it to: David Cooper, Community Involvement Coordinator, U.S. EPA, 75 Hawthorne St. (SFD-3), San Francisco, CA 94105 or e-mail the information to: cooper.david@epa.gov

Name _____

Mailing Address _____

City, State _____ Zip _____

EPA, ADEQ, and ASARCO, LLC Sign Cleanup Agreement

Information Repositories

EPA has established two information repositories for community members. A copy of the EPA October 2004 Sampling final report is available for review at:

Hayden Public Library
520 Velasco Avenue
Hayden, AZ 85235



Arthur E. Pomeroy Public Library
912-A Tilbury Road
Kearny, AZ 85237

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Appendix



ASARCO Hayden Plant Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • September 2008

EPA Releases ASARCO Hayden Plant Investigation Results

The U.S. Environmental Protection Agency (EPA) invites the public to two community meetings to discuss the results of its comprehensive investigation of properties in Hayden and Winkelman associated with the ASARCO Hayden Plant Site (Site).

Both meetings will be held at the Hayden Senior Center, 520 Velasco Ave., Hayden, AZ, one on Thursday, September 11th from 6:30 p.m. to 8:30 p.m., and the other on Friday September 12th from 10:00 a.m. to 12:00 p.m. Both meetings will cover the same information.

During each meeting, EPA will present information on the results of the cleanup investigation, provide the status of the cleanup of the yards, and discuss methods of community involvement, including the availability of an independent technical advisor to assist the community in understanding EPA's cleanup documents.

The draft Phase I Remedial Investigation Report is now available in the Information Repository at the Hayden Library. EPA invites the public to review and comment on the report. Please submit comments to John Hillenbrand by September 25, 2008 (see contact information on back page).

Results of EPA's Investigation

The Phase I site investigation has found extensive soil contamination in Hayden residential soils, and air contamination in both Hayden and Winkelman, related to past and present smelting and milling operations.

Over 1,000 soil samples were collected in Hayden and Winkelman. This sampling has found arsenic, lead and copper above residential soil cleanup standards. Areas which are closer to the old Kennecott Smelter and the ASARCO concentrator show the highest concentrations of arsenic and copper. In Winkelman, soil contamination is centered along the old railroad tracks and Highway 177.

One year of air monitoring near city hall in Hayden, and at the high school in Winkelman, has indicated elevated levels of arsenic, lead, copper, cadmium and chromium. For example, the average levels of arsenic in Hayden air is .0239 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) while areas unaffected by mining, such as the Organ Pipe National Monument area southwest of Tucson, have average concentrations of

Community Meetings

Hayden Senior Center
520 Velasco Ave
Hayden, AZ

Thursday, September 11th
6:30 p.m. to 8:30 p.m.

.....
Friday, September 12th
10:00 a.m. to 12:00 p.m.



**Remedial Investigation
Comment Period Ends
September 25, 2008**

Agenda

1. Welcome and Introductions
2. Superfund Process
3. Remedial Investigation Results
4. Risk Assessment
5. Community Involvement
6. Adjourn

.0004 ug/m³ or less. These concentrations indicate that the arsenic in Hayden air is about 60 times above what would be expected in an area unaffected by smelting activities. The high levels in Hayden were typically measured when the wind was blowing from the smelter towards town. The high arsenic concentrations are not always associated with high dust levels.

In Winkelman, the average arsenic air concentration (.00796 ug/m³) is 20 times higher than the Organ Pipe area and is elevated when the wind direction is from the smelter. The pattern of other metals such as lead and copper are similar to arsenic and will be discussed at the public meeting.

Drinking water supplies for the towns of Hayden and Winkelman, as measured at the drinking water fountains at the Hayden Public Library and the Hayden High School in Winkelman, meet drinking water quality standards for all parameters except manganese. The manganese standard is not based on health effects but on the effects of staining on cloths and plumbing fixtures.

ASARCO Cleanup to Follow Superfund Process

The ASARCO Hayden Plant Site will be cleaned up as outlined in the Administrative Settlement Agreement and Order on Consent (AOC) and under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), which is commonly referred to as Superfund. The process has a number of steps (see figure below). The public is encouraged to share its issues and concerns throughout the Superfund process.

