

# **Five-Year Review Report**

## **Fourth Five-Year Review Report**

**for**

**Mountain View Mobile Home Estates  
Superfund Site**

**Globe**

**Gila County, Arizona**

**September, 2010**

**PREPARED BY:**

**United States Environmental Protection Agency**

**Region IX**

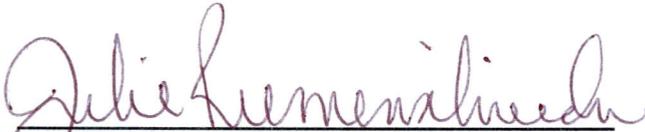
**San Francisco, California**

**REPORT APPROVALS**

**Report Title: Fourth Five-Year Review Report  
Mountain View Mobile Home Estates Superfund Site  
Globe, Arizona**

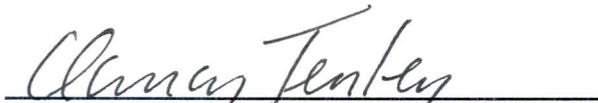
**Report Date: September 2010**

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## List of Acronyms

ADEQ	Arizona Department of Environmental Quality
ADES	Arizona Division of Emergency Services
ADHS	Arizona Department of Health Services
ARARs	Applicable or Relevant and Appropriate Requirements
BLM	Bureau of Land Management
CD	Consent Decree
CDC	U.S. Center for Disease Control
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CIC	Community Involvement Coordinator
DEUR	Declaration of Environmental Use Restriction
DOJ	U.S. Department of Justice
EPA	Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
HQ	Headquarters
IC	Institutional Control
N/A	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operations and Maintenance
OSC	On-Scene Coordinator
OU	Operable Unit
RA	Remedial Action
RAO	Remedial Action Objective, cleanup level
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RPM	Remedial Project Manager
SARA	Superfund Amendments and Reauthorization Act of 1986
SSC	State Superfund Contract
SPRR	Southern Pacific Railroad
USACE	U.S. Army Corps of Engineers
USFS	U.S. Forest Service

## Executive Summary

This is the fourth Five-Year Review of the Mountain View Mobile Home Estates Superfund Site (Site) in the City of Globe, Gila County, Arizona. The purpose of this Five-Year Review is to review information from the previous five years to assess the maintenance of the capped asbestos contamination left on-site and determine whether or not the remedy remains protective of human health and the environment.

The 17-acre site was once the home of the former Metate Asbestos Corporation's chrysotile asbestos mill. The property was subsequently used as a mobile home park from the period of 1973 until 1979. In 1979, local health officials discovered asbestos contamination during an inspection of the mobile home park's sewage treatment plant. Asbestos mill tailings had been used as fill material and then been partially covered with topsoil. Small piles of asbestos mill tailings were found near the abandoned mill structures and the adjacent railroad tracks. The air and soils were contaminated with asbestos posing a potential health risk to the residents.

In 1980, the State of Arizona provided temporary housing for the 100-130 residents while the site was decontaminated. The old mill buildings were demolished, and topsoil was used to cover the asbestos contaminated soil. However, wind, water and public activity soon eroded this soil covering, resulting again in exposed asbestos.

In July 1982, Mountain Mobile Home Estates was added to the National Priorities (NPL). The Remediation Investigation/Feasibility Study (RI/FS) began in April 1983, and a RI/FS Report was published in May 1983. In June 1983, EPA signed a Record of Decision (ROD) selecting the following remedy for the site: permanently relocating the mobile home residents; burying and capping the asbestos contaminated soils at the site; demolishing and burying all the homes and the sewage treatment plant on-site; covering the site with a filter fabric; placing clean soil on top of the site; and periodically inspecting and maintaining the site. Permanent relocation of the residents was completed in 1985, and ownership of the purchased property was transferred to the State of Arizona.

In April 1987, EPA issued a Notice of Intent to delete the site from the NPL. The comment period ended in October 1987, and the final notice of deletion was published on April, 18, 1988. The "Construction Complete" date for the Site is also listed as the same April 1988 date.

The Arizona Department of Environmental Quality (ADEQ) through a Superfund State Contract with EPA is responsible for the long-term operations and maintenance (O&M) of the remedy. In the intervening years, ADEQ has been maintaining the site, including conducting periodic inspections to confirm that the buried asbestos remains capped in place and that the perimeter fencing and signage are in good condition to prevent public access to the site.

Exposure to the remaining capped and buried asbestos contaminated soils and construction debris is adequately controlled by the protective cap put in place in 1985 by EPA and U.S. Army Corps of Engineers, and the additional protection of the land use restriction (Declaration of Environmental Use Restriction or DEUR) recorded on the property by ADEQ on December 20, 2007 by ADEQ, in accordance with the October 2007 First Amended Superfund State Contract.

The remedy at the Mountain View Mobile Home Estates Superfund Site currently protects human health and the environment because there is no current exposure to the contamination that remains at the Site. The placement of the DEUR in 2007 completed the requirement for this institutional control being in place and ensures long-term protectiveness. There are some minor landscaping and maintenance items that were identified during the 2010 site inspection; however, these maintenance items do not affect the protectiveness of the remedy.

