



Community Involvement Plan

April 2007

COMMUNITY INVOLVEMENT HELPS SHAPE CLEANUP DECISIONS

This **Community Involvement Plan (CIP)** describes the needs and concerns of the Klau/Buena Vista community while describing how the United States Environmental Protection Agency (USEPA) will involve community members and stakeholders in activities to be conducted during ongoing investigations and cleanup at the Klau/Buena Vista Mine Superfund Site (Site). The CIP is a living document intended to reflect the needs of the community over the life of the project and may be periodically revised as appropriate. USEPA believes that effective community involvement helps project staff make better decisions during investigation and cleanup of sites. As we begin the Superfund Process (see Appendix A – Superfund Process), creating this CIP is one of the initial steps taken to describe past community outreach activities and outline plans for future public involvement in the cleanup of the site. We welcome your ideas on how to maximize the effectiveness of our public involvement.

KLAU/BUENA VISTA MINE SUPERFUND SITE

Site Description/Location

The Klau/Buena Vista Mine Superfund Site is located in San Luis Obispo County approximately 12 miles west of Paso Robles, California. The Site consists of two properties with former mining facilities (Klau Mine and Buena Vista Mine) and residual mining wastes from past mercury mining at the Site. The Klau and Buena Vista Mines had similar operations and are both located within the Las Tablas Watershed. The Klau Mine and BV Mine share the same ownership (Buena Vista Mine, Inc. [BVMI]). The Adelaida area is a historic mining area for mercury and other minerals; at least four other mines in San Luis Obispo County are listed by the State Mineralogist as formerly operational mercury mines. Our main concern at the Site is the potential effect that mercury (due to past mining operations) may have on the **watershed** and watershed residents, including fisheries and recreational users.

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➤ Definitions – Page 1

For your convenience, definitions of words highlighted in BOLD are provided within the text. See also Appendix E - Glossary and Acronym List.

Community Involvement Plan (CIP): As a requirement of the Superfund process, Federal Law requires that USEPA write a CIP prior to the Remedial Investigation to determine the best methods to communicate with the affected community.

Watershed: Similar to a drainage basin, a watershed is a region of land where water from rain or snowmelt drains downhill into a body of water, such as a river, lake, estuary, wetland, or ocean. The watershed includes the streams and rivers that convey the water, as well as the land surfaces from which the water drains into those channels. Watersheds are separated topographically from each other by a ridge, hill, or mountain.

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The approximately 324-acre Site is located on a northwest-southeast ridge of the Santa Lucia Range in the California coastal mountain range. The landscape primarily consists of picturesque rolling coastal foothills, generally covered with oak woodlands and dry grasslands. Approximately 6 miles to the north of the Site is Lake Nacimiento, a man-made lake controlled by the Monterey County Water Resources Agency. Lake Nacimiento is a deep lake and contains populations of large mouth and white bass, sunfish, catfish and crappie.

History

The Klau and Buena Vista Mines share a similar history, with mercury mining and ore processing operations occurring between 1868 and 1970. BVMI has owned the Buena Vista Mine since at least 1957 and the Klau Mine since at least 1964. Mining operations included **adit** and **open-pit mining** on approximately 324 acres in a predominantly agricultural area. During the operation of the Buena Vista Mine, the mine reportedly produced 30 tons of ore per day. This ore contained cinnabar (a common name for red mercury sulfide) that was processed to extract mercury. The primary source of mercury is from processed ore **tailings** deposited on the Site.

The mines are situated between two forks of Las Tablas Creek (see map inset). Both forks have mercury levels found in sediment attributed to the Site. Previous studies show that **acid mine drainage (AMD)** seeped into the Klau Branch of Las Tablas Creek. As a result of these and other findings, the **Central Coast Regional Water Quality Control Board (RWQCB)** issued the mine owner with two Cease and Desist



San Luis Obispo County Area Map

Orders in 1988 and 1990 because discharges from the mines did not meet permit conditions. Four additional orders were issued by the RWQCB to eliminate actual and potential water quality impacts from the mines.

In 2002, USEPA entered into a settlement agreement with BVMI and San Luis Obispo County by which USEPA would take over and fund all remaining investigation and cleanups at the Site.

Prior to 1999, the mine owner performed some cleanup activities in response to the RWQCB's directives, including construction of a collection, storage and treatment system to prevent uncontrolled releases of AMD; erosion controls; and other measures to stop mercury from migrating from the Site. These measures were insufficient to control the mercury's migration offsite, and the RWQCB requested the assistance of USEPA's **Emergency Response Section (ERS)** to prevent further releases. The ERS conducted short-term temporary **removal action** measures to deal with mining contamination at the Site from 2000 to 2006.

During ERS activity, we were able to gather additional information about the source and nature of the mercury onsite. Based on this information, we determined that the Site did not pose an immediate threat to the public, but did pose a potential long-term risk. Therefore, USEPA began a process of evaluating a

Contact Information

USEPA welcomes your comments and ideas regarding the Site. To provide input or pose questions, contact:

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Toll Free Message Line
1-800-231-3075
Please leave a message and
your call will be returned.

What is “Emergency Reponse?”

USEPA defines emergency response as a short-term action designed to protect the public from threats to human health and the environment. These actions vary in urgency based on the potential threat to the public. There are three categories of emergency response:

- **Emergency:** Action is required. Example – explosion or chemical spill
- **Time Critical:** Action must begin within 6 months (based on a site evaluation). Example – abandoned contaminated site containing drums that do not pose an immediate threat, but need to be addressed soon because of potential leakage
- **Non-time Critical:** A 6-month planning period is available before activities must begin at the site (based on a site evaluation). Example – installing a fence around an area that may contain contaminated materials, to prevent human contact.

long-term solution through the Superfund process. In April 2006, the Site was added to USEPA’s **National Priorities List (NPL)**, making it an official Superfund Site. Listing the Site on the NPL allows USEPA to use federal resources to conduct long-term cleanup activities at the Site.

Mercury Cleanup Activities

What is mercury?

The most significant chemical of concern for the Site is **mercury**, a metal that can be harmful to the human nervous system. Though substantial stabilization work has been conducted by USEPA previously, uncontained mercury sources remain on the Site.

According to the **Agency for Toxic Substances and Disease Registry (ATSDR)**, an agency within the United States Department of Health and Human Services, mercury occurs naturally in the environment and exists in several forms. These forms are: elemental mercury, inorganic mercury compounds (primarily mercuric chloride) and organic mercury compounds (primarily **methyl mercury**). Elemental mercury is a shiny, silver-white metal that is a liquid at room temperature (sometimes referred to as quicksilver). At room temperature, some of the elemental mercury will evaporate and form mercury vapor. Elemental mercury is a pure form of mercury which is used in thermometers. Inorganic mercury is formed when mercury binds with other elements such as sulfur or calcium. Inorganic mercury compounds are called mercury salts.

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Acid mine drainage (AMD): Drainage of water from areas that have been mined for coal or other mineral ores. The water has a low pH (high acidity) because of its contact with sulfur-bearing material and is harmful to aquatic organisms.

Adit: An adit is a type of entrance to an underground mining operation in which the entrance shaft is horizontal or nearly horizontal. Adits are usually built into the side of a hill or mountain, and often occur when a measure of coal, or in this case mercury, is located inside the mountain but above the adjacent valley floor or coastal plain.

Agency for Toxic Substances and Disease Registry (ATSDR): An agency of the U.S. Department of Health and Human Services that was created to perform specific functions concerning the effect of hazardous substances on human health.

Central Coast Regional Water Quality Control Board (RWQCB): There are nine Regional Water Quality Control Boards in the State of California. The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State’s waters, recognizing local differences in climate, topography, geology and hydrology.

Emergency Response Section (ERS): The Emergency Response Section is a coordinated effort among five key USEPA organizations and USEPA’s 10 Superfund Divisions. The mission of the ERS is to prevent, plan for and respond to emergencies. The ERS’s emergency response activities are short-term removal actions designed to protect the public from immediate threats to human health and the environment.

Mercury: Also called quicksilver, mercury is a heavy, silver-colored metal that is one of five elements that are either liquid or nearly liquid at room temperature. Mercury is mostly obtained by reduction of the mineral cinnabar. Like lead, mercury is a neurotoxin, and elevated blood mercury levels have led to retardation and deformities in children. *See Appendix C – Technical Mercury Summary for more detailed information.*

Methyl mercury: Shorthand for monomethylmercury, methyl mercury is formed from inorganic mercury by the action of organisms that live in aquatic systems including lakes, rivers, wetlands, sediments, soils and open ocean. Ingested methyl mercury is readily and completely absorbed into the bloodstream and can cross the blood-brain barrier and the placenta. *See Appendix C – Technical Mercury Summary for more detailed information.*

National Priorities List (NPL): A published list of contaminated sites in the country that are eligible for funding to carry out extensive, long-term cleanup under the Superfund program.

Open-pit mining: A method of extracting rock or minerals from the earth by their removal from an open pit. The term is used to differentiate this form of mining from extractive methods that require tunneling into the earth.

Removal action: The short-term cleanup of hazardous substances or the elimination of threats either actual or potential to human health or the environment.

Tailings: Residue of raw material or waste separated out during the processing of crops or mineral ores.

Mercury

For more information on mercury, you can:

- Search online at the U.S. Department of Health and Human Services website:
<http://cerhr.niehs.nih.gov/common/mercury.html>
- Read “Toxicological Profile for Mercury” by ATSDR, which can be found on file at the Paso Robles Public Library at 1000 Spring Street, Paso Robles, CA or online at
<http://www.atsdr.cdc.gov/toxprofiles/tp46.html>

Organic mercury is formed when mercury binds with carbon. The most important organic mercury, in terms of human exposure, is methyl mercury. Methyl mercury exposure occurs primarily through diet, with fish and fish products as the dominant source. Mercury has been listed as a pollutant of concern due to its persistence in the environment, potential to **bioaccumulate** and toxicity to humans and the environment.

In ATSDR’s September 2005 Health Consultation for USEPA, the results indicated that while all three forms of mercury (elemental, inorganic and organic) can be found in varying concentrations at the Site, the focus of the cleanup is elemental mercury. The most likely way trespassers could come into contact with mercury at the Site is through inhalation of elemental mercury vapor and incidental exposure to mercury around the mine structures and contaminated areas. More severe health impacts could be realized if an individual handled mercury or attempted to collect elemental mercury that has accumulated in the mine area. Individuals that collect and remove elemental mercury from the Site could then expose other people to mercury.

