UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

ACTION MEMORANDUM

DATE:

SUBJECT: Request for Approval for Change in Scope and a Ceiling Increase at the Argonaut Mine Site, City of Jackson, Amador County, California

FROM: Daniel Shane, On-Scene Coordinator
Emergency Response Section (SFD-9-2)

TO: Daniel Meer, Assistant Director
Superfund Division (SFD-9)

THRU: Harry L Allen, Chief
Emergency Response Section (SFD-9-2)

I. PURPOSE

The purpose of this Action Memorandum is to request and document your approval of (1) a change in the scope of the Argonaut Mine Site ("Site") project, and (2) an increase of the project ceiling from $3,609,456 to $4,944,324 in order to mitigate threats to public health, welfare, and the environment posed by the presence of high concentrations of arsenic in residential surface soils. The continuing actions proposed herein will mitigate Site conditions by removing and or capping arsenic-contaminated surface soils at 12 residential properties and at the Jackson Junior High School, all of which are located in close proximity to the Argonaut Mine tailings disposal areas. The response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. § 9604(c)(1)(A).

Previous Action Memorandums requesting approval for an exemption to the $2 million and 12-month statutory limitations for removal actions were approved on May 15, 2014 (see Attachment 1) and February 11, 2015 (see Attachment 2), respectively. There are no nationally significant or precedent-setting issues associated with this response. A removal action (Phase 1) which began on March 16, 2015 and was completed on March 28, 2015, involved the excavation and removal of arsenic-contaminated tailings and soils at a vacant lot located in close proximity to residential properties that are currently proposed, in this Action Memorandum, for a removal action. This response will involve the removal of surface soils to a depth of one foot at 12 residential properties where arsenic concentrations exceed the site-specific action level of 100 mg/kg.1

1 As described in Section A.3. below, Region 9 developed a site-specific action

II. SITE CONDITIONS AND BACKGROUND

Category of Removal: Time-Critical
CERCLIS ID: CAD983650011
SITE ID: A930

A. Site Description

Please refer to the attached Action Memorandums, dated May 15, 2014 and February 11, 2015.

1. Removal Site Evaluation

Please refer to the attached Action Memorandums, dated May 15, 2014 and February 11, 2015.

2. Physical Location

Please refer to the attached Action Memorandums, dated May 15, 2014 and February 11, 2015.

3. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant.

Please refer to the attached Action Memorandum, dated May 15, 2014.

During the Preliminary Assessment/Site Inspection ("PASI") in July 2014, new areas were found where arsenic concentrations in soils exceeded the EPA's site-specific Regional Screening Level (RSL) of 100 mg/kg. All PASI samples from residential properties had lead and mercury concentrations below the RSL, except one sample adjacent to the 0.39-acre vacant lot. This sample contained concentrations of 39,900 mg/kg arsenic, 3,220 mg/kg for lead and 193 mg/kg for mercury.

Based on these PASI findings, sampling was conducted during the Phase I removal action in March 2015 at 19 residential properties and Jackson Junior High School. Soil samples from these properties were analyzed for arsenic and lead. Mercury was not considered a primary contaminant of concern for the residential properties because, except in limited cases where sampling encountered black semi-processed fine-grained tailings at the vacant lot, mercury concentrations in previous residential samples did not exceed the screening levels. The black tailings were not encountered in samples collected from the residential properties except for those collected immediately adjacent to the vacant lot. Sampling in March 2015 revealed additional properties where arsenic and lead concentrations exceeded the RSLs.

During the Phase I removal action in March 2015, samples were collected from the black tailings encountered in the buried trenches during the excavation of the vacant lot. These sample results were

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level for this response based on site-specific bio-availability testing of 40 soil samples. Selection of a one-foot depth of excavation is based on EPA guidance for residential properties, including excavation of properties with lead contamination. See EPA Guidance, Superfund Lead-Contaminated Residential Sites Handbook, http://www.epa.gov/superfund/lead/products/handbook.pdf at page 37 (page 44 of pdf) (August 2003); see also http://www.epa.gov/superfund/eparecovery/south_minneapolis.html (regarding excavation of arsenic-contaminated soils).

encountered in the buried trenches during the excavation of the vacant lot. These sample results were similar to the PASI sample collected on the property line adjacent to the vacant lot. Samples collected from the black tailings revealed a maximum arsenic concentration of 59,000 mg/kg. Additionally, an embankment below the athletic field at the Jackson Junior High School was found to be composed of tailings and the arsenic concentrations in surface soils exceeded the action level.

