



PROBLEMS WITH BINGHAM CANYON MINE

The Bingham Canyon mine is an open pit, copper, gold, silver and molybdenum mine located 28 miles southwest of Salt Lake City, Utah. It is considered the largest open pit mine in North America, covering roughly 27,000 acres of land. Approximately 6 billion tons of rock have been removed from the pit, which is 3/4 mile deep and 2 3/4 miles across.¹ It has been owned by Kennecott Copper Corp (now a subsidiary of Rio Tinto) since 1936.

The mine is a source of major environmental contamination. The mine is the second most polluting mine in the US by toxic releases.² The north zone of the mine is proposed for listing as one of the US's most significant hazardous waste sites.³ State and federal agencies have repeatedly had to rely on legal or administrative action to compel the company to respond to impacts.



Bingham Canyon Mine viewed from space. Photo Credit: NASA Earth Observatory.

Mining activities have resulted in damage to fish and wildlife habitat, extensive water pollution, and public health and safety risks. The mine and its expansion plans are a threat to air quality as well.⁴ The following is a synopsis of some key issues.

Damage to fish and wildlife habitat

The Bingham Canyon Mine is located in close proximity to the Great Salt Lake - one of the Western Hemisphere's most significant migratory bird habitats.⁵ In February 2008, the United States Department of Interior Fish and Wildlife Service took legal action against Kennecott for the release of hazardous substances from the mine's facilities, including selenium, copper, arsenic, lead, zinc and cadmium.⁶ At least a quarter of the selenium flowing into the Lake comes from the mine.⁷ According to the federal biologists, the release of these hazardous pollutants has harmed natural resources, including migratory birds and their support ecosystems, which includes wetlands, marshes, freshwater wildlife habitats, playas and riparian areas and freshwater ponds.⁸ Furthermore, groundwater pollution released from the site has damaged fish and wildlife habitat.⁹ The lawsuit seeks to recover compensation to the public for losses for damage to natural resources due to the release of hazardous substances from the site. The complaint contends that the site has incurred, and continues to incur, costs related to the loss of natural resources resulting from the release of hazardous substances.

The mine also sought to access to the forested cliffs of Rose Canyon, a public area for hiking and wildlife near Salt Lake City once considered the County's "Crown Jewel."¹⁰ Kennecott refused to accept emission caps and mandatory monitoring as part of a land sale, and so Salt Lake City Mayor



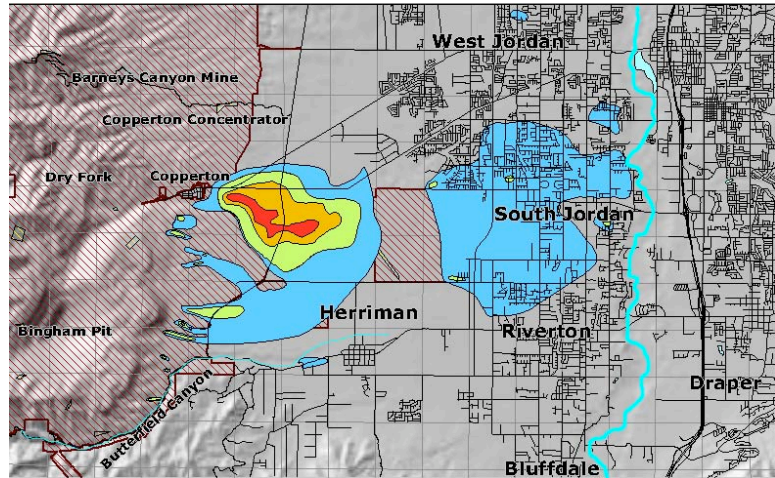
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Peter Corroon rejected the sale. Kennecott plans to explore on the land because it holds subsurface claims under the 1872 mining law.¹¹

South zone groundwater contamination plume¹²

Over its years of operation, mining activities have caused extensive groundwater pollution. Wastewater from the mine has escaped the site's collection system, contaminating groundwater with acid, metals and sulfates.¹³

According to the EPA, the groundwater plume extends towards the nearby Jordan River and covers more than 72 square miles -- rendering water for thousands of Salt Lake City residents undrinkable.¹⁴ The plume was created primarily from wastewater leaching from acid generating waste rock deposited on the slopes of the Oquirrh Mountains. Metals-rich acidic water was channeled through a reservoir, which Kennecott operated without a liner for nearly three decades.¹⁵



Groundwater contamination plume extending from the mine into the Salt Lake Valley and towards the Jordan River.

