SEMS-RM DOCID # 100018625

Iron King Mine / Humboldt Smelter

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • October 2019

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Keep Children Away from Former Smelter and Mine Properties

The United States Environmental Protection Agency (EPA) was recently alerted that people, many of whom are children and teenagers, are playing in and around the Iron King Mine **tailings** pile and former Humboldt Smelter property. (*Note: See page 3 for more information on words in* **bold**.)

These two dangerous, contaminated properties in Dewey-Humboldt are part of the Superfund site. The former Iron King Mine created the orange tailings pile, just west of Highway 69. The former Humboldt Smelter left behind various smelter wastes and the brick smelter stack and nearby building, just east of Main Street. People should also avoid the Agua Fria River next to the smelter. The **slag** formed on the cliffs could break off and fall to the area below, creating a safety hazard.

Please follow posted warnings and talk with your children about staying away from these areas. If you see people or children near the smelter building or tailings pile, notify the Yavapai Sheriff's office at (928) 771–3260.

The smelter stack and nearby building are unstable and unsafe. Anyone near these structures is in danger of severe injury or death, should these structures collapse. Also, the smelter contains sharp cliffs, crevasses, and other fall hazards.

Both properties contain chemical hazards from toxic metals that could pose a health risk. Trespassers are likely to contact waste material including mine tailings, which contain high levels of arsenic and lead.

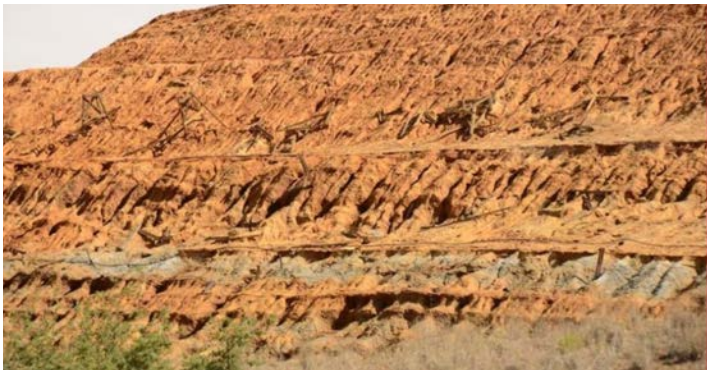

Figure 1: Former Iron King Mine tailings pile

Figure 2: Smelter with tailings pile in background

Figure 3: Smelter slag hanging over Agua Fria River

EPA placed signs and is evaluating options for fencing

EPA wants to keep children and unwary trespassers off the former Iron King Mine property and the former Humboldt Smelter property. In September 2019, we placed nine warning signs in areas on or near these properties. These signs warn of the chemical and physical hazards in the areas. The community requested more signs in specific locations, and we are considering adding new signs.

EPA wants to limit public access to the properties. We expect to place fencing at key parts of the smelter property. In addition, we are working with the owner of the mine tailings pile to upgrade and add fencing at that property.

EPA is taking action to control dust at the smelter property

EPA has heard community concerns about dust from the former Humboldt Smelter property, especially during high winds. Most of the dust is from the waste material called "**dross**." In the next two months, EPA will take actions to control this dust. We will be spraying a product near the smelter which will create a hard, thick crust over the dross waste. You may see trucks and equipment at the smelter property while we complete this work. We will have a robust plan to control dust during this project.

EPA's past work at the site

EPA has thoroughly sampled surface soils in residential yards. We cleaned up surface soils in 50 yards where we found arsenic or lead at high enough levels to pose an unacceptable health risk. EPA's cleanup of residential yards is now complete. In 2016, EPA completed a comprehensive sampling investigation of the entire site (called a remedial investigation). EPA is still studying various ways to clean up the mine tailings and other wastes at the former Iron King Mine and former Humboldt Smelter properties. EPA's goal is to cleanup these properties to fully protect human health.

Tailings

powdery wastes that remain after the crushing and concentrating of mine ore.

Dross

a fine-grained, grey color waste from dye-casting plants.

Slag

a black, solid smelter waste (like hardened lava).

EPA to visit the community in November

EPA plans to visit Dewey-Humboldt the week of November 18 and meet with community members. We plan to:

- attend the Town Council meeting on Tuesday, November 19, at 6:00 p.m.;
- host "office hours" at the Dewey-Humboldt Library on Tuesday, November 19, from 1:30 to 3:30 p.m. for residents to talk with EPA; and
- participate in community meetings.

The Iron King Mine / Humboldt Smelter Superfund site

Superfund is a law that provides authorities and funding to clean up sites with contamination that pose a threat to human health or to the environment. EPA placed the Iron King Mine / Humboldt Smelter site on the Superfund list (known as the "National Priorities List") in 2008. The contamination at the site was caused by historic operations from the former Iron King Mine and the former Humboldt Smelter. Figure 4 shows the site features and the surrounding residential properties that EPA sampled during its investigation. The majority of residential properties on the figure did not require any cleanup action.