The Remedial Investigation determines the nature and extent of contamination. This involves collecting samples of the soil, groundwater and air. Currently, the ASARCO site is at this stage. However, during any stage of the cleanup process, EPA can conduct short-term or immediate

cleanup actions, which EPA calls removal actions. The cleanup of the 15 yards in Hayden falls into the removal action category.

After the remedial investigation is completed, the "Feasibility Study" will be initiated. The Feasibility Study describes and analyzes the potential cleanup alternatives for the Site. Individual alternatives will be assessed against EPA's evaluation criteria and a comparative analysis of options will be performed.

After the Feasibility Study, EPA will identify the preferred cleanup remedy and will share this in a public meeting which is accompanied by a comment period. After all public comments are reviewed, EPA will document the selected remedy in a legal document called a Record of Decision (ROD).

Following the ROD, EPA will oversee the design, construction, testing, and operation of the remedy and/or perform the necessary cleanup activities itself.

Community Involvement Process

EPA policy establishes a strong program of public participation in the site cleanup process. The purpose of the Community Involvement program is to help community members become involved in the decision-making process by developing two-way communication between the affected community and EPA. It focuses on answering the community's questions about the cleanup effort, providing information to the community about site activities, and incorporating community issues and concerns into Agency decisions.

A Community Involvement Plan (CIP) will be developed to organize the way EPA provides cleanup information and community access to the decision-making process. During community interviews with local residents, elected officials



Appendix

and other interested parties, EPA gathers a list of issues and questions the community is concerned about so that they may be considered during the cleanup process, and when a cleanup remedy is proposed. EPA also learns the best ways to provide information and notify the community of meetings.

If you are interested in being interviewed for the development of the CIP, please contact David Cooper (see back page).

Throughout the cleanup process, there will be a number of public meetings. Typically, these events occur when the remedial investigation report is released and when EPA's preferred cleanup method is identified. These meetings and formal comment periods will be announced through fact sheets and through public notices advertised in the *Copper Basin News*. The EPA website for this site is found through <http://www.epa.gov/region09/AsarcoHaydenPlant>.

Technical Assistance Available

Under the terms of the settlement, ASARCO will fund an independent technical advisor to interpret cleanup documents and help the community understand technical information about the site. Interested community groups should contact David Cooper (see back page) at EPA for more information.

EPA also has an internal assistance program called Technical Assistance Services for Communities (TASC) which provides the services of independent, outside technical experts. For more information about TASC services, please contact: Luis Garcia-Bakarich (415) 972-3237 or email: garcia-bakarich.luis@epa.gov.

Next Steps

The next steps in Hayden and Winkelman involve two parts and are controlled by the AOC agreement between EPA, ADEQ and ASARCO. The first part is sampling and, if needed, removal of residential soil in additional yards. ASARCO, under EPA oversight, will sample and remove soil in a manner similar to the 15 yards that are already completed.

The second part is extensive sampling of ASARCO facility soils and more detailed sampling of air quality coming from different areas, including ASARCO facilities. This second part is called the Phase II Remedial Investigation and will help pinpoint specific contamination sources, and may include any specific actions needed to control these air or soil contamination sources.

Information Repositories

EPA has established two information repositories for community members. A copy of the EPA October 2004 Sampling final report is available for review at:

Hayden Public Library
175 5th Street
Hayden, AZ 85235

Arthur E. Pomeroy Public Library
912-A Tilbury Road
Kearny, AZ 85237



Mailing List Coupon

If you are not already on the ASARCO Hayden Plant mailing list and would like to be, please fill out the coupon below and return it to: David Cooper, Community Involvement Coordinator, U.S. EPA, 75 Hawthorne St. (SFD-3), San Francisco, CA 94105 or e-mail the information to: cooper.david@epa.gov

Name _____

Mailing Address _____

City, State _____ Zip _____

EPA Releases ASARCO Hayden Plant Investigation Results

For Further Information

If you have questions or concerns, please contact the following individuals:

Technical Issues

John Hillenbrand
 Remedial Project Manager
 U.S. EPA, Region 9 (SFD-8-2)
 75 Hawthorne St.
 San Francisco, CA 94105
 (415) 972-3494
 Fax (415) 947-3528
hillenbrand.john@epa.gov

Community

David Cooper
 Community Involvement Coordinator
 U.S. EPA, Region 9 (SFD-3)
 75 Hawthorne St.
 San Francisco, CA 94105
 (415) 972-3245
 Fax (415) 947-3528
cooper.david@epa.gov

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Hayden and Winkelman Yard Cleanup Update

Under an agreement with the U.S. Environmental Protection Agency (EPA) and the State of Arizona Department of Environmental Quality (ADEQ), ASARCO has begun the next phase of the yard sampling and cleanup project in Hayden and Winkelman, AZ.

This next phase will result in samples from most of the residential properties in Hayden and the southern portion of Winkelman below Third Street and along Highway 77. Properties that have already been sampled will not be sampled again. The school properties and residential yards north of Third Street have been extensively sampled and were found to not be at levels that require cleanup activities.

The residential properties will have their soil sampled by ASARCO contractors under the direction of EPA. If the results of the sampling show metals above certain protective levels, then the yard will require cleanup. Based on past sampling and likely future sample results, at least 150 more residential yards in Hayden and Winkelman will be

excavated and replaced with clean soil. The yard cleanups will be carried out in the same way as the 15 yards with the highest contaminant levels were cleaned up during the summer of 2008.

During the current phase of residential sampling and cleanup, EPA and ADEQ will approve the workplan and oversee ASARCO's activities. EPA will maintain a presence at the site near the ASARCO Administrative building.

As with the earlier 15-yard cleanup, ASARCO's contractors will remove the top 1-2 feet of soil if remediation is needed. ASARCO will reduce dust using water suppression and will cover the loads of dirt while transporting them away from the residential area. Soil from the excavation will be trucked to and secured on ASARCO's property in the same way that dirt was taken from the first 15 yards.

For any questions regarding sampling or excavation activities or ASARCO's role please contact EPA (see below).

For Further Information

If you have questions or concerns, please contact the following individuals:

John Hillenbrand
Remedial Project Manager
U.S. EPA, Region 9 (SFD-8-2)
75 Hawthorne St.
San Francisco, CA 94105
(415) 972-3494
Fax (415) 947-3528
hillenbrand.john@epa.gov

David Cooper
Community Involvement Coordinator
U.S. EPA, Region 9 (SFD-6-3)
75 Hawthorne St.
San Francisco, CA 94105
(415) 972-3245
Fax (415) 947-3528
cooper.david@epa.gov

You can also call Toll-free (800) 231-3075. Leave a message and your call will be returned.



Hayden and Winkelman Yard Cleanup Update

Information Repositories

EPA has established two information repositories for community members. Documents are available for review at:

Hayden Public Library
175 5th Street
Hayden, AZ 85235



Arthur E. Pomeroy Public Library
912-A Tilbury Road
Kearny, AZ 85237

The EPA website for this site is found through
<http://www.epa.gov/region09/AsarcoHaydenPlant>



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Public Meeting Residential Yard Cleanup and Future Activities

The U.S. Environmental Protection Agency (EPA) invites the public to two community meetings to learn about the cleanup of residential yards in Hayden and Winkelman, AZ, and the pending cleanup investigation on the ASARCO property. The meetings will cover the same information.

Yard Cleanup in Hayden and Winkelman

ASARCO continues to address contamination under the oversight of EPA and the State of Arizona Department of Environmental Quality (ADEQ). ASARCO's yard sampling and cleanup project in Hayden and Winkelman is on track and scheduled to be near completion by the end of July. Approximately 650 properties in the two towns have been sampled. Of these properties, just over 40% or 250 have required cleanup for arsenic, copper and/or lead. ASARCO has paid for these cleanups. The remainder of the homes do not require cleanup.

Of the homes that do not require cleanup, possible reasons include the prior removal of contaminated soils (for landscaping and other purposes), the prior addition of clean soil on top of the contamination (for drainage, landscaping or other purposes), construction on top of the contaminated soils which created an exposure barrier, and/or the erosion or movement of contamination off of the residential site through historic rain events.