## Five-Year Review Summary Form

<b>SITE IDENTIFICATION</b>		
<b>Site name (from WasteLAN): Mountain View Mobile Home Estates</b>		
<b>EPA ID (from WasteLAN): AZ D980735724</b>		
<b>Region: IX</b>	<b>State: AZ</b>	<b>City/County: Globe / Gila County</b>
<b>SITE STATUS</b>		
<b>NPL status:</b> <input type="checkbox"/> Final <input checked="" type="checkbox"/> Deleted <input type="checkbox"/> Other (specify) _____		
<b>Remediation status</b> (choose all that apply): <input type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Complete		
<b>Multiple OUs?*</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<b>Construction completion date:</b> April 18, 1988	
<b>Has site been put into reuse?</b> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		
<b>REVIEW STATUS</b>		
<b>Lead agency:</b> <input checked="" type="checkbox"/> EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency _____		
<b>Author name:</b> Andria Benner		
<b>Author title:</b> RPM	<b>Author affiliation:</b> USEPA	
<b>Review period:</b> 04/01/2010 to 09/15/2010		
<b>Date(s) of site inspection:</b> 07/07/2010		
<b>Type of review:</b> <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion		
<b>Review number:</b> <input type="checkbox"/> 1 (first) <input type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input checked="" type="checkbox"/> Other (specify) __#4__		
<b>Triggering action:</b> <input type="checkbox"/> Actual RA Onsite Construction at OU # _____ <input type="checkbox"/> Actual RA Start at OU# _____ <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify) Change in land use plans. Consideration of updated toxicity information.		
<b>Triggering action date (from WasteLAN):</b> September 28, 2005		
<b>Due date (five years after triggering action date):</b> September 28, 2010		

## Five-Year Review Summary Form, cont'd.

### Issues:

There are no issues that affect protectiveness. All required Land Use Restrictions and other ICs are now fully in place.

### Recommendations and Follow-up Actions:

EPA and ADEQ should ensure that the remedy decision documents are modified, as needed, to incorporate the institutional controls (DEUR).

Minor, recurring O&M landscaping and fencing issues at the Site require continual, on-going O&M. ADEQ currently plans to address these O&M deficiencies during 2010. These O&M actions do not affect the short-term or long-term protectiveness of the existing Site remedy.

### Protectiveness Statement(s):

The remedy at the Mountain View Mobile Home Estates Superfund Site currently protects human health and the environment because there is no current exposure to the contamination that remains at the Site. A Declaration of Environmental Use Restriction (DEUR) to restrict use of property was recorded for the site in 2007. A title search confirmed that this institutional control is in place and effective to ensure long-term protectiveness.

There are some minor landscaping and maintenance items that were identified during the site inspection; however, these maintenance items do not affect the protectiveness of the remedy.

## 1. Introduction

The purpose of a Five-Year Review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review Reports. In addition, Five-Year Review Reports identify issues found during the review, if any, and recommendations to address them.

The Agency is preparing this Five-Year Review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA §121 states:

*If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section 104 or 106, the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The agency interpreted this requirement further in the NCP. 40 CFR §300.430(f)(ii) states:

*If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

EPA Region 9 in coordination with the Arizona Department of Environmental Quality (ADEQ) has conducted a Five-Year Review of the remedial actions implemented at the Mountain View Mobile Home Estates Superfund site (Site) in Globe, Gila County, Arizona. The entire Site comprises one Operable Unit (OU). This review was conducted from April 2010 through August 2010. This report documents the results of the review.

The June 2, 1983 Record of Decision (ROD) selected a remedy that allowed hazardous substances, pollutants, or contaminants to be left on-site at levels that would prohibit unlimited use and unrestricted exposure. A complete chronology of site events is included on Table 1. This Five-Year Review is therefore required by statute because the remedy allows buried and capped asbestos, including asbestos-contaminated soils and construction debris, to remain on the site indefinitely. This is the fourth Five-Year Review for the site. The triggering action for this statutory review is the signature date September 28, 2005, of the previous Five-Year Review Report, as shown in EPA's CERCLIS database.

## 2. Site Chronology

Table 1 lists the chronology of events for the Site.

**Table 1: Chronology of Site Events**

Event	Date
Metate Asbestos Corp. operated an asbestos mill on the 17-acre property	1953-1973
Metate court-ordered to cease operations after air quality standard violations	1973
The property owner then built a mobile home subdivision on the former mill site	1973
Asbestos mill tailings and contaminated soil discovered on the site by ADHS	1979
State takes emergency action to decontaminate homes and cover the asbestos	1979
U.S. Center for Disease Control recommends evacuation of subdivision residents	Jan 1980
EPA lists Site on National Priorities List (NPL)	July 1982
Remedial Investigation/Feasibility Study (RI/FS) completed by EPA Region 9	May 1983
Public Meeting on proposed remedy conducted by EPA	May 1983
Record of Decision (ROD) signed by EPA HQ	June 1983
USACE given authority by EPA to construct remedy	Oct 1983
60% remedial design completed by USACE	Dec 1983
Final design and O&M Manual completed by USACE	April 1984
Superfund State Contract for long-term O&M signed by EPA, ADHS & ADES	June 1984
Permanent relocation of mobile home residents conducted by ADES, with FEMA	1983-1985
Relocation of 47 families and all property acquisition completed	April 1985
Consent Decree signed by DOJ, EPA, State of AZ, Metate Asbestos & Jaquays	April 1985
Construction contract awarded for remedial action to USACE	June 1985
Construction of remedy commenced by USACE	Aug 1985
Construction project and final reports completed by USACE	Jan 1986
Remedial Action Report completed by USACE	April 1986
Notice of Intent to Delete Site from NPL proposed by EPA	Nov 1987
Final rule for deletion of Site from NPL published by EPA	April 1988
Construction Complete determination by EPA	April 1988
First Five-Year Review completed by EPA	Sept 1991
Second Five-Year Review completed by EPA	Dec 1999
Third Five-Year Review completed by ADEQ	Sept 2005
First Amended Superfund State Contract signed by EPA and ADEQ	Oct 2007
Declaration of Environmental Use Restriction on Site Recorded by ADEQ	Dec 2007
Site-Wide Ready for Anticipated Use (SWRAU) Determination made by EPA	Mar 2008
Future Use Assessment Report for Site completed by EPA	Nov 2008