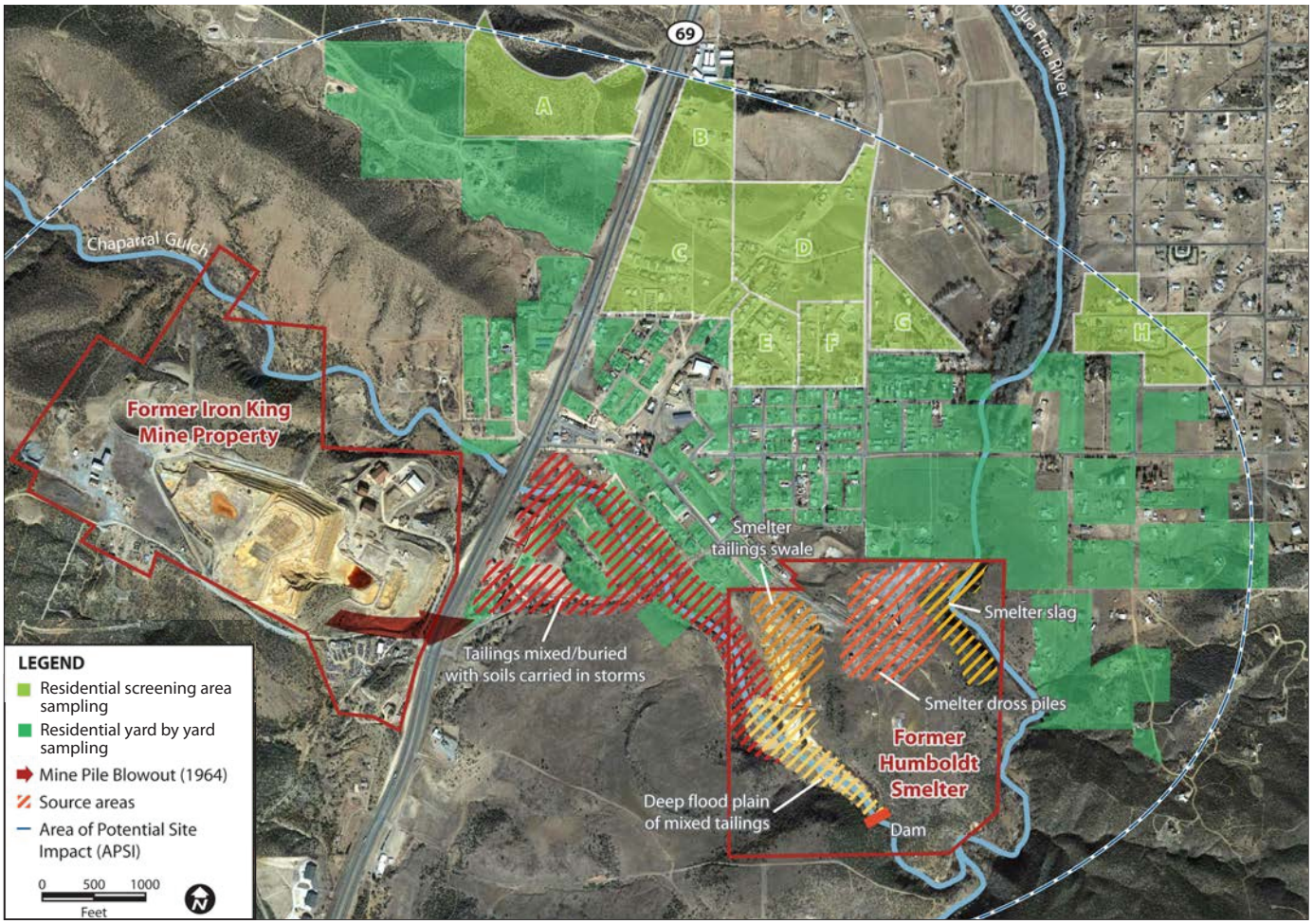

Figure 4: Map of the Iron King Mine/Humboldt Smelter Superfund site and surrounding residential properties sampled by EPA during its investigation

Between the early 1900s and about 1970, the former Iron King Mine mined rock ores of zinc, silver, lead, and gold. Peak production was during the World War II era. These operations left behind a pile of about four million cubic yards of orange mine tailings with high levels of arsenic and lead. Some of these tailings washed into the Chaparral Gulch and flowed downstream toward the Agua Fria River. Tailings and sediment from the mountains continue to move with storm water today. Tailings have also blown to the north from the mine in the past.

Between the late 1800s and about 1937, the Humboldt Smelter and two earlier facilities crushed copper and lead ores and melted them in furnaces to make pure metal. The peak production for the smelter was the earlier World War I era. During the smelter's operation, lead and other metals were released from the smelter's smoke stacks. The smelter property also contains large piles of dross and slag and soils contaminated with lead and other metals.

Historically, tailings from the Iron King Mine and Humboldt Smelter mixed together. These mixed tailings in the flood plain are held back from entering the Agua Fria River by a dam in the lower Chaparral Gulch.

Iron King Mine & Humboldt Smelter Superfund Site

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For more information

If you have questions about the Iron King Mine / Humboldt Smelter Superfund site, please contact:

- Yolanda Sanchez, Community Involvement Coordinator, at (415) 972–3880 or
- Jeff Dhont, Remedial Project Manager, at (415) 972–3020

EPA maintains an information repository which contains documents, reports, and letters about site cleanup activities at the Dewey-Humboldt Town Library located at 2735 S. Corral Street, Dewey-Humboldt, AZ.

You can also visit the site webpage at: **www.epa.gov/superfund/ironkingmine.**

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