According to ATSDR, studies have demonstrated that the human nervous system is very sensitive to all forms of mercury. In the environment, inorganic mercury can be transformed into more toxic organic mercury. Inhalation of high concentrations of inorganic mercury vapor can cause coughing, difficulty breathing and chest pain. Inhalation of high concentrations of



Cinnabar, a heavy reddish mineral consisting of mercuric sulfide; the chief source of mercury

inorganic mercury vapor may also cause chemical pneumonitis, renal (kidney related) failure and even death. Ingestion of high levels of mercury can permanently damage the central nervous system.

Agency Cleanup Activities

Several agencies have been concerned with mercury at the Site. As mentioned earlier, the **Regional Water Quality Control Board (RWQCB)** played an early role in directing the mine operator to prevent mercury from moving offsite. The RWQCB concluded that the Buena Vista and Klau Mines were a significant source of mercury in the watershed, beyond the naturally occurring levels. In addition, the **Agency for Toxic Substances and Disease Registry (ATSDR)** has assisted USEPA in evaluating the potential for mercury exposure in the area. ATSDR published a Site-specific Health Consultation in September 2005 and anticipates release of a Health Assessment for the Site in 2007. Under federal law, ATSDR and its California State partner (**California Department of Health Services [DHS]**) are required to conduct a **public health assessment (PHA)** within 1 year of site nomination to the NPL. The PHA will focus on past and current exposures, take into consideration the health concerns of the community, and determine if people are exposed to mercury at levels that could cause health problems. The PHA

What is the Difference?

Both USEPA and ATSDR conduct assessments on the sites they are involved in, but the focus of the assessment differs.

- The ATSDR public health assessment (PHA) focuses on exposed or potentially exposed people and recommends/performs appropriate prevention and follow-up health activities.
- The USEPA risk assessment focuses on the environmental contamination and what should be done to prevent exposure.
- Together, these two agencies work to provide the community with information and services needed to protect human health.

is also a means for DHS and ATSDR to make recommendations to reduce or eliminate public health risks.

In addition to the PHA, USEPA will perform a risk assessment. A USEPA **risk assessment** determines the extent of risk and what actions may be necessary to protect human health and the environment. Together with ATSDR, we work to provide the information and services needed to ensure the community members’ health is protected from actual or potential threats due to contaminants released in the environment.

San Luis Obispo County Department of Public Works received a grant to cover mercury-containing mine tailings used as a road base for a 3.3-mile portion of Cypress Mountain Drive. The County will work closely with USEPA and DHS to coordinate and share information and project plans.

USEPA is the **lead agency** for the Site cleanup, which will be conducted under its Superfund Program.

USEPA's Risk Assessment considers both people and the environment

The Risk Assessment performed by USEPA at Superfund sites estimates the current and possible future risks, if no action were taken to clean up the site. Superfund's goal is to manage risks to acceptable levels, and risk managers incorporate risk assessment information with a variety of site factors to select the best cleanup strategies. The purpose of the risk assessment is to determine how threatening a hazardous site is to both human health and the environment. Accordingly, risk assessors seek to determine a safe level for each potentially dangerous contaminant present in two studies, which are then combined to create the overall Risk Assessment for a site:

- **Human Risk Analysis:** Safe levels of contaminants are determined, which for humans are levels at which ill health effects are unlikely and the probability of cancer is very small.
- **Ecological Risk Analysis:** Similar to the human risk analysis, safe levels of contaminants are determined, but for ecological receptors, determining the risk is more complicated. Ecological risk is a function of the receptors of concern, the nature of the adverse effects caused by the contaminants and the desired condition of the ecological resources.

Throughout the Superfund Process (See Appendix A), we will use federal funding to support the cleanup of the Site. We are coordinating with the other agencies historically involved at the Site to build on what has already been done; together with the community we will address the mercury at the Site.

COMMUNITY BACKGROUND

Community Profile

The surrounding area to the Site is used primarily for rangeland and agricultural farming, including vineyards. With a large farming population, there are several community resources that help support the local agriculture industry. In addition to the monthly Farm Bureau Meetings, several Farmers' Markets are held regularly in local communities, and San Luis Obispo County provides a variety of programs including pes-

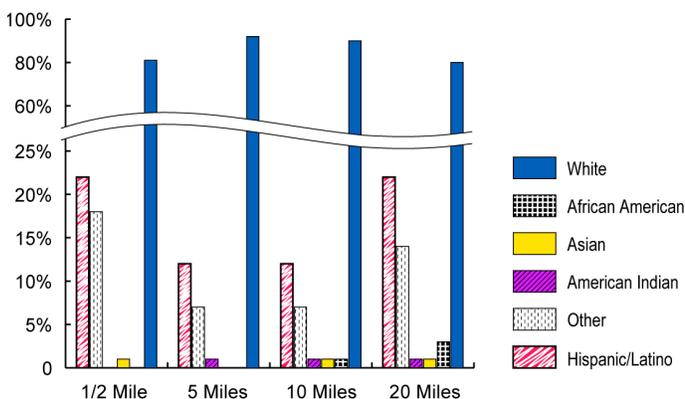


Exhibit 1A: Community Race/Ethnicities
Source: U.S. Census Bureau, Census 2000

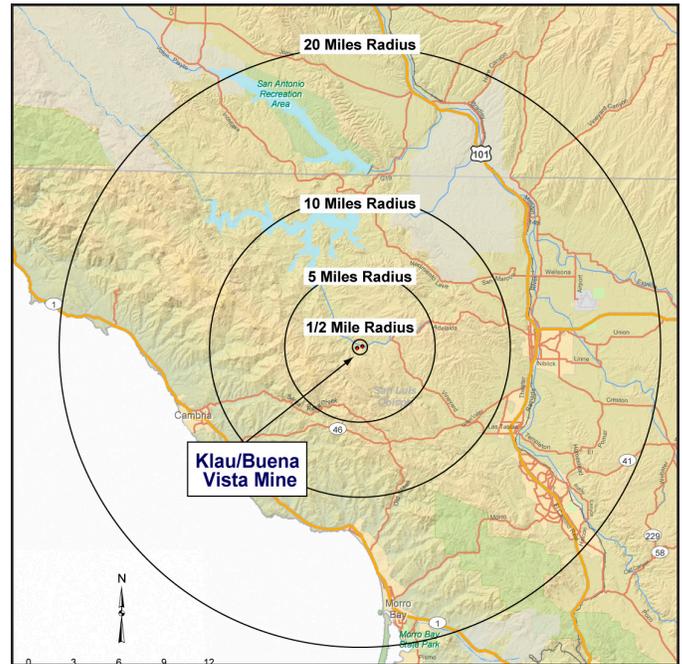


Exhibit 2: We collected census information from populations at 1/2, 5, 10, and 20 miles from the Site

ticide use enforcement, pest management/prevention, product quality and other agricultural resources.

Approximately 6 miles northwest of the Site is Lake Nacimiento. Development around the lake includes home developments, a resort, a public elementary school and a senior center. The lake provides recreational users with over 165 miles of shoreline, including a marina for boat launching and several campsites.

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Bioaccumulate: The net accumulation of a contaminant in an organism from all sources, including air, water and food. Toxic chemicals such as mercury tend to bioaccumulate in the fatty tissues of fish, and these these toxins increase in concentration as they are passed from the prey to the predator (called biomagnification).

California Department of Health Services (DHS): The primary role of DHS is to improve the health of all Californians. DHS programs include population-based public health and preventive services, environmental health programs, medical care services and those programs that focus on special medical needs.

Lead agency: A public agency which has the principal responsibility for ordering and overseeing site investigation and cleanup.

Public Health Assessment (PHA): An ATSDR document that examines hazardous substances, health outcomes and community concerns at a contaminated site to determine whether people could be harmed from coming into contact with those substances. The PHA also lists actions that need to be taken to protect public health.

Risk assessment: USEPA's process of evaluating whether a hazardous substance poses a potential threat, either currently or in a reasonably likely future, to human health and the environment.

Paso Robles is the Site's closest city, approximately 10 miles to the east, with a population over 24,000. There are no schools within 5 miles of the Site; the nearest school is located approximately 8 miles east of the site, Grace Christian High School. Students participating in Girl Scouts make use of the Girl Scout's Camp Natoma, a 360 acre property northwest of the Site on Lime Mountain. Built in 1941, Camp Natoma houses up to 100 people per week, with 3 weeks of summer sessions starting in May.

To understand the demographics of the community, we reviewed U.S. Census Bureau demographic information. We found that the census information is collected in a manner more appropriate for high density areas, rather than the rural environment around the Site. In order to compare the immediate Site area with the surrounding community, we researched populations within a 1/2-mile, 5-mile, 10-mile and 20-mile radius of the Site, see *Exhibit 2*. We obtained our information by selecting Census blocks roughly within these boundaries from the 2000 Census. Results from our demographic study are provided below.

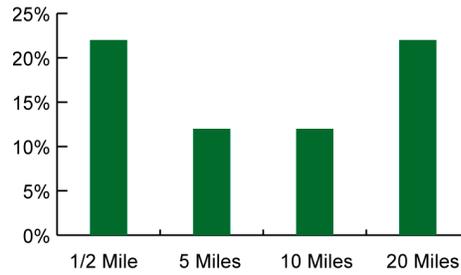


Exhibit 1B: Percent residents that identify themselves as Hispanic/Latino
Source: U.S. Census Bureau, Census 2000

From our research we learned that most residents surveyed consider themselves “white,” see *Exhibit 1A*. Historically, U.S. Census forms did not include Hispanics/Latinos as a separate race/ethnicity selection option on the census form. To clarify this issue in the 2000 Census, a second yes or no question was asked to identify those who are Hispanic/Latino, to which about 20 percent of the total population answered affirmatively, see *Exhibit 1B*. Just over half of the houses nearest the site are occupied, and of those, two-thirds are rented. This is significantly different from the larger area (20-mile radius from the site) where over 90 percent of homes are occupied and only one-third

