

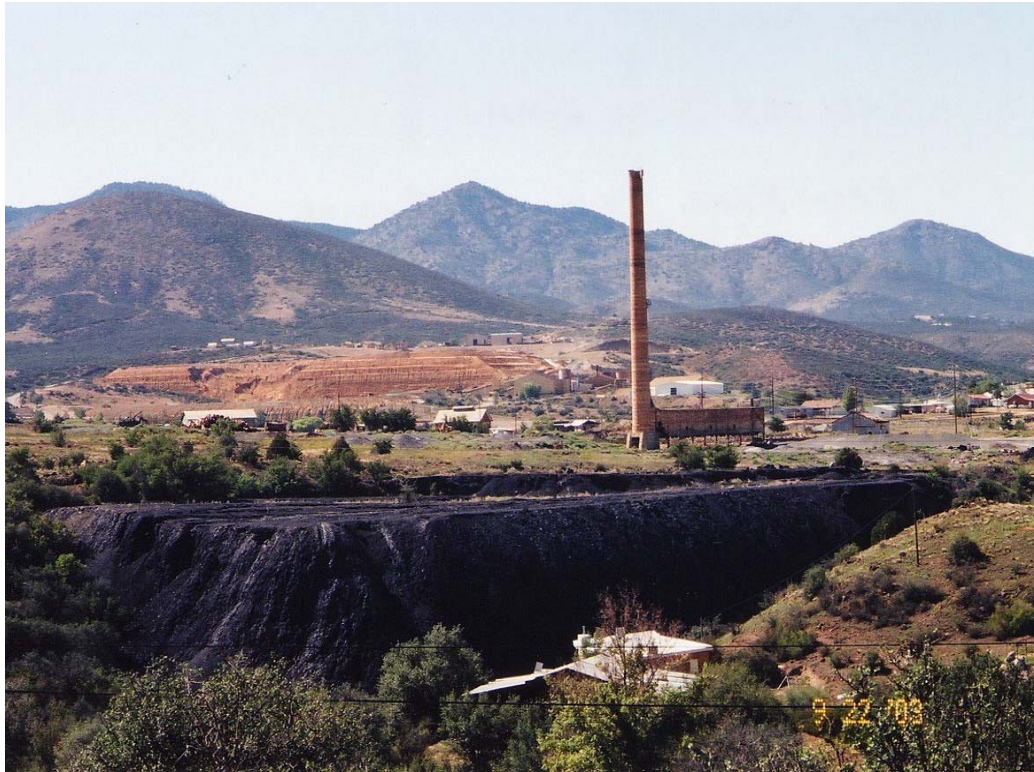
## Appendix A

### Current Site Photographs

# Appendix A

## Current Site Photographs, Iron King Mine – Humboldt Smelter Superfund Site

### Overview



*Photograph 1: Site Overview. Former Humboldt Smelter property in the foreground and former Iron King Mine property in the background at Viewpoint (VP) 1 (see Figure A-1)*

## Iron King Mine, Main Tailings Pile (NR17)



*Photograph 2: Iron King Mine Main Tailings Pile at VP2*



*Photograph 3: Iron King Mine Main Tailings Pile at VP3*



## Iron King Mine, Main Tailings Pile (NR17)



*Photograph 4: Iron King Mine Main Tailings Pile at VP4*



*Photograph 5: Iron King Mine Main Tailings Pile, Blowout at VP5*



## Iron King Mine, Main Tailings Pile (NR17)



*Photograph 6: Iron King Mine Main Tailings Pile, looking east toward former Humboldt Smelter at VP6*



*Photograph 7: Iron King Mine Main Tailings Pile, Retention Pond and NAI Operations area at VP6*

## Iron King Mine, Main Tailings Pile (NR17)



*Photograph 8: Iron King Mine Main Tailings Pile, drainage channel west of Highway 69 at VP7*



## Upper and Middle Chaparral Gulch (NR3, NR5, and NR6)



*Photograph 9: Unnamed drainage near Blowout Path at VP8*



*Photograph 10: Chaparral Gulch at 3rd Street, downstream of Highway 69 at VP9. Photograph taken in 2008; additional alluvium (from other sources in the drainage basin) has been deposited at this VP in recent years.*



## Upper and Middle Chaparral Gulch (NR3, NR5, and NR6)



*Photograph 11: Middle Chaparral Gulch at VP10; tailings evident along banks of southern channel*



## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 12: Smelter Tailings Swale with former Iron King Mine in background at VP11*



*Photograph 13: Smelter Tailings Swale, tailings pond berm, and blowout at VP12*



## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 14: Smelter Tailings Swale at VP13*



*Photograph 15: Smelter Tailings Swale at VP14*



## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 16: Tailings Floodplain, efflorescent salts from repeated evapoconcentration at VP15*

## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 17: Tailings Floodplain, efflorescent salts from repeated evapoconcentration at VP16*



## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 18: Tailings Floodplain, Chaparral Gulch at VP17*

## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



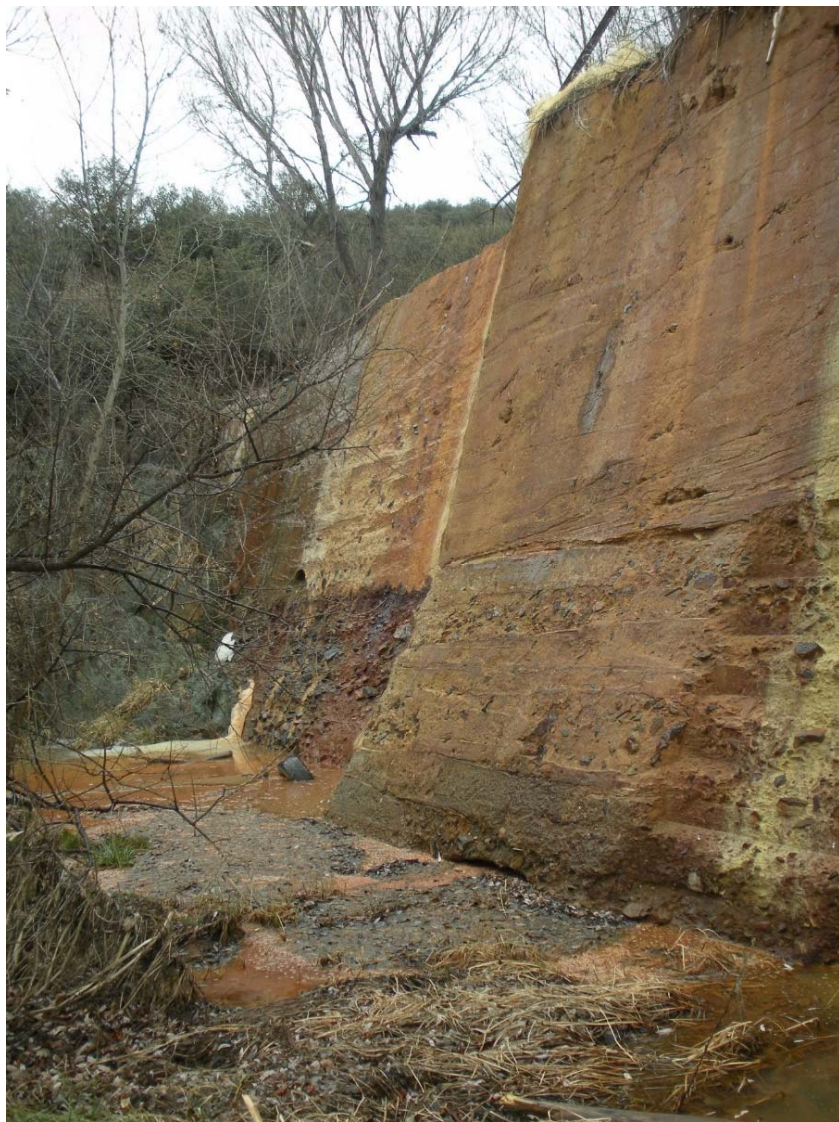
*Photograph 19: Tailings Floodplain at VP18*



*Photograph 20: Chaparral Gulch Dam at VP19*



## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 21: Chaparral Gulch Dam at VP19*

## Smelter Tailings Swale (NR7) and Tailings Floodplain (NR8)



*Photograph 22: Chaparral Gulch Dam at VP20*



## Lower Chaparral Gulch (NR9)



*Photograph 23: Lower Chaparral Gulch at VP21*



## Lower Chaparral Gulch (NR9)



*Photograph 24: Lower Chaparral Gulch at VP22*



*Photograph 25: Lower Chaparral Gulch at VP23*



## Dross Area and Former Pyrometallurgical Operations Area (NR11)



*Photograph 26: Former Humboldt Smelter Pyrometallurgical Operations area, Smelter Stack and brick flue at VP24*

## Dross Area and Former Pyrometallurgical Operations Area (NR11)



*Photograph 27: Former Humboldt Smelter buildings, Smelter Stack, and dross at VP25*



*Photograph 28: Dross at VP26*



## Dross Area and Former Pyrometallurgical Operations Area (NR11)



*Photograph 29: Former Humboldt Smelter slag pile and Agua Fria River, looking southwest at VP27*



*Photograph 30: Former Humboldt Smelter slag pile and Agua Fria River, looking west at VP27*



## Dross Area and Former Pyrometallurgical Operations Area (NR11)



*Photograph 31: Slag pile and Agua Fria River, looking west at VP27*



*Photograph 32: Northeastern corner of the primary slag pile, looking northwest at VP27*



## Dross Area and Former Pyrometallurgical Operations Area (NR11)



*Photograph 33: Slag material dumped in a solid form from the retort or kiln, resulting in a funnel-shaped 3-foot-diameter fragment at VP28*



*Photograph 34: Slag Pile at VP29*



## Agua Fria River



*Photograph 35: Agua Fria River at Prescott Street, looking south at VP30*



*Photograph 36: Agua Fria River at Prescott Street, looking north at VP31*



## Agua Fria River



*Photograph 37: Agua Fria Tailings Pile (NR10), just upstream of confluence with Chaparral Gulch at VP32*

## Agua Fria River






*Photograph 38: Agua Fria River near confluence with Chaparral Gulch at VP33*





Aerial from Google Earth Pro © 2015. Additional information added by CH2M HILL.