### **3. Background**

#### **Physical Characteristics**

The Mountain View Mobile Homes Estates Superfund Site is located on a 17-acre parcel approximately one and one-half miles east of the City of Globe, approximately 75 miles east of Phoenix, Arizona, in Gila County. The Site is within the city limits and consists of seventeen acres of land contaminated with asbestos mill tailings and asbestos-contaminated construction debris and soils buried under a landfill cap. It is located in a relatively undeveloped area on the north side of Highway 70 where it meets State Route 77 (SR 77). The surrounding terrain is mountainous and primarily composed of federally-owned land. The Gila County Assessor parcel numbers of the property where the contamination is located are 102-28-014-A and 102-28-014-B (See Figure 1).

Since the completion of the remedial action in 1985, the Site has been fenced, locked, and posted with a public notice stating that hazardous substances are present. In addition to the fence, the site itself includes the following remedial components: a barrier fabric capped with 24-inch soil and 3-inch gravel cover, plus surface and subsurface drainage features to protect the cap from on-site and off-site erosion. The Site's main access is located off Highway 70, with a secondary access located on the western boundary. The site is bordered along the northern perimeter by an active railroad line owned by Southern Pacific Rail Road Transportation Company (SPRR). The Bureau of Land Management (BLM) owns the land to the north of the Site and the U.S. Forest Service (USFS) owns the land to the south of Highway 70.

According to the 2000 U.S. census, there were 7,486 people, 2,814 households, and 1,871 families residing in the city of Globe. The population density was 415.5 people per square mile (160.4/km<sup>2</sup>). There were 3,172 housing units at an average density of 176.0/sq mi (68.0/km<sup>2</sup>).

#### **Land and Resource Use**

The site contained three washes passing from north and west through the Site and passing under Highway 70 on the south. Two of the washes pass beneath the Southern Pacific railroad tracks in large arch culverts. Both of these drainage courses have relatively steep grades (approximately 5% slope) as they pass through the Site. The third major wash entered the site on the west property line and passed diagonally through the Site leaving the property line on the south side. Drainage studies quantified the storm water runoff that could be anticipated and the remedial action design planned a pipe and channel system that could carry a 100-year storm event.

The current drainage features include a concrete-lined surface swale and two subsurface drainage pipes. These conveyance systems are considered part of the remedy as they protect the cover from erosion from on-site and off-site drainage. As such, the drainage conveyance systems tend to divide the Site into three distinct areas:

- (1) property southwest of the drainage swale,

- (2) a central portion between the swale and the drainage pipe discharging near the main Site access, and
- (3) property east of the main access gate on SR 70.

The land uses of the Site and surrounding area are essentially the same as they were during the third Five-Year Review in 2005. The site is located in an area zoned C-2, intermediate commercial. Regarding future land use, an EPA Headquarters Superfund Reuse/Revitalization contractor, E2, Inc., completed a reuse assessment, “*Planning for the Future*,” for the City of Globe in November 2008. The study identified and discussed the opportunities and the limitations of potential light industrial development of the Site. However, due to the economic conditions in the last few years, development options have not yet been pursued.

## **History of Contamination**

In 1973, the Metate Asbestos Corporation, who operated a chrysotile asbestos mill, on the 17-acre Site, was found to be in violation of EPA Air Quality Standards was ordered to cease operations by the State of Arizona Air Quality Control District. Before the Air District’s temporary injunction became permanent in 1974, the owner of Metate Asbestos, Jack Neal, obtained a rezoning of the property to residential use. Metate asbestos tailings and contaminated soil were used as landfill to level the site and the area was subdivided into 55 lots. Of these lots, mobile homes were placed on 47 lots occupied by approximately 130 residents and the subdivision was named Mountain View Mobile Home Estates.

In October 1979, asbestos contamination of the soil of the subdivision was discovered by State and local health officials during an inspection of the mobile home park’s wastewater disposal system. Subsequent sampling of the air and sediment of the subdivision confirmed the presence of asbestos fibers posing a risk to public health.

In November 1979, The Arizona Department of Health Services (ADHS) sent the residents a letter notifying them of the health hazard. In December 1979, ADHS ordered Metate Asbestos Corp. and several other mills in the Globe area, including the Jaquays Mining and Equipment Corp. (an asbestos mill directly contiguous on the east to the Mountain View subdivision), to submit cleanup plans for their asbestos contamination. The U.S. Assistant Surgeon General, U.S. Public Health Service, determined that the chrysotile asbestos in the air and soils was hazardous to public health. In January 1980, the U.S. Center for Disease Control (CDC) recommended that all the residents of the Mountain View site be evacuated. Governor Bruce Babbitt of Arizona declared the Site to be a state of emergency on January 16, 1980. During the period of January through March 1980, the Arizona Division of Emergency Services provided temporary housing to the residents while their homes were decontaminated and the Metate Mill building was demolished and buried on-site with a soil cover.