In 1986 the State of Utah took legal action against the company, filing a Natural Resource Damage Claim against the mine for the destruction and loss of natural resources, particularly groundwater pollution.¹⁶ A settlement was reached in 1995, requiring the company to pay \$37 million into a trust fund, install interception wells to capture the contaminated water to prevent the plume from expanding further, and to submit a plan for how it would provide replacement drinking water to four communities.¹⁷ In 2003, the water replacement plan was submitted to the State, and finally in 2006,



Tailings impoundment adjacent to the Great Salt Lake.

water treatment operations were initiated. A consent decree was reached in 2007 for a portion of the groundwater contamination (the acidic plume).¹⁸ The decree requires the company to continue pumping and treating the contaminated groundwater for the next forty years or be subject to penalties.¹⁹ The South Zone has been withdrawn from the EPA's list of proposed Superfund sites. Long term water treatment is now addressed through the court-mandated consent decree, but one plan would dump contaminants from groundwater into the Great Salt Lake.²⁰



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North zone groundwater contamination plume

Toxic waste was released from the mine's refinery and smelter facilities into the groundwater, creating plumes of contaminated water containing high concentrations of selenium and arsenic.²¹ In one area, the plume comes to the surface via seeps and springs.²² Selenium is particularly toxic to birds, fish and amphibians. The North Zone was proposed for the Superfund National Priorities List (NPL) in January 1994.²³ In 1995, Kennecott, EPA and the State of Utah signed an agreement, saying that Kennecott will continue the cleanup and EPA will defer final listing on the NPL. It remains a proposed Superfund site.²⁴

Tailings containment threatens community of Magna

A special report in March of 2007 by the *Salt Lake Tribune* revealed that since 1988, the company has been covering up reports showing that the tailings dam that overshadows the town of Magna was in danger of collapse in an earthquake.²⁵ Instead of notifying people living below the vulnerable dam, it continued to raise the height of the tailings impoundment about seven feet per year, and to quietly buy up homes in the area. In 1992, the company conducted a risk assessment to determine if full containment of the impoundment would be more expensive than legal costs associated with property damage and citizen deaths. According to the *Tribune* article, the company requested the "approximate number of people involved...approximate spread of the population age (normal, young, aged) [sic]...approximate number of children and adults present at each school...approximate value placed on loss of life by Utah courts, with variation by age."²⁶ The *Tribune* published a 1997 confidential memo, written by Ray D. Gardner, former Chief Legal Officer for Kennecott, that was critical of the company's handling of the potential tailings disaster: "Prior management's decisions to disregard and conceal legal advice, forego public notice, attempt to establish a residential buffer surreptitiously, collude with the State Engineer to withhold the KL studies from the public, and restrict the distribution of the Reduction Study, collectively and individually, give the appearance of a conspiracy to cover-up a profound threat to public safety."²⁷ The company has since bolstered the segment of the dam that directly threatens Magna by piling up more tailings. There are still concerns about the safety and adequacy of the dam. In April 2008, it was announced that a study would be commissioned to evaluate the safety of the tailings facility.²⁸

Inadequate Reclamation Bonding

Reclamation bonds are an important component of responsible mining, because they provide financial assurance that the funding will be in place to complete reclamation in the event the company files for bankruptcy or the company fails to complete reclamation as required in the operating permit. Kennecott has provided the State of Utah with an independently guaranteed reclamation bond for the tailings impoundment (\$23,904,400) and the concentrator (\$20,374,600), but the open pit and waste rock facilities are self-bonded.²⁹ These facilities are backed only by corporate guarantees, a written promise by the company that it will fulfill its reclamation obligation. Thus, there are no hard assets, cash, or cash-equivalents, behind it. Should bankruptcy occur, corporate guarantees leave the State and public in a position of liability, and reclamation plans potentially unfunded.³⁰