As described in the Action Memo dated May 15, 2014, the Removal Site Evaluation used 61 mg/kg for arsenic based on a modified EPA Regional Screening Level (RSL) using an assumed 60% bioavailability factor and an estimated excess cancer risk of 10^{-4} for a residential scenario. In January 2015, EPA conducted an in vitro bio-accessibility assay of 40 soil/tailings samples collected from the Site and surrounding areas. This assay indicated a bioavailability factor of 20% was appropriate for this Site. As a result, EPA determined that a site-specific screening level of 100 mg/kg for arsenic was appropriate, in order to provide an estimated excess cancer risk of 10^{-4} or below for a residential scenario and an estimated non-cancer hazard index of 1 for a residential scenario (i.e., below the level at which non-cancer risks are expected to be a concern). See Attachment 3, June 30, 2015 Memorandum Arsenic Contamination - Site Specific Screening and Action Level for Residential Cleanups at the Argonaut Mine Site in Jackson, California.

4. NPL Status

The Site is not currently on or proposed for the NPL. A PASI has been completed by EPA Region 9 Brownfields & Site Assessment Section. The Section is currently evaluating whether the Site qualifies for inclusion on the NPL.

5. Maps and Other Graphic Representations

Please refer to Attachment 4 for an overview map showing the locations of the residential properties and Jackson Junior High School and color-coded maps showing the residential properties and Jackson Junior High School where arsenic concentrations in surface soils were above the removal action level.

B. Other Actions to Date

1. Previous Actions

On March 16, 2015, EPA initiated a removal action ("Phase 1") at the Site. The removal action involved the excavation of 1,872 cubic yards of contaminated soils and tailings from the vacant lot at the corner of Pioneer Street and Argonaut Lane. The contaminated soils and tailings were transported to the 5-acre parcel within the 64.8-acre mine tailings disposal area. A small repository, a two foot thick capillary barrier evapotranspiration ("ET") cover system was constructed in the southeast corner of the 5-acre parcel. The excavation was backfilled with clean imported soil, graded, hydro-seeded and the property was fenced. Additionally, EPA assisted the City of Jackson with the installation of a subsurface storm water drain pipe to help alleviate flooding in this area and protect the vegetative cap. EPA over-excavated a trench and installed the pipe below the two foot soil cover across the property. The removal action was completed on March 28, 2015.

2. Current Actions

During the PASI in July 2014, soil samples were collected from several residential properties. The sampling results indicated arsenic concentrations in surface soils were above the action level of 100 mg/kg on several of the residential properties located in close proximity to the vacant lot (6 homes), cyanide plant (4 homes) and lower earthen tailings dam (2 homes). Additionally, historical aerial photographs from the EPA's Environmental Photographic Interpretation Center revealed past disposal practices in this area. A 1944 aerial image revealed trenches, pits, berms in the area where there are currently 12 residential properties and homes, and the vacant lot. The residential area (one block) was bordered by Argonaut Lane, Buena Vista Drive and Pioneer Street. It is believed the Argonaut Mining Company conveyed tailings through a pipeline from the mill to the trenches. The 1944 aerial images also indicated several residential properties near the cyanide plant and lower earthen dam impoundment that may have been impacted by tailings disposal. During the excavation of the vacant lot during the Phase 1 removal action, the old trenches and tailings were encountered approximately 2-4 feet below the original grade. The tailings were excavated up to the north and east property line of the vacant lot which bordered developed property and likely extended under several homes. The maximum arsenic concentration was 59,000 mg/kg in a sample collected from the sidewall of the excavation along the east property line.