#### Legend

-  Viewpoint
-  Former Iron King Mine Property
-  Former Humboldt Smelter Property

Notes:  
Viewpoints are approximate.  
Photos taken by EPA.



**Figure A-1**  
**Iron King Mine – Humboldt Smelter,**  
**Current Site Photo Location Key**  
*Iron King Mine – Humboldt Smelter Superfund Site*  
*Dewey-Humboldt, Yavapai County, Arizona*



## Supplemental Photographs



*Photo DSC\_0615: Photos during investigation: depicting percussion drill rig used to obtain cores from the ground in area of the Humboldt Smelter*





*Photo DSC\_0643: Photos during investigation: depicting percussion drill rig used to obtain cores from the ground in the Iron King Mine Blow Out Path*



*Photo IMG\_0814: Photos during investigation: depicting percussion drill rig used to obtain cores from the ground in the Upper Gulch*





*Photo D004 IMG\_0830: Example of deep erosional gulley cut through existing tailings in the Smelter Tailings Swale; shows underlying natural brown clay layer*



*Photo DSC00116: Core samples prior to shipment to laboratory*



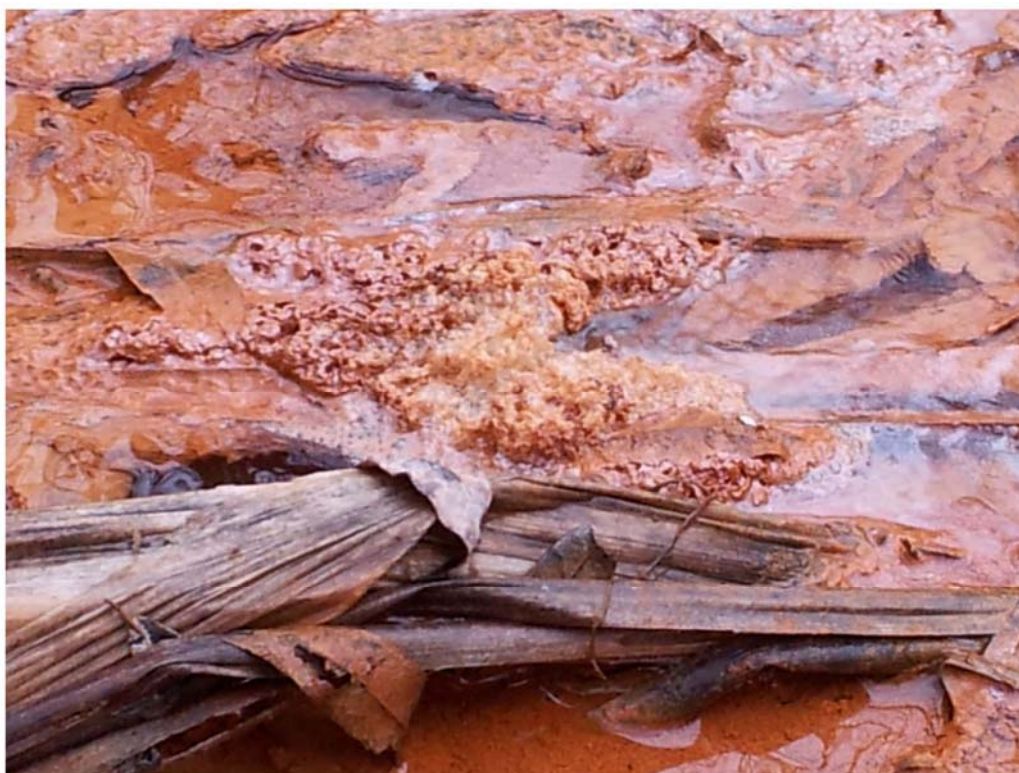


*Photo F002 DSCN0939: Chaparral Gulch Dam*



*Photo F004: Ponds of water at the base (downstream) of Chaparral Gulch Dam*





*Photo F009: Red precipitate immediately downstream of Chaparral Gulch Dam*



*Photo GEDC1485: Dross material covering Pyrometallurgical Operations area*





*Photo GEDC1486: Dross material covering Pyrometallurgical Operations area*



*Photo GEDC1487: Dross material covering Pyrometallurgical Operations area*





*Photo GEDC1488: Dross material covering Pyrometallurgical Operations area*



*Photo GEDC1490: Dross material covering Pyrometallurgical Operations area at Humboldt Smelter*





*Photo 1: Part of a core into the Tailings Floodplain showing yellow-orange oxidized tailings layer on top of other deposit material*



*Photo 2: Part of a core into the Tailings Floodplain, showing black reduced (anoxic) tailings*