



# Iron King Mine & Humboldt Smelter Superfund Site

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • September 2012

## Interim Removal Report Available Online Site Update

### Removal Report Available Online

EPA completed a removal action in November 2011. The interim removal action began in September 2011, and included the cleanup of residential yards, the removal of the Small Tailings Pile, and the application of a soil sealant to ash piles at the Humboldt Smelter.

As part of this removal action, EPA remediated 11 yards, replaced up to two feet of soils with clean backfill, and re-stored them to their original condition. These yards contained elevated levels of arsenic and lead. The soils removed from the yards were placed on the Main Tailings Pile at the Iron King Mine. Hydro-seed was added on top of the soils to encourage vegetation growth and act as a temporary dust suppressant.

The Small Tailings Pile, located adjacent to the Chaparral Gulch was also relocated as part of the removal action. Over 20,000 cubic yards were removed and placed in a designated storage area on top of the Iron King Main Tailings Pile. Upon placement of the Small Tailings Pile in the storage area, Gorilla Snot, a temporary soil sealant was applied to this area to act as a temporary dust suppressant. After the Small Tailings Pile was removed from its original location, the area was restored to a natural drainage pathway.

A severe monsoon in July 2012 damaged certain soil cleanup areas that were remediated during the removal action. EPA is currently evaluating these properties to be repaired and re-graded.

The final report documenting the removal action is available in the information repository at the Dewey-Humboldt Town Library, located at 2735 S. Corral Street, Dewey-Humboldt, Arizona. It can also be found online at <http://www.epa.gov/region09/ironkingmine>.

### Update on Field Investigation Efforts

#### Iron King Mine Stability Sampling

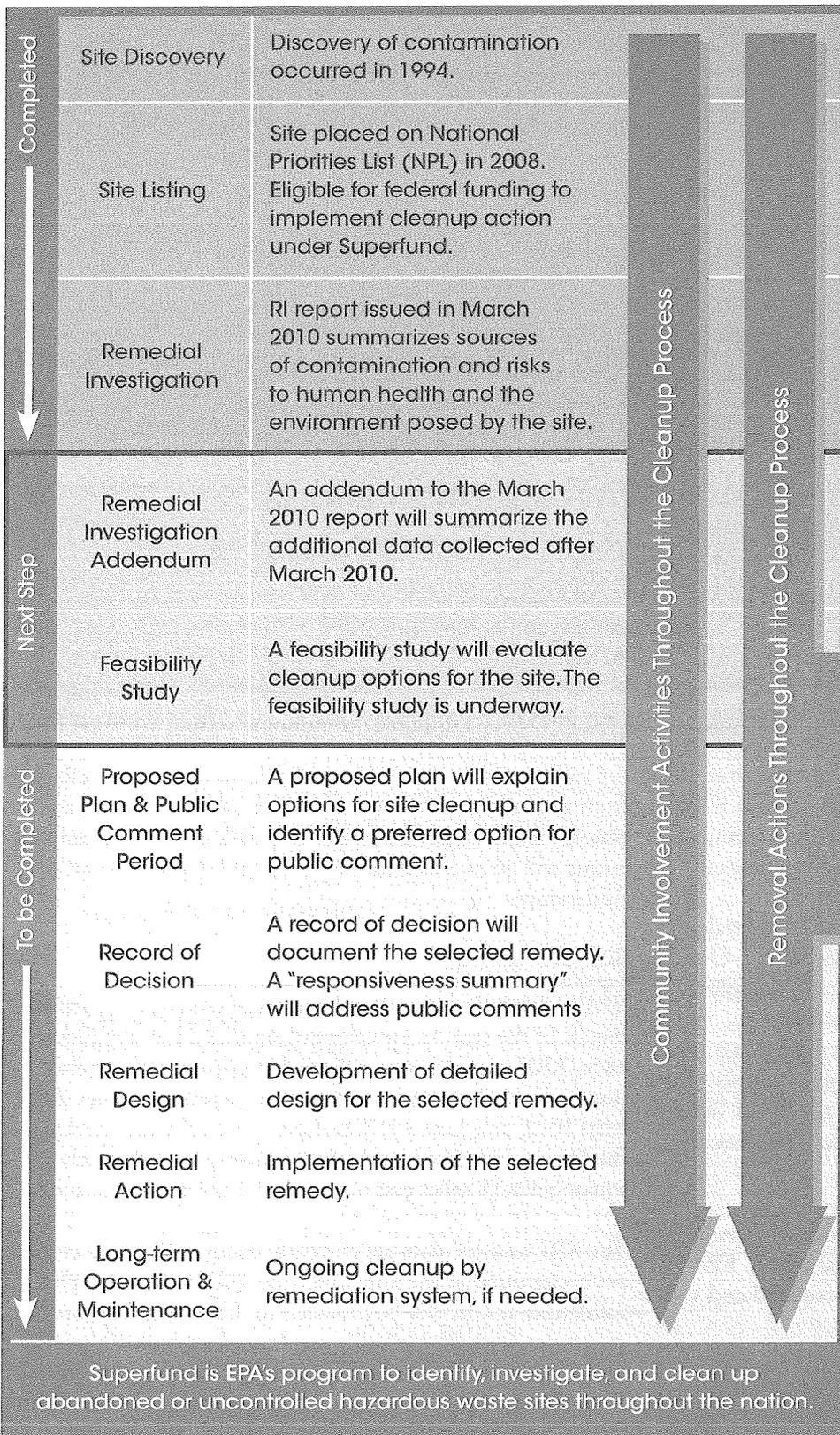
In January 2012, additional data was collected to evaluate the stability of the Iron King Mine Main Tailings Pile. Cone penetration technology (CPT) was used to evaluate the strength of the tailings at approximately 40 locations. Preliminary results indicate the volume of the tailings pile is approximately 3.2 million cubic yards (instead of the original estimate of 6.4 million cubic yards). Geotechnical samples were collected from four additional locations in May 2012 to further characterize the tailings. The results and analysis of these sampling events will be included in the Remedial Investigation (RI) Addendum.