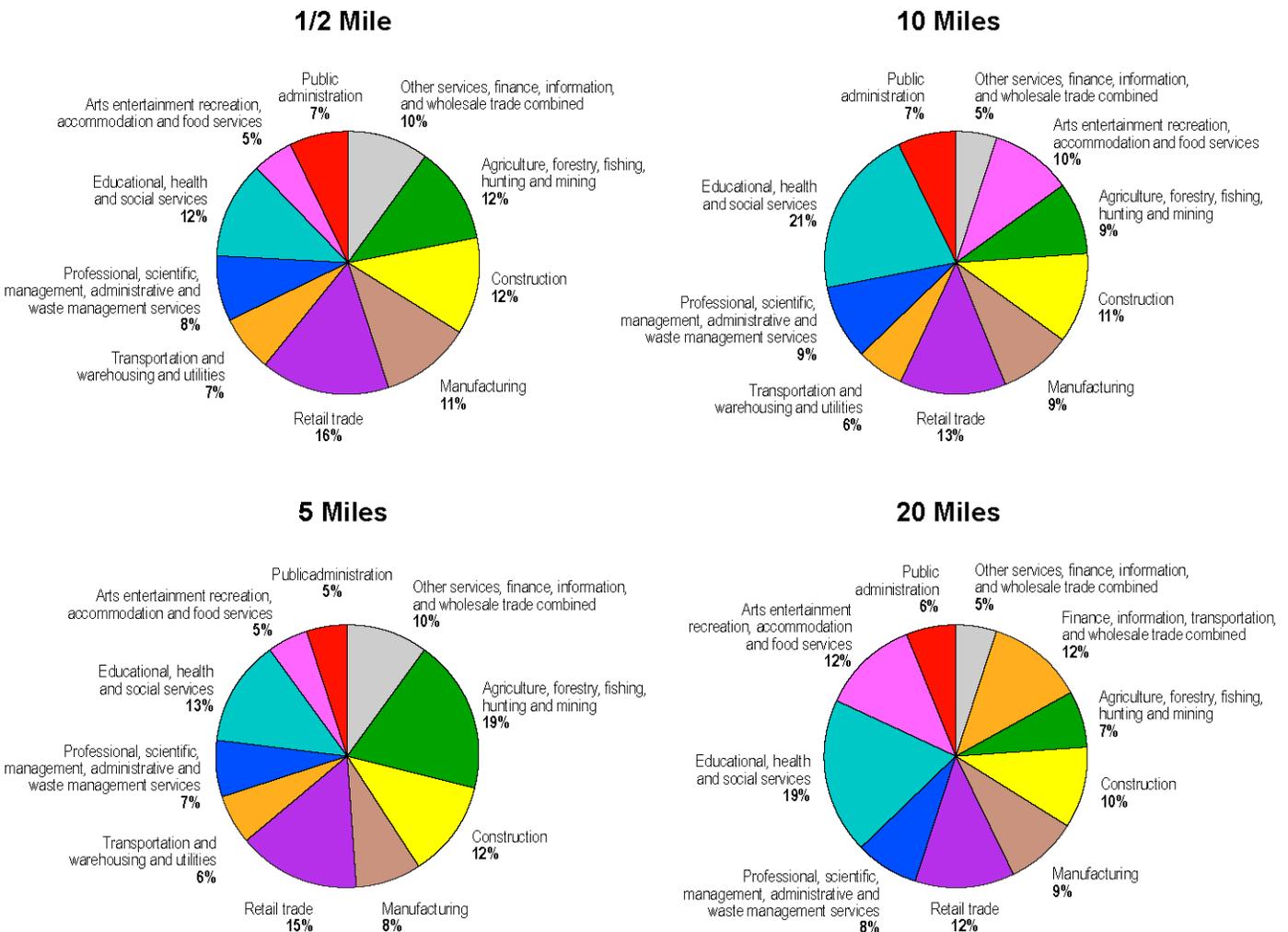


Exhibit 4: Community Occupational Information
Source: U.S. Census Bureau, Census 2000

	1/2 Mile	5 Miles	10 Miles	20 Miles
Total Population	74	654	3612	29,256
Median Household Income	\$41,778	\$48,667	\$54,207	\$39,775
Avg Household Size	2.32	1.94	1.7	2.66
Occupied	57%	57%	93%	93%
Owner Occupied	34%	34%	61%	61%

Exhibit 3: Community Household Information
Source: U.S. Census Bureau, Census 2000

are rented. The average number of people living in a household is 2.3, though the number drops to under two people per household at a five and ten mile radius from the Site, see *Exhibit 3*.

Employment percentages did not vary between the immediate site neighbors and the larger community – all percentages showed that just over half of the population is employed. Of those employed, most of the site neighbors have occupations in agriculture/forestry/fishing/hunting/mining, construction, manufacturing and retail trade industries, see *Exhibit 4*. In comparison, the surrounding community’s primary occupations shift from agriculture/forestry/fishing/hunting/mining and manufacturing industries to health care and social assistance industries. Average (median) household income is \$41,778 in residences nearest the Site and declines to \$39,775 if you average all households within a 20-mile radius of the Site, see *Exhibit 2*.

USEPA Community Involvement

In September 2006, we interviewed local residents to gather information on their needs and concerns of the Site. The residents most familiar with the Site were concerned about previous cleanup efforts, particularly in regard to the newly constructed **repository** (a location onsite used to contain mercury mine tailings) and problems with the drainage around this new repository. In their view, the initial emergency response efforts did not fully account for the rainfall and drainages in the area. They pointed out that there is no liner under the repository and that the pipes get plugged. Because these concerns about the Site have not been resolved, residents felt that the contractors from 2002 left an unfinished project. Interviewees stated the contractors responsible for the removal action in 2006 better

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Repository: An area designed and constructed at a site with the purpose of containing mine contamination in order to prevent future releases to the environment.

addressed issues at the Site than the contractor who performed USEPA’s emergency removal in 2002. Despite the 2006 improvements, however, some residents are so concerned about the results from the 2002 work that they would prefer that USEPA not do any further work at the Site, out of a concern that additional work might further degrade drainage conditions.

Is my drinking water contaminated?

Because mercury does not readily dissolve in water, residents are highly unlikely to come into contact with mercury through their drinking water supply.

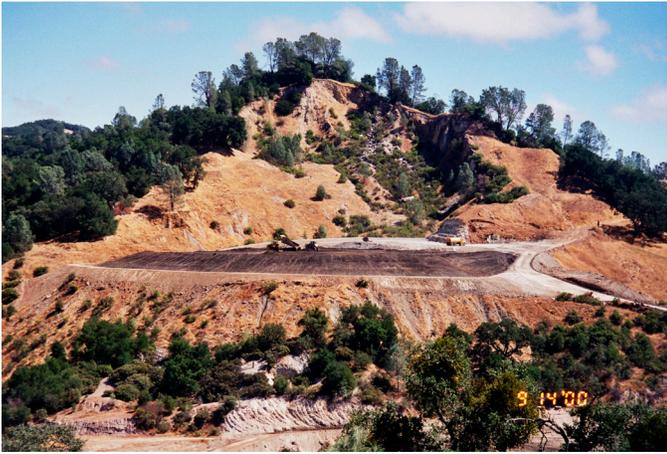
Are the fish contaminated?

Most of the mercury is found in sediment at the bottom of stream beds and lakes. Fish and other animals that filter the water and sediment can build up mercury in their body. The larger the fish, the more mercury it will contain. When humans consume the fish they ingest the mercury.

Most interviewees stated that prior to the CIP interviews, they would not have known who to contact if they had a question about the Site. Other agencies familiar to interviewees included the Central Coast Regional Water Quality Control Board (RWQCB), California Department of Health Services (DHS) and the San Luis Obispo County Departments of Health, Public Works and Parks & Recreation. For future outreach by USEPA, community members suggested private/non-governmental environmental groups such as California Conservation Corps, the Resources Conservation District, Natural Resources Conservation District and University of California Cooperative Extension and the Environmental Center for San Luis Obispo County (ECOSLO) for the Latino community. A goal of this CIP is to outline a process to improve communication with those affected by the Site and provide opportunities for their input and involvement.



Buena Vista Mine Treatment Pond, January 1970



Lower portion of the repository is capped and USEPA's Emergency Rapid Response Services contractor begins filling the upper portion, September 2000

What We Heard

Below is a summary of the concerns we heard from the community during CIP interviews.

Concern raised by greatest number of interviewees

Interviewees were most concerned about mercury drainage/seepage from the mines becoming potentially detrimental to human health. With regard to contamination from the mine, some interviewees noted that it will be difficult to separate mine-contributed mercury from the mercury that occurs naturally in the environment. In addition to the streams near the Klau and Buena Vista Mines, there are several tributaries of Lake Nacimiento that also flow near other mine sites. Several interviewees thought that the mines do not contribute elevated mercury in the lake and that such a connection is unfounded. There is a belief by some interviewees that any mercury contributions to the stream from the mine are blocked by private dams and do not contribute to the mercury levels in Lake Nacimiento.

Concerns raised by more than one individual

Several residents, and also neighboring Girl Scouts' Camp Natoma, receive their water from individual wells. While most residents assume that there is no risk that their water wells are affected by mercury from the mine, they requested that USEPA confirm this assumption by testing private wells.

Several interviewees were interested in how traffic would impact them during the site construction, particularly when San Luis Obispo County begins to pave Cypress Mountain Road, anticipated during

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Remedial: Pertaining to the removal or containment of contaminated materials in soil, surface water, groundwater and soil gas.

Summer 2007. One resident noted that Chimney Rock Road already experiences heavy traffic with limestone trucks; while suitable for big trucks, it already has a high volume of vehicles. A suggestion was made that USEPA limit its traffic to the Klau Mine and Adelaide Roads.

Residents suggested that USEPA take rainfall into consideration in order to ensure that **remedial** activities will be successful in preventing further migration of mercury offsite. They requested that USEPA coordinate with the County as it contours the land (related to the Lake Nacimiento Watershed Mercury Sediment Reduction Project) so that drainage modifications do not undermine either project. They warned that the road would be subject to washouts – and often closed because of this. If drainages are modified by either project, USEPA and the County need to be careful not to counteract each other.

Several comments were made indicating the depth of the community's knowledge about the site/drainages/local watershed. Residents want USEPA to keep in mind that the community members know the land and drainages very well. Conversely, the community needs to feel that government agencies are listening to them. Interviewees were disappointed that no local input was taken on the earlier emergency responses at the Site, and they believe that the lack of input is a primary reason for what they consider to be ineffective response actions. Residents advised USEPA to work with someone who is familiar with the Site and local landscape as the cleanup starts. It was suggested that we obtain input from those who worked at the mine, if possible.

Several community members requested that the cleanup at the Site be completed without creating public alarm. They felt that the fact sheet announcing the mine as a Superfund Site does not sufficiently explain and educate the public that it is not the water but sediment and fish that are affected by the mercury. They want the public to be aware of the potential for mercury in the fish.