In addition, during the removal action (Phase 1) in March 2015, a removal site evaluation was conducted at 19 of 20 residential properties (one property owner refused access). Each property was divided into several decision units (front, back and side yards) and a five-point composite soil sample was collected from each decision unit at the surface (0"-2") and subsurface (14"-18"). The sampling strategy was based on guidance provided in the EPA Superfund lead-Contaminated Residential Sites Handbook dated August 2003. The following is a summary of soil sampling results:

- The action level for arsenic (100 mg/kg) was exceeded at 16 of the 19 residential properties for surface and/or subsurface samples;
- The action level for arsenic was exceeded in surface soil samples from 12 of the 19 residential properties. The proposed removal action will involve the excavation and removal of contaminated surface soils to a depth of one foot below ground surface where arsenic levels exceeded the action level;
- The action level for arsenic was exceeded in subsurface soil samples from 15 of the 19 properties;
- The action level for lead (400 mg/kg) was exceeded in only the subsurface soil samples from 3 residential properties. The highest lead concentrations ranged from 505 mg/kg to 2,070 mg/kg and were generally associated with high arsenic concentrations ranging from 369 mg/kg to 4,892 mg/kg;
- The action level for arsenic was not exceeded at 3 residential properties. These properties were generally located near the outer boundaries of the tailings disposal trenches which were identified in the 1944 aerial images.

12-Residential Properties near Warner Property

Based on historical aerial photographs it appeared that the Argonaut Mining Company disposed of tailings from their mill operations in an area bordered by Argonaut Lane, Buena Vista Drive and Pioneer Street. The 12 developed residential properties and the vacant lot are located within this area. Homes were built on top of or adjacent to the trenches and pits that were used to dispose of tailings in

the 1940's.

The action level for arsenic in soils was exceeded in surface and subsurface soil samples at 8 of 12 residential properties. The action level for arsenic in surface soil samples was exceeded at 6 of the 12 residential properties. The highest arsenic concentration in surface soil was 331 mg/kg; subsurface soil was 4,892 mg/kg. Two properties had lead contamination in subsurface soils ranging from 505 mg/kg to 2,070 mg/kg. Three families have young children. Three properties had no arsenic or lead contamination in either surface or subsurface soils above the action level.

5-Residential Properties near Cyanide Plant

The action level for arsenic in surface and subsurface soils was exceeded in all 5 residential properties. The action level for arsenic in surface soil samples were exceeded in 4 of the 5 residential properties. The highest arsenic concentration in surface soil was 219 mg/kg; subsurface soil was 160 mg/kg. One property had lead contamination in subsurface soils (597 mg/kg). Two families have young children.

2-Residential Properties near Lower Earthen Tailings Dam

The action level for arsenic in surface and subsurface soils was exceeded in both residential properties. The action level for arsenic in surface soil samples were exceeded in 2 of the 2 residential properties. The highest arsenic concentration in surface soil was 665 mg/kg; subsurface soil was 798 mg/kg. The property with the highest arsenic concentration in surface soil was located next to the property whose owner denied EPA access to collect soil samples. It is likely the backyard area of this residence has high arsenic concentrations. No soil samples had lead concentrations above the action level.

Jackson Junior High School

The action level for arsenic in surface soils was exceeded in the two soil samples collected during the PASI from a 10,000 square foot embankment below the athletic field. The depth of the soils samples was 0-6 inches below ground surface. The arsenic concentrations were 239 mg/kg and 659 mg/kg. The geotechnical properties of the material used to construct the embankment appeared to be similar to the grey sands tailings located at the Argonaut Mine tailings disposal area. The slopes are nearly void of vegetative growth and the fine-grained tailings were susceptible to wind erosion and fugitive dust emissions. The embankment is located along the main school entrance road and is in close proximity to classroom buildings.

C. Potential for continued State/Local response

Please refer to the attached Action Memorandums, dated May 15, 2014 and February 11, 2015.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

EPA determined that conditions at the Argonaut Mine Site continue to present an imminent and substantial endangerment to public health, welfare, and the environment and meet the criteria for a time-

critical removal action provided for in Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), as amended, 40 C.F.R. Part 300. These criteria are documented in the original Action Memorandum signed on May 15, 2014. If the response action is not completed as planned, threats to the public health or welfare or the environment will continue, as considered in accordance with the following NCP factors:

1. Actual or potential exposure to hazardous substances or pollutants or contaminants by nearby human populations, animals or the food chain

High concentrations of arsenic have been detected in samples from surface soils collected from 12 residential properties and an embankment below the athletic field at Jackson Junior High School. Families and their young children are most at risk from exposure to arsenic through inhalation of dust particles and accidental ingestion. High levels of arsenic and lead will remain in the subsurface soils on some properties following remediation. However, the soils will be covered (capped) with one foot of clean soil and no exposures are anticipated unless these areas are excavated by the property owner.