In 1981, ADHS began to look at a more permanent remedy because the partial soil cover began eroding and exposing asbestos fibers. In July 1982, The Site was designated by the State as its highest priority site for cleanup under the federal Superfund law, the Comprehensive

Environmental Response Compensation and Liability Act (CERCLA) and added to EPA's National Priorities List (NPL)

In September 1982, the Site was referred to the U.S. Department of Justice (DOJ). In January 1983, after the property owner refused to accept responsibility for the cleanup, EPA began investigation of the site conditions. A remedial investigation and feasibility study (RI/FS) was completed under an accelerated schedule by May 1983. On May 13, 1983, DOJ filed a complaint in United States District Court for the State of Arizona against the Metate Asbestos Corp., Jaquays Mining Corp., and the developers of the Mountain View Mobile Home Estates.

The Remediation Investigation/Feasibility Study (RI/FS) began in April 1983, and a RI/FS Report was published in May 1983. On May 16, EPA Region 9 held a Public Meeting in Globe to present the RI/FS Report and hear public comments. The Arizona Division of Emergency Services (ADES), through an agreement with the Federal Emergency Management Agency (FEMA) also began a voluntary temporary relocation program in May 1983.

## **Basis for Taking Action**

The results of EPA's RI/FS Report indicated that the asbestos contamination posed an unacceptable threat to the resident of the subdivision. Chrysotile asbestos fibers were the only hazardous wastes identified at the Site. Airborne fibers were monitored at levels of concern to health authorities. Asbestos mill tailings were also present in the surface and subsurface soil at the Site. Both of these conditions created potential health hazards for the residents, workers and the general public. Chrysotile asbestos is a human carcinogen and fibrogen that poses a substantial health risk when inhaled. EPA's position was based on both animal experimentation and human epidemiological studies supported in publications of the World Health Organization International Agency for Research on Cancer, the National Institute for Occupational Safety and Health (NIOSH), and the CDC revised Recommended Standard for Occupational Exposure to Asbestos, among other studies.

## **4. Remedial Actions**

### **Remedy Selection and Remedial Action Objectives**

The ROD for the Site was signed in EPA Headquarters by Lee Thomas, the Acting Assistant Administrator, on June 2, 1983. The selected remedy was the following:

- Permanent relocation of Mountain View residents
- On-site burial of containerized mobile homes
- Site closure by capping, fencing and maintenance

The ROD states that the recommended alternative includes clearing the entire site and demolishing and burying all of the homes and the sewage treatment plant. Following the home burial, a non-woven fabric filter fabric would be placed over the entire site and the filter media would be covered by two feet of compacted earth fill. The surface of the earth would be sloped to drain and seeded with native grasses. Periodic inspection and maintenance of the cap would be required. Permanent relocation of the Mountain View residents would be conducted by direct

government purchase of the resident's homes and property through the FEMA relocation program.

No Remedial Action Objectives (RAOs) were selected in the 1983 ROD, and no subsequent remedy changes have been made to this original decision document.

## **Remedy Implementation**

After the June 1983 ROD was signed, ADES and FEMA began the permanent relocation of the Mountain View residents. The voluntary relocation of 47 families and all property acquisition was completed in March 1985. In August 1983, EPA executed an Interagency Agreement with the U.S. Army Corps of Engineers (USACE) to design the remedial action for the Site. In October 1983, USACE selected Cella Barr & Associates from Phoenix, Arizona to complete the design drawings. The USACE Los Angeles District office was the lead Construction District for the project.

In June 1984, EPA and ADEQ entered into a Superfund State Contract (SSC) to undertake response activities related to Site closure (construction), community involvement activities during construction, and long-term operations and maintenance activities post construction. The SSC defined the roles of EPA, and ADHS and ADES (the State agencies responsible for the site prior to the establishment of ADEQ) during and following remedy construction, as well as the cost-sharing responsibilities of each Agency.

In April 1985, FEMA certified that all the real estate acquisitions and relocation assistance work was completed by ADES and FEMA. The property was transferred into ownership by the State of Arizona. In May 1985, USACE Omaha District issued a request for bids for construction of the remedy. In June 1985, USACE awarded the \$1,871,000 contract to a joint venture of Maitland-Hydro Corporation and Hydro-Dredge Corporation. In July 1985, the construction contractor received the notice to proceed and work commenced in August 1985. The site design provided two areas on the Site in which the demolished trailers were to be buried at a reasonable depth over a limited area, near the north edge of the site adjacent to the SPRR railroad right-of-way, utilizing the existing natural terrain on the site and within the railroad right-of-way. All crushed and demolished material was maintained within the property boundaries and buried on top of the pre-existing grade without excavation of pits or trenches into contaminated material. Rough grading and subgrade compaction efforts provided a stable, uniformly sloping site to place the non-woven filter fabric and final gravel and soil cap.