Acid mine drainage near Bureau of Land Management dam with cows grazing

Some interviewees were interested in the relationship between USEPA and other agencies. They would like to have clarification on which agency is completing what tasks and suggest that USEPA work closely with the RWQCB.

Interviewees were interested in our goals and objectives. They want to know what problems we are trying to solve. Two residents felt that mercury was not a big concern until fixing the mine “made it worse” (referring to the creek color after the emergency response actions). The residents are concerned about their property value regardless of whether or not they ever sell the land. They are concerned about the effect of mercury on their livestock and also the potential effects to their health.

Interviewees felt that project completion time should be as short as possible. Residents expressed a sense of urgency, as they are concerned that conditions resulting from construction of the repository need urgent fixing. Visual blight is also an issue for the immediate residents.

Other Concerns

- There is interest in understanding our decision-making process regarding target cleanup levels. Interviewees asked about the objectivity of the Superfund Process and wanted to know how much public opinion is considered by USEPA in determining target cleanup levels. There is concern that the public may be more emotionally tied to visual blight and as a result disregard the technical issues.
- It was suggested we target information to different stakeholders depending on the topics and level of detail.
- There is concern that the “big picture” be addressed rather than limiting the scope of remedial activities to the Site alone. A suggestion was made that USEPA treat the Site comprehensively, studying soil, air and water pathways. Interviewees felt that USEPA should address the cause, not just the symptoms, by finding the mercury sources.
- The community is interested in getting more information about whether mine tailings were used by San Luis Obispo County as a road base along Cypress Mountain Road.
- There is concern about the potential for mercury to affect livestock grazing on property near the Site.
- Concern was expressed regarding the potential for children to come into contact with mercury. There are no children in the adjacent residences, but there is potential for children to vacation and visit in the Site area (e.g., Camp Natoma).

- Some interviewees were concerned about nesting availability for birds of prey, including bald eagles. In addition to the existing bald eagle population at Lake Nacimiento, the Ventana Wildlife Association is seeking to bring osprey nesting to the Lake. Like eagles, osprey's are fish-eating birds, which interviewees noted as a problem if fish are contaminated with mercury.

Summary of Communication Needs

The majority of interviewees responded that besides word-of-mouth, print media (press releases/fact sheets) and other mailings are the best way for us to communicate with the community. Respondents stated that publishing information through the local papers is another effective method of communication. These papers include the San Luis Obispo Tribune, Paso Robles Press and San Luis Obispo New Times.

Most residents adjacent to the Site attend the monthly Farm Bureau meetings or are aware that these meetings are held at the Adelaide Center on the third Friday of every month. Interviewees suggested that USEPA host public meetings at the Adelaide Center. One resident noted that joint agency meetings would be good to consolidate information from all the various agencies working on Site-related activities.

Several interviewees noted that residents frequently tune into the local radio/television stations. Most often mentioned was the “Sound Off” program on KPRL.

Regarding topics of interest, interviewees were most interested in receiving information on the following:

- General Site information
- New activities/events
- Future of mines
- Safety of onsite storage (repository)
- Water quality
- History of the site
- Spread of mercury

The Communication Plan

The goal of USEPA's community involvement program is to work with community members and stakeholders to provide opportunities for meaningful and active involvement in the cleanup process. This CIP is based on the results of the community interviews and addresses important issues raised by the Klau/Buena Vista community.



Upper portion of the repository is filled with reactive tailings from the mining process, September 2000



Issue 1: Keeping the public informed and up to date

Activity 1A: Designate a USEPA Community Involvement Coordinator

Objective: To provide a primary liaison between the Klau/Buena Vista community and USEPA, to ensure prompt, accurate and consistent responses and information about the Site. When the **Community Involvement Coordinator (CIC)** is unable to provide adequate information (such as on technical issues), inquiries will be directed to the appropriate USEPA contact.

Method: A CIC was assigned to the site by USEPA Region IX. The CIC's role is to handle site inquiries and serve as a point of contact for community members. The CIC will work closely with the Site's Remedial Project Managers.

Timing: The CIC was designated in March 2006.

Activity 1B: Prepare and distribute Site fact sheets and technical summaries

Objective: To provide community members and stakeholders with current and accurate information that is easy to understand about the Klau/Buena Vista Mine.

Method: Fact sheets will be mailed to all parties on the site mailing list. Copies will also be available at the **information repositories**, see Appendix B – *Community Resources for locations*.

Timing: USEPA will prepare and distribute fact sheets quarterly or as needed.

Activity 1C: Provide a toll-free "800 number" for community to contact USEPA

Objective: To enable community members and stakeholders to request information or have concerns addressed without incurring phone charges.

Method: USEPA will activate the 800-number and publish it in all fact sheets.

Timing: The line is currently operational. The phone number is 800-231-3075. Please leave a message and your call will be returned.

Activity 1D: Maintain a mailing list for the Site

Objective: To facilitate the distribution of site-specific information to everyone who needs or wants to be kept informed about the Site.

Method: The information repository is a reference collection of site information containing the Administrative Record file, other site-specific information, the Community Involvement Plan, information about the Technical Assistance Grant program and the general Superfund process. The Community Involvement Coordinator will work with a local contact to establish the local information repository. This repository will be accessible to the physically challenged, will have copier facilities, and will be available to community members during normal business hours and at least some evening and/or weekend hours.

Timing: USEPA established the local information repository at the Paso Robles Public Library located at 1000 Spring Street, Paso Robles, CA 93446. A second information repository is located at the USEPA Region IX Superfund Records Center in San Francisco. USEPA adds new documents as they become available.

Activity 1E: Provide Site and Superfund information on the Internet

Objective: To provide key resources for searching and listing both general and specific information about Superfund and contamination issues.

Method: A Site summary and fact sheets can be found at <http://www.epa.gov/>. Information about USEPA and Superfund can be found at: <http://www.epa.gov/superfund/> by scrolling down and double clicking on "site overviews."

USEPA Region IX: <http://www.epa.gov/Region9/>

The Proposed Plan and the Record of Decision (ROD) for the Site will be placed on the internet as they are completed.

Timing: Site Status Summaries are periodically updated.

Activity 1F: Provide Technical Assistance Grant (TAG) information

Objective: To provide resources for eligible community groups to hire technical advisor(s) who can assist them in interpreting technical information about the Site.

Method: USEPA will provide information about the Technical Assistance Grant (TAG) program at public

meetings and in fact sheets. USEPA will also provide briefing sessions to interested groups if so requested. USEPA will provide TAG applications to qualified groups and will provide assistance in completing the application. Since each site can only have one TAG recipient, USEPA encourages groups to create a coalition to apply.

Activity 1G: Establish and maintain the Administrative Record (AR)

Objective: To provide residents with all documents, resources, etc. used by the Remedial Project Manager(s) and Site Team in reaching decisions about the Site cleanup.

Method: USEPA will provide two sets of the Administrative Record (AR) for the Site, The first AR is located at the USEPA Region IX Superfund Records Center in San Francisco, and the other is kept at the local Information Repository at the Paso Robles Public Library. Addresses, contact information and hours can be found in Appendix B – Community Resources.

Timing: The AR was established when the Site investigation began and will remain open until the last ROD is signed.

Activity 1H: Conduct special events

Objective: To share Site-related information with community members and stakeholders about major events or milestones.

Method: Klau/Buena Vista Mine Superfund Site special events include special topic educational programs, celebrations of construction completion and transitions to the next phase of the Superfund process.

Timing: To be scheduled on an as-needed basis.

Issue 2: Provide meaningful opportunities for community involvement

Activity 2A: Hold public meetings

Objective: To provide updates on Site developments and address community concerns, ideas and comments.



Buena Vista Mine mill works-condenser gallery: May 10, 2005

Method: USEPA will schedule, prepare for, and attend all announced meetings. USEPA will provide at least two weeks notice of the scheduled meeting. The Remedial Project Managers, Community Involvement Coordinator and other appropriate USEPA staff will attend.

Activity 2B: Encourage formation of a Community Advisory Group (CAG)

Objective: To provide community members and stakeholders with meaningful opportunities to become actively involved and to provide the Klau/Buena Vista Mine Superfund Site team with viable means of learning community concerns and needs.

Method: USEPA will encourage the formation of a **Community Advisory Group (CAG)** and provide support as appropriate to facilitate its formation. If formed, USEPA will provide initial administrative support until the group is established. USEPA supports the CAG as needed with updates, briefings, special topics, etc.

Timing: USEPA will respond to any requests for help to form a CAG. As necessary, USEPA will promote CAGs regularly throughout the Superfund process until one is formed.

Activity 2C: Make informal visits to the community

Objective: To keep community members informed about the Site and provide USEPA with feedback about site activities and community opinion.

Method: USEPA will establish a presence in the community through informal scheduled and unscheduled visits to talk with community members and stakeholders. When needed, the USEPA CIC will provide advance notice to community members with whom USEPA would like to speak.

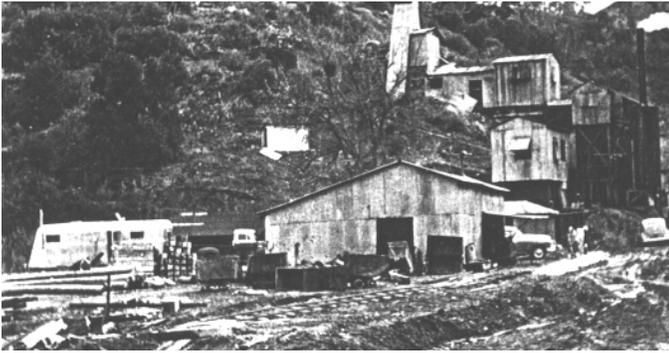
Timing: Throughout the entire Superfund process.

Definitions – Page 10-11

Community Advisory Group (CAG): A self-sustaining group that receives administrative and facilitative support from USEPA. Forming a CAG is one of the opportunities USEPA provides to the community during the Superfund process to receive advice from the public.

Community Involvement Coordinator (CIC): A USEPA representative who works with community members to keep them informed about a Superfund cleanup and also helps those who are interested to participate in the response decision-making process.

Information Repository: A place where records are kept and made available for public use.



Former Buena Vista Mine buildings. Photograph from The Story of Adelaida, by MacGillivray, 1992

Activity 2D: Solicit comments during a Public Comment Period

Objective: To provide community members and stakeholders an opportunity to review and comment on various USEPA documents, especially the **Proposed Plan**. The public comment period provides community members with meaningful involvement in the Superfund process while also providing the Site Team with valuable information for use in making decisions.