2. High Levels of Hazardous Substance or Pollutants or Contaminants in Soils at or Near the Surface that May Migrate

The arsenic-contaminated surface soils located in residential yards and the school are generally lack vegetation and cover and are exposed to wind and rain. The contaminated soils can be dispersed in the wind and become an inhalation hazard. Additionally, the contaminated soils can be tracked into homes and classrooms and potentially increase the duration of exposure. There is a risk that young children playing in yards may ingest contaminated soils.

3. Weather Conditions that may Cause Hazardous Substances or Pollutants or Contaminants to Migrate or be Released.

Surface water runoff during storms can carry contaminated soils into storm drains which flow into nearby creeks. Children with muddy shoes can track contamination into homes and classrooms.

4. Availability of Other Appropriate Federal or State Response Mechanisms to Respond to the Release

The State of California is unable to respond to the release due to insufficient funds to carry out a removal action. In August 2013, DTSC officially requested EPA assistance in conducting a removal action at the Argonaut Mine Site.

IV. ENDANGERMENT DETERMINATION

The current Site conditions, including the presence of arsenic contaminated materials, if not mitigated by completing the planned response actions, will continue to pose a threat to human health and the environment through inhalation and ingestion, and migration of materials off-Site and into the local ecosystem. Arsenic is a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

Consistent with the factors set forth at 40 C.F.R. § 300.415(b)(2), the actual or threatened releases of this hazardous substance, if not addressed by completing the response action as proposed in

this memorandum, will continue to present a threat of exposure to arsenic in surface soils and pose an imminent and substantial endangerment to public health or welfare or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Previous Action Memorandums on May 14, 2014 and February 11, 2015 approved the exemptions from the $2 million and 12-month statutory limitations for removal actions, respectively.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

The primary change in scope of work and associated costs documented in this Action Memorandum is the excavation and removal of arsenic-contaminated surface soils from 12 residential properties and capping arsenic-contaminated soils at the Jackson Junior High School. The excavation of soil will be to a depth of 12 inches below grade. Although EPA practices at similar sites suggest excavating soils to a depth of 18 inches in garden areas, there were no gardens in the contaminated areas of concern. In cases where residents mentioned plans for building a garden EPA will recommend the property owner build a raised garden at least 6 inches above grade to provide a minimum of an 18 inch clean soil zone for their garden. (In selecting final response actions for the Site, EPA may also consider using institutional controls, such as deed restriction, to ensure continuing protection from soils below 12 inches below grade.)

The contaminated soils from residential properties will be transported to a 5-acre area where a small repository was constructed during the phase I removal action. A second small repository and capillary barrier ET cover system will be constructed directly across a middle drainage channel from the previously constructed repository. The removal and consolidation of contaminated soils from various hotspot areas needs to be accomplished prior to the construction of the final repository and capillary barrier ET cover system over the 5-acre repository site which contains an estimated 120,000 cubic yards of tailings with high concentrations of arsenic, lead and mercury. The two small repositories in Phase 1 and the continuation of Phase 1 will be integrated into a single repository and capillary barrier ET cover system will be constructed over the entire 5-acre area. The construction of the final cover and improvements to the existing drainage system in the 5-acre repository site was designated phase II of the removal action in the previous Action Memorandums. Please see section "B" for a summary of all the proposed work tasks and cost estimates under this removal action.

1. Proposed Action Description

Specifically, the following activities are proposed for this phase of the response action:

Residential Properties:

- Conduct removal activities at 12 of 19 properties where the arsenic concentrations in surface soils exceed the action level of 100 mg/kg;
- Excavate soils to a depth of 1.0 feet in each decision unit that exceeds the action level;
- Transport a total of approximately 2,246 cubic yards of contaminated soils to the 5-acre repository site;

- Construct a small repository which includes a capillary barrier ET cover system;
- Install a permanent high visibility marker layer (i.e., yellow snow fence) at the bottom of the excavation. The marker layer will provide a visual barrier over soils that were not excavated during the removal action and may contain contamination above the shallow soil cleanup action level.
- Backfill excavations with clean imported topsoil or road base fill depending on the property owner's preference;
- Restore the properties which may involve replacing fencing, sod and plants;
- Prepare a final report for each property owner which will include a detailed summary of the site assessment and cleanup actions taken to mitigate the threats to public health and the environment;
- Recommend to the property owners that they implement institutional controls to prevent damage to the permanent soil cap and prevent excavations that could expose unknowing persons to arsenic and lead contamination. In selecting the final response actions for the Site, EPA will consider selecting institutional controls in the form of deed restrictions (also called land use restrictions) on excavation more than 12 inches below grade. The land use restrictions should define areas of remaining concern and restrict uses that would result in exposure.