In January 1986, the construction work, including the storm drainage system, was completed by the contractor and a final construction inspection was completed by EPA Region 9, the State of Arizona, USACE and the contractor. Drainage structures (manholes, junction structures, outlet headwalls, channel, channel cut off walls, etc.) were installed on top of the filter fabric. Fence post foundations were also installed above the filter fabric in the cap or into the existing native materials with the SPRR easement. In April 1986, a Remedial Action Report was completed by USACE. In June 1986, final deficiency corrective actions were completed by the contractor. In November 1986, Cella Barr & Associates completed a revised Operations and

Maintenance Manual for the Site. In May 1987, EPA closed the construction contract with USACE.

This 1985 cleanup was the first Superfund remedial action for the State of Arizona and one of the first such cleanups in the United States to reach construction complete status. However, EPA did not prepare or sign a Preliminary Close Out Report (PCOR) for the Site.

In September 1987, EPA issued a Notice of Intent to delete the site from the NPL. The comment period ended in October 1987, and the final rule for deletion of the site published on April, 18, 1988. The “Construction Complete” date for the Site is also listed as the same April 1988 date.

During the intervening years, the First Five-Year Review was completed in September 1991, the Second Review in December 1999 and the Third Review in September 2005. This September 2010 review is the Fourth Five-Year Review.

In October 2007, EPA signed its First Amended Superfund State Contract with ADEQ for the on-going operation and maintenance of the Site (Appendix A). In accordance with the requirements of the SSC, a Declaration of Environmental Use Restriction (DEUR) was recorded by ADEQ for the Site in December 2007 (Appendix B). In March 2008, EPA made a Site-Wide Ready for Anticipated Use (SWRAU) determination for the Site. In November 2008, an EPA HQ Superfund Revitalization contractor, E2, Inc., completed a reuse study for the Site, entitled “*Planning for the Future: Reuse Assessment for the Mobile Home Estates Superfund Site.*”

## **Operation and Maintenance**

In accordance with the terms of the SSC and because the State of Arizona is the owner of the Site, the State is responsible for the Site’s operations and maintenance (O&M). ADEQ has been the designated State Agency responsible for the O&M since the completion of the construction activities in 1986. The primary activities, as outlined in the revised November 1986 O&M Manual prepared by Cella Barr Associates, are:

- Visual inspection and repair of settlement or erosion of the soil/aggregate cap, as needed;
- Repair of fence damage resulting from vandalism or animals;
- Removing debris that accumulates along the perimeter fence;
- Removing built-up silts or debris from the channel or inside drainage pipes; and
- Replacing or repainting warning signs on the perimeter fence.

## **5. Progress Since the Last (Second) Five-Year Review**

The 2005 Third Five Year Review for the Mountain View Mobile Home Estates Superfund Site concluded that:

*“The remedial action selected in the ROD, signed June 2, 1983, for the Mountain View Mobile Home Estates Superfund site remains protective of human health and the environment as long as the State of Arizona is still the owner. Currently, there are no*

*environmental exposure pathways that could result in unacceptable risks and none are expected as long as the engineered controls selected in the decision documents continue to be properly operated, monitored, and maintained, and the land use at the site allows for the integrity of the remedy to continue. The remedy remains protective in the short-term. In order for the remedy to remain protective in the long-term, follow-up actions may need to be taken. In the long-term, if the State of Arizona transfers the property, a DEUR or some sort of deed restriction will need to be implemented for the remedy to remain protective in the long-term.”*

The Third Five Year Review identified only one major issue potentially affecting current or future protectiveness,

*“The State Superfund Contract (SSC) for the site expires in March 2006. During the SSC amendment process, a clause should be added that an institutional control mechanism needs to be implemented if the State transfers ownership (for example, a DEUR) and EPA and ADEQ should ensure that the remedy decision document includes the institutional controls mechanism, and modify the decision documents accordingly. ADEQ will work with the State of Arizona Lands Department to ensure that land transfer does not occur.”*

The other issues identified in the Five Year Review were minor deficiencies in the Site O&M, as follows:

*“Various maintenance issues were identified during the site inspection such as sediment and debris accumulation, excess vegetation, minor gaps in the fencing, etc.”*

During the period since the 2005 Five-Year Review to the present, the following actions have been taken to address these issues:

- In October 2007, the First Amended SSC was signed by EPA and ADEQ;
- In November 2007, a DEUR was placed on the Mountain View Superfund Site;
- In March 2008, EPA made a Site-Wide Ready for Anticipated Use determination; and
- During the period of 2005-2009, the identified minor maintenance issues were addressed.

The following issue identified during the 2005 Five-Year Review has not yet been addressed:

- Remedy decision documents should be amended once the IC mechanism (DEUR) is put in place for the Site.

## **6. Five-Year Review Process**

### **Administrative Components**

Gila County representatives and the City of Globe community were formally notified of the initiation of the Five-Year Review process on April 14, 2010. The Five-Year Review was led by Andria Benner, EPA's Remedial Project Manager (RPM) for the Mountain View Mobile Home Estates Superfund site with technical support from Wayne Schiemann, USACE Los Angeles District, and Ed Pond, ADEQ's Project Manager for the Site.

The following EPA Site team members assisted in the review:

- David Cooper, Community Involvement Coordinator (CIC);
- Monica O’Sullivan (Villanueva), Case Developer;
- Kim Muratore, Case Developer;
- Thomas Butler, Regional Counsel Attorney;
- Jere Johnson, Remedial Project Manager (RPM) during 1983 remedial action; and
- Cynthia Wetmore, Environmental Engineer, Technical Support.