Method: USEPA will announce each comment period separately. Announcements will appear in local newspapers and USEPA fact sheets. These fact sheets will include information on the duration of the comment period and how to make and submit comments. USEPA is required to solicit public comments on the Proposed Plan. Public Comments may be solicited on the following:

- preliminary findings on the **Remedial Investigation (RI)** and a list of possible remedies likely to be considered;
- preliminary findings of the **Feasibility Study (FS)** and a brief summary of the leading contender for the proposed remedy; and
- preliminary plans for the implementation and construction of the proposed remedy.

Both oral and written comments will be accepted. Public comments are also solicited during the Record of Decision (ROD), **Explanation of Significant Differences** (if needed) and at the **Notice of Deletion**. For a definition of terms please refer to Appendix E – Glossary and Acronym List.

Timing: Public Comment Periods will be announced as appropriate. A comment period is required in conjunction with the announcement of the Proposed Plan and will last a minimum of 30 days.

Activity 2E: Prepare and issue a Responsiveness Summary

Objective: To summarize comments received during comment periods, to document how the USEPA has considered those comments during the decision-

making process and to provide responses to major comments.

Method: USEPA will prepare a Responsiveness Summary as a section of the Record of Decision (ROD). The Responsiveness Summary will include four sections:

- Overview
- Background on Community Involvement
- Summary of comments received and USEPA responses
- Remedial Design/Remedial Action concerns.

All information, both technical and non-technical, will be conveyed in an easily understandable manner.

Timing: USEPA will issue the Responsiveness Summary as part of the Record of Decision

Activity 2F: Revise the Community Involvement Plan (CIP)

Objective: To identify and address community needs, issues, or concerns regarding the Site or the cleanup remedy that are currently not addressed in the CIP.

Method: The revised CIP will update the information presented in the previous version of the CIP.

Timing: USEPA will revise the CIP as community concerns warrant or at least every three years until the Site is closed out. USEPA revises the CIP after issuance of the Record of Decision and before the Remedial Design starts.

➤ Definitions – Page 12

Explanation of Significant Differences: If, after the Record of Decision is issued, USEPA determines that a significant change to the remedy is necessary, then USEPA must issue a document called “Explanation of Significant Differences.” This document describes to the public the nature of the significant changes, summarizes the information that led to making the changes, and affirms that the revised remedy complies with the statutory requirements of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Feasibility Study (FS): A document that provides an assessment of remedial alternatives (including taking no action), their relative strengths and weaknesses and the trade-offs in selecting one alternative over another.

Notice of Deletion: A notice published in the Federal Register announcing a site’s deletion from the National Priorities List.

Proposed Plan: A plan that proposes a particular remedy for site cleanup after completion of the RI/FS.

Remedial Investigation (RI): Actions undertaken to characterize the full nature and extent of contamination, including characterization of hazardous substances, characterization of the facility, evaluation of human health and ecological risks, and collection and evaluation of information relevant to the identification of hot spots of contamination.

Appendix A: Superfund Process

WHAT IS SUPERFUND?

In 1980, the United States Congress passed the **Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)** in response to growing concern about health and environmental threats posed by contaminated sites. CERCLA, also known as the Superfund law, was created to fund the cleanup of contaminated sites. Since 1980, CERCLA has been further strengthened through multiple revisions and amendments by lawmakers. In the late 1970s, lawmakers noticed that determining responsibility and liability for environmental disasters often takes years in courts of law. However, to protect public health, the need to respond to such environmental problems is often immediate. CERCLA created a “Superfund” of money to be used in emergency situations.

The “Superfund” is managed by USEPA to investigate and clean up the most contaminated sites before liability is determined. In addition, the fund is used to help identify and recover cleanup costs from **potentially responsible parties (PRPs)**, i.e., the companies responsible for the contamination. The procedures USEPA follows under CERCLA are outlined in the **National Contingency Plan (NCP)** 40 Code of Federal Regulations Part 300. If you are interested in learning more about this process, contact the librarian in the Paso Robles Public Library (see *Appendix B – Community Resources*), or contact the Community Involvement Coordinator, Lauren Berkman. The activities proposed in this **Community Involvement Plan (CIP)** for the Klau Buena Vista Site include, among other things, public involvement requirements that have been established by law or regulation for all Superfund sites.

THE SUPERFUND PROCESS

Below is a summary of required actions USEPA must take in the Superfund process. The law that governs



Fuming retorted (distilled) ore and denuded vegetation at the Buena Vista Mine, March 1965

Superfund is Title 42, Chapter 103 of the U.S. Code. Title 42 in its entirety can be found on the U.S. House of Representatives website at http://uscode.house.gov/title_42.htm. Scroll down the list to Chapter 103 - Comprehensive Environmental Response, Compensation and Liability.

Site Discovery

The first step in the Superfund process is discovery of the site. Someone has to report evidence of potential contamination to USEPA. This “someone” could be any person, organization, agency, business, etc. Once a site is discovered, it is entered into the **Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)** and the Superfund process begins.

Preliminary Assessment/Site Investigation

After a site is reported to EPA, we begin a **Preliminary Assessment/Site Investigation (PA/SI)**. This involves reviewing readily available reports and documentation about the site, determining whether hazardous substances are involved, and identifying people and sensitive environments potentially affected by the site. The PA/SI helps USEPA to distinguish between sites that may pose little or no threat to human health and the environment, and sites that may pose a more significant threat and require further investigation. The PA/SI can also identify sites that need emergency response actions.

➤ Definitions – Page 13

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): A Federal act (Public Law 96-510; December 11, 1980) that provides for liability, cleanup and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS): A national database accessible to the public that contains information on current and potential hazardous waste sites and remedial activities nationwide, including sites listed or proposed for listing on the National Priorities List. Visit http://www.epa.gov/enviro/html/cerclis/cerclis_query.html

National Contingency Plan (NCP): The federal government’s blueprint for responding to both oil spills and hazardous substance releases.

Potentially Responsible Parties (PRPs): Entities that are potentially responsible for generating, transporting, or disposing of the contaminated materials found at a site.

National Priorities List

If USEPA determines that further investigation of the site is necessary to more completely evaluate the site, USEPA uses **Hazard Ranking System (HRS)** criteria to determine how serious a danger the hazard(s) at the site might pose. The HRS assesses the relative threat associated with actual or potential releases of hazardous substances at the site and assigns the site a numerical ranking. Depending on the HRS site score, USEPA may compile a report recommending the site be added to the **National Priorities List (NPL)**. The report includes information gathered during the PA/SI, as well as letters of recommendation from the community, local government, and state government. Listing on the NPL also requires approval by the state governor where the site is located. USEPA headquarters reviews the report, and decides whether to propose that the site be added to the NPL. Sites proposed for listing to the NPL are published in the **Federal Register** (the official daily publication for rules, proposed rules and notices from federal agencies and organizations). The public then has 60 days to comment on the proposal. NPL listing makes the Site eligible for federal



Buena Vista mill works building. The building was removed in a 2006 removal action.

USEPA's Decision-Making Process

Throughout the Superfund process, USEPA continually makes decisions on how to proceed from information the agency receives from the community, the State and local agencies. Decisions are made in many different ways, depending on the implications. Day-to-day decisions are made by the project team (project manager, Community Involvement Coordinator, toxicologist, site attorney, etc.). Day-to-day decisions include activities such as community outreach, scoping the Remedial Investigation, funding needs and coordinating with local agencies.

Longer-term decisions or decisions with broader impact may require approval of several levels of management within USEPA Region IX, the State, or even our national headquarters in Washington, DC. These broader decisions might include listing of the site, the Proposed Plan, major policy and/or technical issues, cleanup decisions, funding issues, or major milestones.

The community has opportunities for involvement throughout the Superfund process. For a list of required community involvement activities, see the list at the end of this appendix.

funds. These funds allow USEPA to conduct additional investigations to better characterize the nature and extent of the contamination, and makes available to the community federal assistance under a **Technical Assistance Grant (TAG)**.

Remedial Investigation/Feasibility Study and Proposed Plan

Once a site is placed on the NPL, USEPA begins preparation of a **Community Involvement Plan (CIP)**, informs the community of the availability of a Technical Assistance Grant (TAG), and establishes an information repository. USEPA also conducts a detailed study to determine the nature and extent of contamination called a **Remedial Investigation (RI)**, which includes a **risk assessment**. The risk assess-

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Hazard Ranking System (HRS): The principal screening tool used by USEPA to evaluate risks to public health and the environment associated with abandoned or uncontrolled contaminated sites. The HRS calculates a score based on the potential for hazardous substances to spread from the site through the air, surface water, or groundwater and on other factors such as density and proximity of human population. This score is the primary factor in deciding if the site should be on the National Priorities List and, if so, what ranking it should have compared to other sites on the list.

Technical Assistance Grant (TAG): Funds provided by USEPA for communities affected by Superfund sites to hire an independent technical advisor to help interpret and comment on site-related information.

ment evaluates the actual or potential risks to human health and the environment.

After the RI is completed, USEPA performs a formal evaluation of various cleanup alternatives for addressing the contamination in the **Feasibility Study (FS)**. If the risk assessment indicates that conditions at the site present an unacceptable risk to human health and/or the environment, USEPA will identify a preferred alternative to address the risk in the **Proposed Plan**. The Proposed Plan includes a summary of the RI, a summary of the alternatives that were evaluated, and a detailed description of the preferred alternative, including the rationale for selecting the alternative and the associated costs. In some cases, however, the risk may be low enough that cleanup is not warranted and USEPA would propose no remedial action. The RI and FS are often combined into a single document.

Public Comment Period

CERCLA requires that USEPA accept public comment on the Proposed Plan and supporting documentation, including the RI/FS. Superfund requires that these documents be made available to the public in the

► Definitions – Pages 14-15

Administrative Record (AR): A set of documents which form the basis for selection of a response action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended in 1986. Judicial review of any issue concerning the adequacy of any response action is limited to the record.

Federal Register: The official daily publication for rules, proposed rules and notices of Federal agencies and organizations, as well as executive orders and other presidential documents. Visit <http://www.gpoaccess.gov/fr>

Preliminary Assessment (PA): A limited-scope investigation to collect readily available information about a site and its surrounding area. The PA is designed to distinguish, based on limited data, between sites that pose little or no threat to human health and the environment and sites that may pose a threat and require further investigation.

Proposed Plan: A plan that outlines the preferred remedy for site cleanup after completion of the RI/FS.

Record of Decision (ROD): A document that details the factors that shaped the decision to select the proposed remedial alternative over all other alternatives.