Jackson Junior High School:

- Stabilize the steep embankment to prevent direct contact with arsenic-contaminated soils and tailings and mitigate fugitive dust emissions;
- Apply shotcrete to the slopes of the 10,000 square foot embankment;
- Install a fence at the toe of the embankment to keep children away from the embankment and protect the shotcrete surface;
- Prepare a final report for the Amador County Unified School District will include a detailed summary of the site assessment and cleanup actions taken to mitigate the threats to public health and the environment;
- Recommend to the School District to implement institutional controls to prevent damage to the permanent shotcrete surface which could expose unknowing persons to arsenic and lead contamination. In selecting final response actions for the Site, EPA will consider selecting institutional controls in the form of deed restrictions (also known as land use restrictions) when selecting the final response actions for the Site. The land use restrictions should define areas of remaining concern and restrict uses that would result in exposure.

2. Contribution to Remedial Performance

The threat posed by the presence of arsenic-contaminated surface soils meets the criteria listed in 40 C.F.R. § 300.415(b)(2) and is consistent with any long-term remedial action that may be required. The On-Scene Coordinator will continue planning and coordination with the remedial program to assure the removal action will not conflict with future remedial cleanup options. In consultation with the remedial program it was decided it would be more cost-effective to use the remedial funding authority than to use emergency removal funding authority to do the construction necessary to cut back and reduce the almost vertical slopes of the embankment, remove excess tailings and cap the slopes with clean soil, vegetation, rock or gravel fill. Several alternatives have been studied including application of dust control/soil stabilization products such as pine resin oil emulsion sealant. These products would

need to be re-applied every 1-2 years until a final remedy is selected and implemented. Extensive ground squirrel burrowing activity on the slopes would greatly reduce the effectiveness of the sealant. The shotcrete application has been selected as the best and most cost effective remedy for the nearly vertical slopes. Shotcrete is concrete conveyed through a hose and pneumatically projected at high velocity onto a surface and is a common construction technique for stabilization of steep slopes. It is reinforced by steel mesh that is tacked to the slope in 10 foot wide sections. This alternative would be a more permanent remedy that would last 6-8 years or longer if maintained properly. EPA completed the field portion of the PASI in July 2014. The Site is currently being evaluated using the Hazard Ranking System (HRS) in order to determine whether it is eligible for listing on the NPL.

The OSC has begun to make provisions for post-removal Site control consistent with the provisions of 40 C.F.R. § 300.415(k). It is likely that the California Department of Toxics Substances Control will be responsible for operation and maintenance (O&M) of the repository. If the Site is listed on the NPL, the responsibility for O&M will be determined during the remedial process.

3. Description of alternative technologies

There are no current plans to use alternative technologies this Site.

4. Applicable or Relevant and Appropriate Requirements

Please refer to the attached Action Memorandums, dated May 15, 2014 and February 11, 2015. As required by 40 C.F.R. § 300.415(j), this emergency response removal action meets, to the extent practicable, applicable or relevant and appropriate requirements under federal and state environmental laws. See CERCLA Section 121(d); 42 U.S.C. § 9621(d).

B. Project Schedule and Estimated Costs

It is expected the removal action will require 36 days to complete. The residential yard cleanup activities will require an estimated 30 days to complete. The school embankment stabilization activities will require an estimated 6 days to complete. The total removal action includes Phase I which has been completed, a continuation of Phase I which is proposed in this Action Memorandum and Phase II which was selected in the original Action Memo signed on May 15, 2014 but has not been completed.

Previous Response Action

Phase I – Excavation and removal of approximately 1,872 cubic yards of contaminated soils and tailings from the vacant lot, construction of small repository and ET cover system in the 5-acre repository site. The Emergency Rapid Response Services ("ERRS") contractor cost ceiling for this work was $400,000. The phase I work has been completed.