This Five-Year Review consisted of the following activities: coordination with State counterparts, community notification and involvement, a review of relevant documents and data, site inspection, and interviews with County and City officials, and other community members.

## **Community Notification and Involvement**

In March 2010, EPA began coordination and outreach with ADEQ regarding the upcoming Five-Year Review process and EPA solicited input from ADEQ on a Site mailing list. In late March a newspaper notice announcing the forthcoming Five-Year Review was prepared by EPA’s CIC, David Cooper, and a copy was provided to ADEQ. The notice was published in the *Copper Country News* and in the *Arizona Silver Belt* on April 14, 2010 (Appendix C). The notice provided a brief background and other relevant information on the Site, explained the reason for the Five-Year Review, and requested that anyone interested in submitting comments regarding the performance of the remedy at the Site contact the EPA RPM at the phone number provided. No comments were received in response to this initial April 2010 notice.

On July 29-30, 2010, the EPA CIC and the EPA RPM conducted a series of community interviews. The questionnaire used for the interviews is attached as Appendix D. In preparation for the community interviews, in July 2010, EPA also prepared a Site Overview Fact Sheet (Appendix E).

A total of nine City of Globe and Gila County officials, business representatives and other interested stakeholders were interviewed as part of this 2010 review (Appendix F), as follows:

- Mayor, City of Globe
- President and Executive Director, Southern Gila County Economic Development Corporation
- Council Members, City of Globe
- Director, Globe-Miami Regional Chamber of Commerce
- Editor, Arizona Silver Belt Newspaper
- Adjacent Property Owner to Site, City of Globe
- Realtor, City of Globe

The responses of those interviewed were unusually uniform, perhaps in keeping with the age of the site. They noted no significant issues with the operation and maintenance of the site remedy (except litter), and no reports of vandalism or trespassing, although a few questioned the health risks that drove the original remedy decision. If they did have questions, most identified the State (ADEQ) as their first choice for initial contact.

Reuse and redevelopment was the only concern, due to the lack of large, reasonably flat, buildable sites in the mountainous town. Most stakeholders were familiar with the restrictions on the site due to the shallow cap over the asbestos contamination, and they had few ideas for development. Several people noted that the property has consistently been identified as completely unavailable for development. The most common proposal presented was for the future use of the Site as a college-level training facility for a “*Renewable Sustainable Energy*” program that was recently developed by Gila Community College. At the close of the interview, EPA gave the interviewees a copy of EPA’s November 2009 reuse assessment (Appendix G) and discussed the scope of the study and answered any questions. On July 30, EPA also provided the City of Globe Library with an updated binder containing copies of key site-specific decision documents and prior Five-Year Review Reports.

The interviewees were informed of EPA’s Mountain View Mobile Home Estates web site and the location of the local information repository. They were given copies of a site overview fact sheet and EPA’s reuse assessment. When asked about the best way to provide further information on the site, the universal answer was e-mail, although phone calls, the City’s web site and presentations to the City Council were noted by a few. All were told that the results of the Five-Year Review would be posted on EPA’s web site and a public notice would be placed in the local papers.

A final notice summarizing the results of the Five-Year Review will be published in the *Copper Country News* and the *Silver Belt Newspaper* upon the completion of the Report. The completed Five-Year Review Report will be available to the public at the following locations:

- Globe Public Library, 339 South Broad Street, Globe, AZ 85501-2607  
(928) 425-6111
- Arizona Department of Environmental Quality Records Management Center,  
1111 W. Washington Street, Phoenix, AZ 85007 (800) 234-5677 (toll free)
- EPA Records Center, 95 Hawthorne Street, Suite 403S, San Francisco, CA 94105  
(415) 820-4700

## **Document and ARARs Review**

No Applicable, Relevant and Appropriate Requirements (ARARs) were identified in the 1983 ROD. Although ARARs are not necessary for the continued O&M of the 1983 selected remedy, if a proposal for future use would allow public access to the site or allow changes to the existing cap or stormwater management system, EPA may need to add ARARs to the remedy decision documents to assure that the integrity of the cap and the protectiveness of the remedy is retained.

The January 1986 closure documents for the construction of the Site remedy and the 1984 Superfund State Contract and the 2008 First Amended SSC for long-term O&M of the Site required that institutional controls (ICs) in the form of a deed restriction be placed on the Site. On December 20, 2007, ADEQ recorded a Declaration of Environmental Use Restriction

(DEUR) with the Gila County Recorders Office (Appendix B). The 2007 DEUR established both engineering controls and ICs.

The following engineering controls were constructed and in place as of January 7, 1986.

- Permanent relocation of subdivision residents
- Burial of contaminated mobile homes and other site structures
- Fencing of the perimeter of the site
- Provide signs identifying the site as restricted to public access;
- Provide for drainage of storm water thru the site;
- Grading and consolidation of contaminated soil and asbestos tailings;
- Capping of contaminated soil, tailings and contaminated structures with a filter fabric liner and two (2) to ten (10) feet of clean fill.