Remedial Design (RD): A phase of remedial action that follows the remedial investigation/feasibility study and includes development of engineering drawings and specifications for a site remediation.

Site Investigation (SI): An onsite investigation designed to collect information needed for the Hazard Ranking System (the principal mechanism USEPA uses to place contaminated sites on the NPL) scoring and documentation.

How is a Remedy Selected?

USEPA uses nine criteria during remedy selection processes. These criteria are grouped into three categories, in order of criteria importance.

Threshold

A remedy must meet the threshold criteria to be selected. These requirements are taken directly from CERCLA and cannot be compromised.

- Overall protection of human health and the environment
- Compliance with applicable/relevant and appropriate requirements

Balancing

These criteria encompass other CERCLA requirements, but are based on site conditions and technological constraints.

- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness (e.g., the environmental impacts of the cleanup)
- Implementability (e.g., whether technology being considered is available within the necessary time frame)
- Cost

Modifying

These criteria are used to decide between similar remedy approaches, rather than deciding between two very different approaches.

- State acceptance
- Community acceptance

local **Information Repository**. This record is called the **Administrative Record (AR)**. The public has a minimum of 30 days to comment on these documents. CERCLA provides the local community an opportunity to comment on the Proposed Plan either in writing or at a public meeting.

Record of Decision

After USEPA considers the public's concerns and determines the final proposed remedy, a **Record of Decision (ROD)**, which addresses how we intend to address the site contamination, is published. USEPA will place the ROD in the Information Repository and will notify the community of the ROD's availability.

Remedial Design/Remedial Action

The **Remedial Design (RD)** is a series of engineering reports, documents, specifications and drawings

Superfund Community Involvement Requirements

- Designate an USEPA spokesperson to the community
- Inform the public of the availability of Technical Assistance Grants (TAGs)
- Conduct community interviews
- Prepare a Community Involvement Plan (CIP)
- Establish a repository in the community and notify the public
- Publish notice of availability of RI/FS, Proposed Plan and Administrative Record File
- Provide a minimum of 30 days for public comment on the RI/FS, Proposed Plan and Administrative Record File
- Provide an opportunity for a public meeting regarding the Proposed Plan and supporting documents. Prepare a meeting transcript through a court reporter and place in Information Repository
- Consider significant comments, criticisms and new data submitted on the RI/FS and Proposed Plan
- Publish Record of Decision (ROD) and issue a public notice of ROD availability in the Information Repository
 - If necessary, revise the CIP prior to Remedial Design
 - If the remedy changes from the one selected in the ROD, either publish a notice to summarize differences or propose an amendment to the ROD, depending on the significance
- If there is a ROD amendment, provide a public comment period, public meeting, meeting transcript, responsiveness summary and notice of ROD amendment availability in the Information Repository
- Issue a fact sheet and hold public briefing of final engineering design and its implementation, or Remedial Action
- Publish a Notice of Intent to delete the site from the NPL in the Federal Register
- Provide a minimum of 30 days to receive public comment on site de-listing
- Place information supporting NPL de-listing in the Information Repository
- Respond to significant comment and new data, if any
- Place final deletion package in Information Repository after publication in the Federal Register

Note: Some activities are required only under certain circumstances. These activities are denoted by “IF” statements and are designated by a hyphen (-) in the list provided above.

The law that governs Superfund is Title 42, Chapter 103 of the U.S. Code. Title 42 in its entirety can be found on the U.S. House of Representatives Web site at http://uscode.house.gov/title_42.htm. Please scroll down the list to Chapter 103 - Comprehensive Environmental Response, Compensation and Liability.

that detail the steps to be taken during the **Remedial Action (RA)** to meet the goals established in the ROD and eventually remove the site from the NPL.

Five Year Review

USEPA performs an in-depth review of the site every five years after the RA is started, to make sure the site remedy is still effective. If no remedial action is taken, USEPA will still perform a five-year review to ensure that the decision for no action is still appropriate. The five-year review is usually in addition to ongoing site monitoring.

NPL De-listing

USEPA may delete a site from the NPL if it determines that no further response is required to protect human health or the environment. After USEPA publishes a notice of intent to delete the site from the NPL in the Federal Register, the public will have at least 30 days to comment on the de-listing of the site. USEPA will respond to significant comments and/or new data, if any. USEPA will place the final deletion package in the Information Repository after publication in the Federal Register.



Buena Vista Mine Mercury Flask Shed (removed during 2006 Response Action)

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Remedial Action (RA): The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.

Appendix B: Community Resources

U.S. Environmental Protection Agency, Region IX

Lauren Berkman

Community Involvement Coordinator
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3292
(800) 231-3075
berkman.lauren@epa.gov

Glenn Kistner

Remedial Project Manager
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3004
(800) 231-3075
kistner.glenn@epa.gov

Michele Dineyazhe

Remedial Project Manager
USEPA Region IX
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3786
(800) 231-3075
dineyazhe.michele.@epa.gov

Project Information Repositories

Paso Robles Public Library

1000 Spring Street
Paso Robles, CA 93446
(805) 237-3870

U.S. Environmental Protection Agency – Region IX Superfund Records Center

95 Hawthorne Street
San Francisco, CA 94105
Call (415) 536-2000 for an appointment

Websites

USEPA's National Priorities List Website (Superfund Site Search)

<http://www.epa.gov/superfund/sites/npl/index.htm>

USEPA

<http://www.epa.gov>

U.S. Department of Health and Human Services

<http://www.dhhs.gov/>

Agency for Toxic Substances and Disease Registry (ATSDR)

<http://www.atsdr.cdc.gov>

California Department of Health Services

<http://www.dhs.ca.gov>

Elected Officials – San Luis Obispo County

County Board of Supervisors

Room D-430, County Government Center
San Luis Obispo, CA 93408
(805) 781-5450

Harry Ovitt – 1st District

e-mail: hovitt@co.slo.ca.us

Bruce Gibson – 2nd District

e-mail: bgibson@co.slo.ca.us

Jerry Lenthall – 3rd District

e-mail: jlenthall@co.slo.ca.us

K. H. “Katcho” Achadjian – 4th District

e-mail: kachadjian@co.slo.ca.us

James R. Patterson – 5th District

e-mail: jpatterson@co.slo.ca.us

Elected Officials – State of California

State Senator Abel Maldonado – 15th District (916) 445-5843

District Office: (805) 549-3784

Fax: (805) 549-3779

e-mail: abel.maldonado@sen.ca.gov

Assemblyman Sam Blakeslee – 33rd district (916) 319-2033

Fax: (916) 319-2133

District Office: (805) 549-3381

Fax: (805) 549-3400

e-mail: sam.blakeslee@assembly.ca.gov

Elected Officials – United States Congress

Senator Barbara Boxer – (202) 224-3553

Fax: (202) 228-4056

e-mail: senator@boxer.senate.gov

California office: (209) 497-5109

Senator Dianne Feinstein – (202) 224-3841

Fax: (202) 228-3954

e-mail: senator@feinstein.senate.gov

California office (209) 485-7430

Representative Lois Capps, 23rd District

(202) 225-3601

Fax: (202) 225-5632

To send e-mail go to website

www.house.gov/writerep/

District Office: (805) 546-8348

Representative Bill Thomas, 22nd District

(202) 225-2915

Fax (202) 225-8798

To send e-mail go to website

www.house.gov/writerep/

District Office: (805) 461-1034

San Luis Obispo County Government**County Government Center**

1055 Monterey Street

San Luis Obispo, CA 93408

Telephone: (805) 781-5000

Toll free: (800) 834-4636

County Public Health Officer

Paso Robles Office

723 Walnut Street

Paso Robles, CA 93446

(805) 237-3050

Department of Public Works

1050 Monterey Street

Room 207

San Luis Obispo, CA 93408

(805) 781-5252

State of California Government**Department of Toxic Substances Control**

1001 I Street

Sacramento, CA 95814-2828

Mailing Address:

P.O. Box 806

Sacramento, CA 95812-0806

Regulatory Assistance Officers:

(800) 728-6942, or (800) 72TOXIC

Department of Health Services

P.O. Box 997413

Sacramento, CA 95899

(916) 445-4171

Central Coast Regional Water Quality Control Board

895 Aerovista Place

Suite 101

San Luis Obispo, CA 93401

(805) 549-3147

Other Related Government Agencies**Department of Fish and Game, Region 4**

1234 E. Shaw Avenue

Fresno, CA 93710

Information: (559) 243-4005 X 151

Monterey County Water Resources Agency

893 Blanco Circle

Salinas, CA 93901

(831) 755-4860

Local Media Contacts**San Luis Obispo Tribune - Newsroom**

e-mail: newsroom@thetribunenews.com

(805) 781-7800

Paso Robles Press

502 First Street, Suite C

Paso Robles, CA 93446

(805) 237-6060

San Luis Obispo New Times

505 Higuera Street

San Luis Obispo, CA 93401

(800) 215-0300

KPRL 1230 AM – Fox News Radio

32nd & Oak - P.O. Box 7

Paso Robles, CA 93447

(805) 238-1230

e-mail: info@tcsn.net

KVEC 920 – News Talk

51 Zaca Lane #100

San Luis Obispo, CA 93401

(805) 543-8830

(800) 549-5832

e-mail: news@920kvec.com

KCBX 90.1 – Public Radio

4100 Vachell Ln

San Luis Obispo, CA 93401

(805) 549-8855

www.kcbx.org

KSBY NBC Channel 6

1772 Calle Joaquin

San Luis Obispo, CA 93405

Switchboard: (805) 541-6666

News: (805) 597-8400

www.ksby.com

Appendix C: Technical Mercury Summary

Text copied directly from USEPA's Mercury Compounds Hazard Summary, revised January 2000. The complete document with references can be found online at: <http://www.epa.gov/ttn/atw/hlthef/mercury.html>

Mercury exists in three forms: elemental mercury, inorganic mercury compounds (primarily mercuric chloride) and organic mercury compounds (primarily methyl mercury). All forms of mercury are quite toxic, and each form exhibits different health effects.

Acute (short-term) exposure to high levels of elemental mercury in humans results in central nervous system (CNS) effects such as tremors, mood changes and slowed sensory and motor nerve function. Chronic (long-term) exposure to elemental mercury in humans also affects the CNS, with effects such as erethism (increased excitability), irritability, excessive shyness and tremors. Human studies are inconclusive regarding elemental mercury and cancer.