In addition to the above reasons, wind patterns, or the greater distance from the source areas (smelters or concentrator), may also have influenced why sampling showed lower contaminant levels in some areas of the towns.

Community Meetings

July 21, 2009

6:30pm – 8:30pm

July 22, 2009

11:00am – 1:00pm

Hayden Senior Center

520 Velasco Ave
Hayden, AZ



In addition to residential yard cleanups, other areas such as vacant lots, businesses and dirt alleys where citizens could be exposed to contamination have also been sampled and, if needed, cleaned up.

Air Monitoring Update

The ongoing air monitoring in Hayden and Winkelman has confirmed the continued presence of metals such as lead, arsenic, and chromium at levels that pose a long-term health risk.

The following table provides a summary of data collected by air monitoring stations for various metals in air.

The table includes the maximum recorded concentration for each metal and the average concentration detected, except for lead. The average contaminant levels used in Table 1 come from monitors located in Hayden, because the average levels in Winkelman are lower. The concentrations are compared to health based air quality standards.

Metal	Arsenic	Cadmium	Chromium	Lead
max detected value mg/m ³	0.189	0.035	0.007	0.8
average detected value mg/m ³	0.024	0.005	0.002	Data not analyzed for average
air quality standard ug/m ³	0.00045	0.0011	0.00016	0.15

Table 1: Air Quality Data

These results will be discussed at the July 21 and 22 public meetings, and are currently available both on EPA's web site and in a document called the "Remedial Investigation Report" at the information repository at the Hayden Library.

The next step in the air investigation will be to pinpoint sources of air emissions. This investigation will focus on sources of various metal contaminants from the smelter and concentrator. EPA and ADEQ will work together to develop a permit that will reduce these emissions from active smelter and concentrator operations to levels that are protective of public health.

ASARCO-owned Property Investigation

ASARCO property includes the facility grounds, where copper production is ongoing, as well as waste piles that exist along Kennecott Avenue and the area east of Hayden City Hall.

Past investigations of ASARCO's property by EPA have discovered elevated levels of metals, such as arsenic, copper and lead in the air and soil. These results will also be discussed at the public meetings, and are currently available both on EPA's web site and at the Information Repository at the Hayden Library.

ASARCO, under the oversight of EPA, will perform the additional investigations of the smelter, concentrator and other ASARCO-owned properties. Specific investigations will include sampling piles of waste soil from old operations, as well as active sources related to ongoing crushing, grinding, smelting, travel on dirt roads and other activities.

Information Repositories

EPA has established two information repositories for community members. Documents are available for review at:

Hayden Public Library
175 5th Street
Hayden, AZ 85235



Arthur E. Pomeroy Public Library
912-A Tilbury Road
Kearny, AZ 85237

The EPA website for this site is found through
<http://www.epa.gov/region09/AsarcoHaydenPlant>



Appendix

July 2009

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The soil investigation will identify the levels of contamination and determine if cleanup is needed to reduce exposure to the residents of Hayden and Winkelman. Groundwater and surface water will also be investigated. This part of the investigation will begin towards the end of 2009.

Garms Park Re-Dedicated

EPA has confirmed that ASARCO's cleanup effort at Garms Park is complete and that the area is ready for use. The park was rededicated on June 20th. Improvements include new grass and playground equipment, and repainting of the memorial to fallen military service members.



Figure 1: Garms Park



Figure 2: Playground structure at Garms Park

ASARCO Cleanup Site Information on the Web

EPA has made a number of cleanup documents available on the internet. These include: EPA's Phase I Remedial Investigation, and the Agreement between EPA, ADEQ and ASARCO to allow EPA and ADEQ to oversee ASARCO's work. To access these documents, click on <http://www.epa.gov/region9/AsarcoHaydenPlant>.

For Further Information

If you have questions or concerns, please contact the following individuals:

John Hillenbrand
Remedial Project Manager
U.S. EPA, Region 9 (SFD-8-2)
75 Hawthorne St.
San Francisco, CA 94105
(415) 972-3494
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