The institutional controls in the DEUR for maintenance of the Site are the following:

- Owner assures that the restricted area will not be subject to residential use as defined in Arizona Revised Statutes (A.R.S.) Section 49-151.
- The maintenance requirements described in the November 1986 Operation and Maintenance (O&M) Plan prepared by the USACE contractor, Cella Barr & Associates be implemented and maintained by the Site Owner, including:
  - Conduct semi-annual inspections of the site and after rainfall events of greater than one inch during a twenty-four hour period;
  - Fence maintenance;
  - Storm water open channel maintenance;
  - Storm water subsurface channel maintenance; and
  - Maintenance of site vegetation to prevent root penetrations of the filter fabric and to reduce fire danger.
- If any person desires to cancel or modify the engineering control or institutional control in the future, the person shall obtain the [ADEQ's] prior written approval. Any modification of the engineering or institutional control without the [ADEQ's] prior written approval is void and a violation of this [DEUR].
- Owner hereby grants to the [ADEQ] and its representatives, authorized agents, attorneys, investigators, consultants, advisors, and contractors the right of access to the Property at all reasonable times to verify that the engineering control and institutional control are being maintained. The [ADEQ's] right of access runs with the land. If access to the Property is restricted, Owner shall have any barrier to entry opened or removed at [ADEQ's] request.
- Owner shall incorporate the terms of this [DEUR] into any lease, license or other agreement that is signed by Owner and that grants a right with respect to the Property. The incorporation may be made by reference.
- Owner agrees to provide a copy of the Engineering Control Plan document dated November 1986 (Operation & Maintenance Plan dated November 1986) to the subsequent purchaser of the property...
- ...The engineering control plan and financial assurance mechanism is prescribed pursuant to A.R.S. § 49-152.01...A subsequent owner shall demonstrate financial assurance pursuant to A.R.S. § 49-152.01(B) within 30 days of the sale or transfer of the Property.

The financial assurance mechanism shall be sufficient to cover the cost of maintaining the engineering control for 30 years and restoring the engineering control if it fails.

- Because Owner has elected to use an engineering control and institutional control to satisfy the requirements of A.R.S. §§ 49-152 or 49-158, Owner shall maintain the controls to ensure that they continue to protect public health and the environment, and shall inspect the engineering control at least once each calendar year or more in accordance with the Engineering Control Plan Document (Operation & Maintenance Plan dated November 1986)...

## **Data Review**

Because the site contains buried asbestos that is not to be disturbed and there is no known current air or groundwater contamination at the Site, there are no requirements to collect or review any sampling or analytical data during this or prior Five-Year Reviews for the Mountain View Mobile Home Estates Superfund Site.

## **Site Inspection**

EPA Region 9 contracted with USACE to conduct a site inspection in July 2010 and complete the Five-Year Review checklist for the Site (Appendix H). Andria Benner, the EPA RPM, and Wayne Schiemann, of the USACE Los Angeles District Office (with an office in Phoenix), visited the Site on July 7, 2010. Ed Pond, the ADEQ Project Manager, also joined EPA and USACE for the Site inspection and he was interviewed by USACE on the Site O&M. The purpose of the inspection was to assess the protectiveness of the remedy by verifying that the integrity of the cap was maintained, the vegetation, fencing, signage, etc. was being well maintained, and to make sure that Site access was restricted, in accordance with the DEUR (IC).

No significant issues were identified as a result of the site inspections. The site was found to be in generally good condition, similar to the 2005 Five-Year Review inspection. However, the following minor, but recurring, O&M deficiencies were identified that need attention:

- Holes, breaks or damaged areas in portions of the fence along the primary drainage channel and the northern fence line;
- Bent and storm-damaged screening gates in the primary drainage channel cutting across the site;
- Silt, sediment and debris accumulation observed in the open channel and where piping reaches the Arizona Department of Transportation (ADOT) culverts;
- Shrubs and large vegetation needs more frequent mowing or cutting;
- Empty hydraulic fluid containers for mower discarded underneath shrubs (ADEQ confirmed the containers have subsequently been removed); and
- Skateboarders (trespassers) appear to be continuing to use the open drainage channel, although graffiti was greatly reduced from that observed during prior inspections.

The Site Inspection Checklist (See Appendix A) attached to this document contains photos documenting these observations during this 2010 Review.

## Interviews

The attached Interview Documentation Form (See Appendix F) provides further details regarding the interviews conducted for this Five Year Review.

Community interviews were not conducted for the 1991 First Five-Year Review, the 1999 Second review or the 2005 Third Review. The community interviews conducted for this 2010 Fourth Review were the first community interviews conducted for the Site since the completion of the Site remedy.

EPA coordinated with the ADEQ project manager so that the project managers for both agencies could meet in Globe and oversee the site inspection conducted by the USACE Los Angeles District Office on July 7, 2010. EPA also invited the ADEQ project manager to participate in the community interviews on July 29-30. Although ADEQ did not accompany EPA on those interviews, EPA followed up with ADEQ on the general content of the interviews.

EPA's Case Development Section has also conducted phone interviews with City of Globe and Gila County Recorder staff to verify the status of property deed restrictions and zoning for the Site.

## 7. Technical Assessment

A technical assessment of a site's remedy is based on information gathered during the Five Year Review in response to the following three questions:

- Question A - Is the remedy functioning as intended by the decision documents?
- Question B - Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?
- Question C - Has any other information come to light that could call into question the protectiveness of the remedy?

These questions provide a framework for organizing and evaluating data and information and ensure that all relevant issues are considered when determining the protectiveness of the remedy.

The following conclusions support the determination that the remedy at the Site is protective of human health and the environment.

**Question A:** Is the remedy functioning as intended by the decision documents?

• *Remedial Action Performance:*

The review of documents and the results of the site inspection indicate that the remedy is functioning as intended by the ROD. The capping has prevented direct contact with the asbestos in the soil, debris and tailings.