Acute exposure to inorganic mercury by the oral route may result in effects such as nausea, vomiting and severe abdominal pain. The major effect from chronic exposure to inorganic mercury is kidney damage. Animal studies have reported effects such as alterations in testicular tissue, increased resorption rates and abnormalities of development. Mercuric chloride (an inorganic mercury compound) exposure has been shown to result in forestomach, thyroid and renal tumors in experimental animals.

Acute exposure of humans to very high levels of methyl mercury results in CNS effects such as blindness, deafness and impaired level of consciousness. Chronic exposure to methyl mercury in humans also affects the CNS with symptoms such as paresthesia (a sensation of pricking on the skin), blurred vision, malaise, speech difficulties and constriction of the visual field. Methyl mercury exposure, via the oral route, has led to significant developmental effects. Infants born

to women who ingested high levels of methyl mercury exhibited mental retardation, ataxia, con-



Cinnabar, a heavy reddish mineral consisting of mercuric sulfide; the chief source of mercury

striction of the visual field, blindness and cerebral palsy.

USES

Elemental Mercury

Elemental mercury is used in thermometers, barometers and pressure-sensing devices. It is also used in batteries, lamps, industrial processes, refining, lubrication oils and dental amalgams.

Inorganic Mercury

Inorganic mercury was used in the past in laxatives, skin-lightening creams and soaps and in latex paint. In 1990, USEPA canceled registration for all interior paints that contained mercury. Mercury use in exterior paint was discontinued after 1991. Although most agricultural and pharmaceutical uses of inorganic mercury have been discontinued in the United States, mercuric chloride is still used as a disinfectant and pesticide.

Methyl Mercury

Methyl mercury has no industrial uses; it is formed in the environment from the methylation of the inorganic mercurial ion.

SOURCES AND POTENTIAL EXPOSURE

Elemental Mercury

A major source of exposure for elemental mercury is through inhalation in occupational settings.

Another source of exposure to low levels of elemental mercury in the general population is elemental mercury released in the mouth from dental amalgam fillings.

Inorganic Mercury

The general population is usually not exposed to inorganic mercury compounds to any significant extent today, as most products containing these compounds have now been banned. Limited exposure could occur through the use of old cans of latex paint, which until 1990, could contain mercury compounds to prevent bacterial and fungal growth.

Methyl Mercury

The most important organic mercury compound, in terms of human exposure, is methyl mercury. Methyl

mercury exposure occurs primarily through the diet, with fish and fish products as the dominant source. Sources of past exposure to methyl mercury include fungicide-treated grains and meat from animals fed such grain. However, fungicides containing mercury are banned in the United States today, and this source of exposure is now negligible.

Mercury has been listed as a pollutant of concern to USEPA's Great Waters Program due to its persistence in the environment, potential to bioaccumulate and toxicity to humans and the environment.

Assessing Personal Exposure

Laboratory tests can detect mercury in blood, urine and hair samples.

HEALTH HAZARD INFORMATION

Acute Effects

Elemental Mercury. The major systems impacted by human inhalation of elemental mercury are the kidneys and central nervous system (CNS). Acute exposure to high levels of elemental mercury in humans results in CNS effects, such as tremors, irritability, insomnia, memory loss, neuromuscular changes, headaches, slowed sensory and motor nerve function and reduction in cognitive function.

Acute inhalation exposure of humans to high concentrations has resulted in kidney effects ranging from mild transient proteinuria to acute renal failure.

Gastrointestinal effects and respiratory effects, such as chest pains, dyspnea, cough, pulmonary function impairment and interstitial pneumonitis have also been noted from human inhalation exposure to elemental mercury.



Buena Vista Mine mill works and Mercury Flask Shed (removed during 2006 Response Action)

Inorganic Mercury. Symptoms noted after acute oral exposure to inorganic mercury compounds include a metallic taste in the mouth, nausea, vomiting and severe abdominal pain in humans.

The acute lethal dose for most inorganic mercury compounds for an adult is 1 to 4 grams (g) or 14 to 57 milligrams per kilogram body weight (mg/kg) for a 70-kg person.

Methyl mercury. Acute inhalation exposure to high levels of methyl mercury, which is extremely rare, has resulted in severe CNS effects, including blindness, deafness and impaired level of consciousness in humans.

It has been estimated that the minimum lethal dose of methyl mercury for a 70-kg person ranges from 20 to 60 mg/kg.

Chronic Effects (Noncancer)

Elemental Mercury. The CNS is the major target organ for elemental mercury toxicity in humans. Effects noted include erethism (increased excitability), irritability, excessive shyness, insomnia, severe salivation, gingivitis and tremors.

Chronic exposure to elemental mercury also affects the kidney in humans, with the development of proteinuria.

Acrodynia is a rare syndrome found in children exposed to elemental mercury compounds. It is characterized by severe leg cramps, irritability, paresthesia (a sensation of prickling on the skin) and painful pink fingers and peeling hands, feet and nose.

USEPA has not established a Reference Dose (RfD) for elemental mercury.

The Reference Concentration (RfC) for elemental mercury is 0.0003 milligrams per cubic meter (mg/m³) based on CNS effects in humans. The RfC is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without appreciable risk of deleterious noncancer effects during a lifetime. It is not a direct estimator of risk but rather a reference point to gauge the potential effects. At exposures increasingly greater than the RfC, the potential for adverse health effects increases. Lifetime exposure above the RfC does not imply that an adverse health effect would necessarily occur.

USEPA has medium confidence in the RfC due to: (1) medium confidence in the studies on which the RfC was based because while there were sufficient number of human subjects and appropriate control groups, exposure levels in a number of the studies

had to be extrapolated from blood mercury levels; and (2) medium confidence in the database due to a lack of human or multispecies reproductive/developmental studies.

Inorganic Mercury. The primary effect from chronic exposure to inorganic mercury is kidney damage, primarily due to mercury-induced autoimmune glomerulonephritis (induction of an immune response to the body's kidney tissue) in humans.

Acrodynia may also occur from exposure to inorganic mercury compounds.

The RfD for inorganic mercury (mercuric chloride) is 0.0003 milligrams per kilogram body weight per day (mg/kg/d) based on autoimmune effects in rats.

USEPA has high confidence in the RfD based on the weight of evidence from the studies using Brown-Norway rats and the entirety of the mercuric chloride database.

USEPA has not established an RfC for inorganic mercury.

Methyl Mercury. The primary effect from chronic exposure to methyl mercury in humans is damage to the CNS. The earliest effects are symptoms such as paresthesia, blurred vision and malaise. Effects at higher doses include deafness, speech difficulties and constriction of the visual field.

The RfD for methyl mercury is 0.0001 mg/kg/d based on developmental neurologic abnormalities in human infants.

USEPA has medium confidence in the RfD due to: (1) medium confidence in the studies on which the RfD was based because the benchmark dose approach allowed use of the entire dose-response assessment, and the results of laboratory studies with nonhuman primates support the quantitative estimate of the no-observed-adverse-effect-level/ lowest-observed-adverse-effect-level range of the benchmark dose that was indicated by the human studies; and (2) medium confidence in the database.

USEPA has not established an RfC for methyl mercury.

REPRODUCTIVE/DEVELOPMENTAL EFFECTS

Elemental Mercury

Studies on the reproductive and developmental effects of elemental mercury in humans have shown mixed results. One study did not see an association between mercury exposure and miscarriages, while another revealed an increase in the rate of spontaneous abor-

tions. Another study showed a higher than expected frequency of birth defects, which was not confirmed in a fourth study.

Inorganic Mercury

No information is available on the reproductive or developmental effects of inorganic mercury in humans.

Animal studies have reported effects including alterations in testicular tissue, increased resorption rates and abnormalities of development.

Methyl Mercury

A large number of human studies on the systemic effects of methyl mercury have been carried out. This is the result of two large scale poisoning incidents in Japan and Iraq and several epidemiologic studies investigating populations that consume large quantities of fish.

Oral exposure to methyl mercury has been observed to produce significant developmental effects in humans. Infants born to women who ingested high concentrations of methyl mercury exhibited CNS effects, such as mental retardation, ataxia, deafness, constriction of the visual field, blindness and cerebral palsy. At lower methyl mercury concentrations, developmental delays and abnormal reflexes were noted.

Considerable new data on the health effects of methyl mercury are becoming available. Large studies of fish and marine mammal consuming populations in Seychelles and Faroe Islands are being carried out. Smaller scale studies also describe effects around the U.S. Great Lakes.

CANCER RISK

Elemental Mercury

Several studies have been carried out regarding elemental mercury and cancer in humans. These studies are inconclusive due to lack of valid exposure data and confounding factors.

USEPA has classified elemental mercury as a Group D, not classifiable as to human carcinogenicity, based on inadequate human and animal data.

Inorganic Mercury

No studies are available on the carcinogenic effects of inorganic mercury in humans. A chronic study on mercuric chloride in rats and mice reported an increased incidence of forestomach and thyroid tumors in rats, and an increased incidence of renal tumors in mice. USEPA has classified an inorganic mercury compound,

mercuric chloride, as a Group C, possible human carcinogen, based on the absence of data in humans and limited evidence of carcinogenicity in rats and mice.

Methyl Mercury

No studies are available on the carcinogenic effects of methyl mercury in humans, and the one available animal study reported renal tumors in mice.

USEPA has classified methyl mercury as Group C, possible human carcinogen, based on inadequate data in humans and limited evidence of carcinogenicity in animals.

Physical Properties

Elemental mercury is a silver-white metal with an atomic weight of 200.59 g/mol. Mercury is a liquid at room temperature and has a vapor pressure of 0.002 mm Hg at 25 °C. Mercury can exist in three oxidation states—elemental(Hg), mercurous (Hg⁺) and mercuric (Hg⁺⁺)—and it can be part of both inorganic and organic compounds. Inorganic mercury compounds include mercuric chloride, mercuric sulfide, mercurous chloride. Organic mercury compounds include mercuric acetate, methylmercuric chloride, dimethyl mercury and phenylmercuric acetate.



Buena Vista Mine mercury puddle located inside building (structure removed during 2006 Response Action)

Appendix D: List of Interview Questions

Site Background

1. How long have you lived/worked in the area?
2. Have you heard of the Klau/Buena Vista Mine?
3. How did you obtain this information?
 - a. When
 - b. Where

Interests and Concerns

1. Do you have any interests or concerns about the Site cleanup?
2. How would you characterize the community's concerns about the mines and their cleanup?

Community Involvement

1. Who would you contact if you had a question about the mines?
2. What is the best way for USEPA to communicate with the community?
3. Have you personally been involved with the mines? If so, how?
4. Are you aware of individuals or groups that have led efforts to be involved in the cleanup of the mine?