#### Soil Sampling

EPA is currently evaluating the levels of naturally occurring metals in the area. In January and April 2012, X-ray Fluorescence (XRF) samples were collected to continue this evaluation. Laboratory samples were also collected in January 2012, May 2012, and June 2012. Samples were collected throughout the Dewey-Humboldt area, encompassing approximately 20 square miles (5 miles east to west and 4 miles north to south).

The XRF and soil data are currently being analyzed to evaluate background at the Site. Once the soil data has completed validation, results will be provided to the residents whose properties were sampled. The results and analysis of these sampling events will be included in the RI Addendum.

**Figure 1.** The Superfund Process for the Iron King Mine - Humboldt Smelter Superfund Site



### Groundwater Well Installation

EPA has completed the installation of four additional groundwater wells at the Iron King Mine Tailings Pile. EPA is also in the process of installing two wells down-gradient of the Mine. The installation of these additional groundwater wells will provide more information on the arsenic levels in the groundwater at and down-gradient of the Iron King Mine Main Tailings Pile.

Due to several technical issues encountered in the field during installation, the installation of the down-gradient wells has been delayed. Groundwater sampling of the newly installed wells, in addition to the existing EPA wells, is scheduled to take place in October 2012. The results and analysis of these sampling events will be included in the RI Addendum.

**2006 Interim Action** - cleanup of 4 residential yards

**2012 Interim Action** - cleanup of 11 residential yards; relocation of Small Tailings Pile; temporary dust fixative applied to Humboldt Smelter ash piles

### Cleanup Schedule Update

Due to complications with the field investigation, the overall cleanup schedule has been delayed. The Remedial Investigation Addendum, which will summarize and analyze all field data collected after March 2010 in addition to existing data, is anticipated to be completed in Summer 2013. EPA will then complete a Feasibility Study (FS) Report, which will evaluate cleanup options for the Site.

The next step following the completion of the RI/FS is the Proposed Plan. The Proposed Plan does the following:

- briefly summarizes the RI/FS
- presents a comparison of all the considered alternatives
- presents the EPA's Preferred Alternative – the method that EPA is proposing to clean up the Site
- explains the reasons why EPA is proposing the Preferred Alternative, as compared to the other alternatives evaluated in the FS

During this phase of the Superfund process, EPA will solicit public comment on the Proposed Plan, including all of the alternatives considered in the FS. EPA will consider all comments from the public and support agencies. EPA will then document its final decision regarding the selected remedy in a Record of Decision. EPA will prepare a responsiveness summary explaining how public comments have been addressed. Currently the Proposed Plan is scheduled to be issued to the public in 2014.

## Project Manager Updates

Wayne Miller has replaced Wendy Flood as the Arizona Department of Environmental Quality (ADEQ) Project Manager working on the Site. Wendy Flood is now the ADEQ Community Involvement Coordinator.

## Signage, Fencing and Additional Information

EPA has worked with the property owners to ensure their properties have signs and are fenced to the extent practicable. However, if trespassers are seen on the smelter property or community

members would like to report suspicious or criminal activity, contact the Yavapai County Sheriff's Department at (928) 771-3260 or call 9-1-1 in case of emergency.

If you encounter an open mine shaft located outside of the Iron King Mine or the Humboldt Smelter, please contact the Arizona State Mine Inspector at (602) 542-5971. For more information, visit their website at

<http://www.asmi.state.az.us/faq.asp>.

## Agency for Toxic Substances and Disease Registry Blood Lead Screening Event



The Agency for Toxic Substances and Disease Registry (ATSDR) and the Arizona Department of Health Services (ADHS) offered blood

lead screening events to the Dewey-

Humboldt community on April 19, 2012 and May 21, 2012. Both screening events took place at Humboldt Elementary School. Participants were sent their results shortly after the event took place.

The Centers for Disease Control & Prevention (CDC) recommends that all children six years of age and younger be tested for lead. The CDC recently adopted a new Reference Value for children under six years of age of 5 micrograms per deciliter (ug/dl) (formerly 10 ug/dl). No children under the age of six included in the recent Dewey-Humboldt community testing exceeded this CDC recommended level for blood lead.

For more information, please contact Robert Knowles with ATSDR, at (415) 947-4317 or via email at [rknowles@cdc.gov](mailto:rknowles@cdc.gov).

## Mailing List Coupon

If you are not already on EPA's mailing list for the Iron King Mine – Humboldt Smelter Superfund Site, please send an e-mail or return the coupon below to David Cooper.

Name \_\_\_\_\_

Mailing Address \_\_\_\_\_

City, State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone (optional) \_\_\_\_\_

E-mail (optional) \_\_\_\_\_

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# Iron King Mine & Humboldt Smelter Superfund Site

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## Contact Information

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

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## Information Repository

For site documents, please visit the information repository at:

**Dewey-Humboldt Town Library**  
2735 S. Corral Street  
Dewey-Humboldt, AZ

Please visit EPA's and ADEQ's Iron King Mine and Humboldt Smelter site websites at: 

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

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

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