• ***System Operations/O&M:***

Operation and maintenance of the cap and drainage structures has been effective. There were no areas or conditions of noncompliance with the goals of the remedial action at the Site. While periodic acts of vandalism have temporarily disturbed Site fencing, the repair of the drainage and site fencing should reduce future disruption.

• ***Opportunities for Optimization:***

The capped and buried asbestos has been in place since the remedy was constructed over 25 years ago, in July 1985. Optimization is not applicable.

• ***Early Indicators of Potential Issues:***

No early indicators of potential remedy failure were noted during the review.

• ***Implementation of Institutional Controls and Other Measures:***

Fencing and signs limit access to the Site. A DEUR was recorded by ADEQ for the entire 17-acre site in November 2007. Site use is limited to the ADEQ site project manager and ADEQ's landscape contractor who maintains the site, with the exception of infrequent site visits by the EPA RPM. The land is owned by the State of Arizona. As the owner and sole user, the State has been able to adequately ensure that no prohibited actions or uses under the DEUR have occurred.

**Question B:** Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

• ***Changes in Standards and TBCs (To Be Considered):***

There were no changes in standards since the ROD was signed in 1983.

• ***Changes in Exposure Pathways:***

No changes in Site conditions that affect exposure pathways were identified as part of the Five-Year Review. First, there are no current changes in land use. Second, no new contaminants, sources, or routes of exposure were identified as part of this Five-Year Review. And, finally, there have no changes in exposure pathways to ecological receptors identified during the review and inspection.

• ***Changes in Toxicity and Other Contaminant Characteristics:***

There were no changes in toxicity or other characteristics of the buried asbestos since the ROD was signed in 1983.

• ***Changes in Risk Assessment Methods:***

We have identified no changes in risk assessment methodologies since the time of the ROD Amendment which would call into question the protectiveness of the remedy.

• ***Expected Progress Toward Meeting RAOs:***

RAOs were not established at the time of the 1993 ROD. Because the remedy construction was completed in 1986, this question is not applicable. However, if a proposal for future should compromise the integrity of the remedy, then RAOs may need to be established.

**Question C:** Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that could call into question the protectiveness of the remedy.

## **Technical Assessment Summary**

According to the review of relevant documents and data, site inspections, and interviews with ADEQ, City of Globe and Gila County personnel, the remedy is functioning as intended by the ROD. There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

## **8. Issues**

Explanation of Significant Difference to Document Remedy Decisions: The one outstanding issue at the site is documentation of the recently implemented institutional controls on the site. EPA could incorporate the institutional control into the remedy decision documents by the completing an Explanation of Significant Difference (ESD) demonstrating that the ICs (DEUR) has been put in place, as identified in the prior 2005 Five-Year Review. When the ESD is prepared, EPA could evaluate the need for Site RAOs and/or ARARs (neither of which were identified at the time of the 1983 ROD). Additionally, because of the increased interest on the part of City and County officials and community members to see this Site put back into more productive future use, any future reuse or redevelopment plans will need to comply with the CERCLA process. For example, any engineering controls needed for future reuse of the Site should be identified and described in a remedy decision document and included in an amendment to the DEUR, as needed. EPA would need to coordinate and work closely with the State, as owner of the property, as well as other regulatory partners and stakeholders.

Correction of O&M Landscaping Deficiencies: The minor, recurring O&M landscaping and fencing deficiencies identified during the Site inspection do not affect the current or future protectiveness of the Remedy. However, they need to be addressed as soon as possible by ADEQ. ADEQ is currently developing a Request for Bid (RFP) for a contract to address these O&M deficiencies during 2010.

## **9. Recommendations and Follow-Up Actions**

EPA and ADEQ should ensure that the remedy decision documents are modified, as needed, to incorporate the institutional controls (DEUR). Future site reuse plans will need to comply with the CERCLA process, including evaluating ARARs and/or other requirements, as needed, to retain the integrity of the cap and maintain the protectiveness of the remedy.

The second follow-up action is that the recurring O&M landscaping and fencing issues at the Site require continual, on-going attention. ADEQ currently plans to address these O&M deficiencies during 2010. These O&M actions do not affect the short-term or long-term protectiveness of the existing Site remedy.

The Five Year Review process, including the site inspection and the community interviews, provided an opportunity for EPA, ADEQ, City of Globe and Gila County officials to discuss the Site. Other than some recurring O&M issues, no follow-up actions were identified to improve the efficiency of the ongoing O&M of the Site.

## **10. Protectiveness Statement**

The remedy at the Mountain View Mobile Home Estates Superfund Site currently protects human health and the environment because there is no current exposure to the contamination that remains at the Site. In November 2007, a DEUR was recorded for the entire 17-acre Site for the single Operable Unit. A subsequent title search confirmed that this IC is in place and effective to ensure long-term protectiveness.

## **11. Next Review**

This Site requires on-going Five-Year Reviews as a matter of statute, because the remedy does not allow for unrestricted use and unrestricted exposure. The next review will be conducted within five years of the completion of this Five-Year Review Report. The completion date will be the date of signature shown on the cover of this report.

# **Mountain View Mobile Home Estates 2010 Five Year Review**

## **FIGURES AND MAPS**

Figure 1 Map Showing Location of Mountain View Mobile Home Estates Superfund Site