Feedback

1. Have you had any contact with the USEPA, local, state or other officials about the cleanup?
 - a. If yes, what was the nature of the contact?
 - b. If yes, what kind of response did you receive?
 - c. Have these officials or agencies been responsive to your concern?

Communication

1. Are you interested in receiving more information about the cleanup activities at the site?
 - a. What topics
 - b. How often?
 - c. Can we add you to our mailing list?
 - d. Snail mail or email?
2. Did you know about the Information Repositories at the Paso Robles library?
 - a. Is this a convenient location?

Language Translation

1. Are you aware of any language or interpretation needs in the community?
 - a. If yes, which language(s)?

Media Coverage & Usage

1. What media (newspaper, TV, internet) do you rely on most to get local information? Do you use the internet?
 - a. Are you aware of USEPA's web page?
2. Is there anyone else you think we should speak with or that would want to speak with us?

Appendix E: Glossary and Acronym List

GLOSSARY

Acid mine drainage (AMD): Drainage of water from areas that have been mined for coal or other mineral ores. The water has a low pH (high acidity) because of its contact with sulfur-bearing material and is harmful to aquatic organisms.

Adit: An adit is a type of entrance to an underground mining operation in which the entrance shaft is horizontal or nearly horizontal. Adits are usually built into the side of a hill or mountain, and often occur when a measure of coal, or in this case mercury, is located inside the mountain but above the adjacent valley floor or coastal plain.

Administrative Record (AR): A set of documents which form the basis for selection of a response action under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended in 1986. Judicial review of any issue concerning the adequacy of any response action is limited to the record.

Agency for Toxic Substances and Disease Registry (ATSDR): An agency of the U.S. Department of Health and Human Services that was created to perform specific functions concerning the effect of hazardous substances on human health.

Bioaccumulate: The net accumulation of a contaminant in an organism from all sources, including air, water and food. Toxic chemicals such as mercury tend to bioaccumulate in the fatty tissues of fish, and these these toxins increase in concentration as they are passed from the prey to the predator (called biomagnification).

Community Advisory Group (CAG): A self-sustaining group that receives administrative and facilitative support from USEPA. Forming a CAG is one of the opportunities USEPA provides to the community during the Superfund process to receive advice from the public.

California Department of Health Services (DHS): The primary role of DHS is to improve the health of all Californians. DHS programs include population-based public health and preventive services, environmental

health programs, medical care services and those programs that focus on special medical needs.

Central Coast Regional Water Quality Control Board (RWQCB): There are nine Regional Water Quality Control Boards in the State of California. The mission of the Regional Boards is to develop and enforce water quality objectives and implementation plans that will best protect the State's waters, recognizing local differences in climate, topography, geology and hydrology.

Community Involvement Coordinator (CIC): A USEPA representative who works with community members to keep them informed about a Superfund cleanup and also helps those who are interested to participate in the response decision-making process.

Community Involvement Plan (CIP): As a requirement of the Superfund process, Federal Law requires that USEPA write a CIP prior to the Remedial Investigation to determine the best methods to communicate with the affected community.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA): A Federal act (Public Law 96-510; December 11, 1980) that provides for liability, cleanup and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites.

Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS): A national database accessible to the public that contains information on current and potential hazardous waste sites and remedial activities nationwide, including sites listed or proposed for listing on the National Priorities List. Visit http://www.epa.gov/enviro/html/cerclis/cerclis_query.html

Emergency Response Section (ERS): The Emergency Response Section is a coordinated effort among five key USEPA organizations and USEPA's 10 Superfund Divisions. The mission of the ERS is to prevent, plan for and respond to emergencies. The ERS's emergency response activities are short-term removal actions designed to protect the public from immediate threats to human health and the environment.

Explanation of Significant Differences: If, after the Record of Decision is issued, USEPA determines another, significantly different remedy is preferable, USEPA must issue a document called “Explanation of Significant Differences.” This document describes to the public the nature of the significant changes, summarizes the information that led to making the changes, and affirms that the revised remedy complies with the statutory requirements of CERCLA.

Feasibility Study (FS): A document that provides an assessment of remedial alternatives (including taking no action), their relative strengths and weaknesses and the trade-offs in selecting one alternative over another.

Federal Register: The official daily publication for rules, proposed rules and notices of Federal agencies and organizations, as well as executive orders and other presidential documents. Visit <http://www.gpoaccess.gov/fr>

Hazard Ranking System (HRS): The principal screening tool used by USEPA to evaluate risks to public health and the environment associated with abandoned or uncontrolled contaminated sites. The HRS calculates a score based on the potential for hazardous substances to spread from the site through the air, surface water, or groundwater and on other factors such as density and proximity of human population. This score is the primary factor in deciding if the site should be on the National Priorities List and, if so, what ranking it should have compared to other sites on the list.

Information Repository: A place where records are kept and made available for public use.

Lead agency: A public agency which has the principal responsibility for ordering and overseeing site investigation and cleanup.

Mercury: Also called quicksilver, mercury is a heavy, silver-colored metal that is one of five elements that are either liquid or nearly liquid at room temperature. Mercury is mostly obtained by reduction of the mineral cinnabar. Like lead, mercury is a neurotoxin, and elevated blood mercury levels have led to retardation and deformities in children. See *Appendix C – Technical Mercury Summary* for more detailed information.

Methyl mercury: Shorthand for monomethylmercury, methyl mercury is formed from inorganic mercury by the action of organisms that live in aquatic systems

including lakes, rivers, wetlands, sediments, soils and open ocean. Ingested methyl mercury is readily and completely absorbed into the bloodstream and can cross the blood-brain barrier and the placenta. See *Appendix C – Technical Mercury Summary* for more detailed information.

National Contingency Plan (NCP): The federal government’s blueprint for responding to both oil spills and hazardous substance releases.

National Priorities List (NPL): A published list of contaminated sites in the country that are eligible for funding to carry out extensive, long-term cleanup under the Superfund program.

Notice of Deletion: A notice published in the Federal Register announcing a site’s deletion from the National Priorities List.

Open-pit mining: A method of extracting rock or minerals from the earth by their removal from an open pit. The term is used to differentiate this form of mining from extractive methods that require tunneling into the earth.

Potentially Responsible Parties (PRPs): Entities that are potentially responsible for generating, transporting, or disposing of the contaminated materials found at a site.

Preliminary Assessment (PA): A limited-scope investigation to collect readily available information about a site and its surrounding area. The PA is designed to distinguish, based on limited data, between sites that pose little or no threat to human health and the environment and sites that may pose a threat and require further investigation.

Proposed Plan: A plan that outlines the preferred remedy for site cleanup after completion of the RI/FS.

Public Health Assessment (PHA): An ATSDR document that examines hazardous substances, health outcomes and community concerns at a contaminated site to determine whether people could be harmed from coming into contact with those substances. The PHA also lists actions that need to be taken to protect public health.

Record of Decision (ROD): A document that details the factors that shaped the decision to select the proposed remedial alternative over all other alternatives.

Reference Concentration (RfC): The reference concentration is an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups which include children, asthmatics and the elderly) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from various types of human or animal data, with uncertainty factors generally applied to reflect limitations of the data used.

Reference Dose (RfD): The reference dose is a numerical estimate of a daily oral exposure to the human population, including sensitive subgroups such as children, that is not likely to cause harmful effects during a lifetime. RfDs are generally used for health effects that are thought to have a threshold or low dose limit for producing effects.

Remedial/remediate: Pertaining to the removal or containment of contaminated materials in soil, surface water, groundwater and soil gas.

Remedial Action (RA): The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.

Remedial Design (RD): A phase of remedial action that follows the remedial investigation/feasibility study and includes development of engineering drawings and specifications for a site remediation.

Remedial Investigation (RI): Actions undertaken to characterize the full nature and extent of contamination, including characterization of hazardous substances, characterization of the facility, evaluation of human health and ecological risks and collection and evaluation of information relevant to the identification of hot spots of contamination.

Remedial Program: The Superfund Program which conducts long-term remediation activities. Sites included in this program must pose a serious but not immediate potential threat to human health and the environment.

Removal action: The short-term cleanup of hazardous substances or the elimination of threats either actual or potential to human health or the environment.

Repository: An area designed and constructed at a site with the purpose of containing mine contamination in order to prevent future releases to the environment.

Risk assessment: USEPA's process of evaluating whether a hazardous substance poses a potential threat, either currently or in a reasonably likely future, to human health and the environment.

Site Investigation (SI): An onsite investigation designed to collect information needed for the Hazard Ranking System (the principal mechanism EPA uses to place contaminated sites on the NPL) scoring and documentation.

Technical Assistance Grant (TAG): Funds provided by USEPA for communities affected by Superfund sites to hire an independent technical advisor to help interpret and comment on site-related information.

Tailings: Residue of raw material or waste separated out during the processing of crops or mineral ores.

Watershed: Similar to a drainage basin, a watershed is a region of land where water from rain or snow-melt drains downhill into a body of water, such as a river, lake, estuary, wetland, or ocean. The watershed includes the streams and rivers that convey the water, as well as the land surfaces from which the water drains into those channels. Watersheds are separated topographically from each other by a ridge, hill, or mountain.

ACRONYM LIST

AMD – acid mine drainage

AR – Administrative Record

ATSDR – Agency for Toxic Substances and Disease Registry

BVMI – Buena Vista Mine, Inc.

CAG – Community Advisory Group

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CERCLIS – Comprehensive Environmental Response, Compensation and Liability Information System

CIC – Community Involvement Coordinator

CIP – Community Involvement Plan

CNS – central nervous system

DHS – Department of Health Services

ECOSLO – Environmental Center for San Luis Obispo County

ERS – Emergency Response Section

FS – Feasibility Study

g – gram

HRS – Hazard Ranking System

mg/kg – milligrams per kilogram

mg/m³ – milligrams per cubic meter

NCP – National Contingency Plan

NPL – National Priorities List

PA – Preliminary Assessment

PHA – Public Health Assessment

PRP – Potentially Responsible Parties

RA – Remedial Action

RD – Remedial Design

RfC – Reference Concentration

RfD – Reference Dose

RI – Remedial Investigation

RI/FS – Remedial Investigation/Feasibility Study

ROD – Record of Decision

RWQCB – Central Coast Regional Water Quality Control Board

SI – Site Investigation

Site – Klau/Buena Vista Mine Superfund Site

TAG – Technical Assistance Grant

USEPA – United States Environmental Protection Agency