Current Proposed Response Action

Phase I (continuation) – Excavation of approximately 2,246 cubic yards of contaminated soils and tailings at 12 residential properties, construction of a small repository and ET cover system in the 5-acre repository site, and capping the arsenic contaminated soils embankment at the Jackson Junior High School. The estimated ERRS cost to continue Phase I work is $1,000,000.00. The continuation of

phase I is proposed in this Action Memorandum.

Future Planned Response Action

Phase II – Excavation of soil hotspot areas in the cyanide plant and drainage sediments below the dam, consolidation of approximately 800 cubic yards of excavated materials in the 5-acre repository site, construction of the final capillary barrier ET cover and new drainage system utilizing concrete cloth to line the channel and plugging two sink holes. The estimated ERRS contractor cost to complete Phase II work is $1,406,000. This work was proposed in the original Action Memorandum but has not been completed. Phase II activities are planned for fiscal year 2016.

Estimated Cost Breakdown

Extramural Costs	**Current Ceiling**	**Proposed Increase**	**Proposed Ceiling**
Regional Removal Allowance Costs:			
Total Cleanup Contractor Costs	$ 1,806,000	$1,000,000	$2,806,000
Other Extramural Costs Not Funded from the Regional Removal Allowance:			
START Contractor Costs	$ 150,000	$ 200,000	$ 350,000
USCG PST Costs	30,000	0	$ 30,000
ERT Costs	20,000	0	$ 20,000
Subtotal Extramural Costs	$ 2,006,000	$ 1,200,000	$ 3,206,000
Extramural Costs Contingency (20%)	$ 401,200	$ 0	$ 401,200
TOTAL, Removal Action Project Ceiling	$ 2,407,200	$ 1,200,000	$ 3,607,200

In addition to the extramural costs estimated for the proposed action, the Region expects to expend the following intramural costs:

Intramural Costs			
U.S. EPA Direct Costs	$ 50,000	$ 36,000	$ 86,000,000
U.S. EPA Indirect Costs (52.39%) (52.39% of 2,407,200 + 50,000)	$ 1,152,256	$ 98,868 (52.39%)	$ 1,251,124
TOTAL Intramural Costs	$ 1,202,256	$134,868	$1,337,124

The total U.S. EPA extramural and intramural costs for this removal action, based on full-cost accounting practices that will be eligible for cost recovery, are estimated to be $4,944,324.00

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

As discussed above, if the removal action does not continue, releases of hazardous substances from the Site will continue to pose threats to public health or welfare or the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues for the Argonaut Mine Site.

IX. ENFORCEMENT

Enforcement strategies for the Site have not changed since the original Action Memorandum. The Enforcement Confidential Addendum is provided Attachment 5.

IX. RECOMMENDATION

This decision document recommends the selected removal action for the Argonaut Mine Site, in Amador County, California, in accordance with the standards laid out in 42 U.S.C. § 9604 (c)(1)(A) and 40 C.F.R. Section 300.415(b)(5). Because conditions at the Argonaut Mine Site continue to meet the criteria for a removal action, we recommend that you approve the proposed change in scope and increase in the project ceiling. Please indicate your decision by signing below.

Approve: _____ 2 July 2015

Daniel Meer, Assistant Director
Superfund Division

Date

Disapprove: _____ _____

Daniel Meer, Assistant Director
Superfund Division

Date

Attachments:

1. May 15, 2014 Action Memorandum and Approval for Exemption to $2 million Limitation for Removal Actions
2. February 11, 2015 Action Memorandum and Approval for Exemption to 12-Month Limitation for Removal Actions
3. June 30, 2015 Memorandum "Arsenic Contamination - Site Specific Screening and Action Level for Residential Cleanups at the Argonaut Mine Site in Jackson, California"
   (attaching June 29, 2015 Memo "Soil Action level for Arsenic," and
   EPA Region 9 Laboratory Analytical Testing Results, December 12, 2014, in vitro and total metals analysis (lab report numbers 14310a and 14310b)
4. Maps showing locations of residential properties and Jackson Junior High School where arsenic-contaminated surface soils exceed the action level
5. Enforcement Confidential Addendum