EARTHWORKS

EARTHWORKS FACTSHEET

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- ¹ Kennecott Utah Copper website, Plan a Field Trip, at <http://www.kennecott.com/?id=MjAwMDExMQ==>
Kennecott Utah Copper website, Facts About Our Operation, at <http://www.kennecott.com/?id=MjAwMDA3NA==>
- ² U.S. Environmental Protection Agency Toxic Release Inventory. 2009 reporting year data by facility and industry. <http://www.epa.gov/tri/>
- ³ U.S. Environmental Protection Agency Superfund proposed listing. <http://cfpub.epa.gov/supercpad/cursites/csitinfo.cfm?id=0800636>
- ⁴ Fahys, Judy. "Activists want say in Kennecott expansion." The Salt Lake Tribune August 17, 2010.
- ⁵ US Department of Interior, US Fish and Wildlife Service, and Utah Ecological Services Field Office, "Lake Point Wetlands Draft Restoration Plan: Environmental Action Statement, Public Review Draft: Addressing Injuries to Migratory Birds and Other US Department of Interior Natural Resources at the Kennecott Utah Copper Corporation North Zone Wetland Site. January 31, 2008
- ⁶ United States of America vs. Kennecott Utah Copper Corp., Complaint Case number: 08cv00122, February 14, 2008.
- ⁷ Fahys, Judy. "Great Salt Lake cleans itself of natural pollutant." The Salt Lake Tribune June 29, 2009.
- ⁸ United States of America vs. Kennecott Utah Copper Corp., Complaint Case number: 08cv00122, February 14, 2008.
- ⁹ Ibid.
- ¹⁰ Stettler, Jeremiah. "Kennecott may buy county's open-space 'crown jewel.'" The Salt Lake Tribune October 2, 2010.
- ¹¹ Jensen, Derek. "Not so fast, says S.L. County of Rose Canyon sale." The Salt Lake Tribune December 8, 2010.
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- ¹² <http://www.deq.utah.gov/Issues/nrd/index.htm>
<http://www.minesandcommunities.org/article.php?a=1210>
- ¹³ U.S. Environmental Protection Agency, Superfund Program, Website, Site Description for Kennecott South Zone Bingham <http://www.epa.gov/region8/superfund/ut/kennecottsouth/>
- ¹⁴ Ibid.
- ¹⁵ Weber, Ivan. The Utah Sierran, Fall 2003. "Kennecott's Bad Groundwater Destined for the Great Salt Lake?"
- ¹⁶ Utah Department of Environmental Quality, Southwest Jordan Valley Groundwater Cleanup Project, webpage, <http://www.deq.utah.gov/Issues/nrd/index.htm#nrdc>
- ¹⁷ Consent Decree Civil #86-C-0902G, State of Utah v. Kennecott Utah Copper Corp., August, 1995.
- ¹⁸ Consent Decree, U.S. Dept. of Justice and State of Utah v. Kennecott Utah Copper Corp., July 2007. Available at http://www.deq.utah.gov/Issues/nrd/docs/July092007_CD_OU2.pdf
- ¹⁹ Ibid.
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- Fahys, Judy. "Public approval sought for ground water cleanup plan." The Salt Lake Tribune December 1, 2010.
- ²¹ U.S. Environmental Protection Agency, Superfund Program, Kennecott North Zone Tailings, Site Description: <http://www.epa.gov/region8/superfund/ut/kennecottnorth/>; Kennecott North Zone, Record of Decision, September 26, 2002.
- ²² US Department of Interior, US Fish and Wildlife Service, and Utah Ecological Services Field Office, "Lake Point Wetlands Draft Restoration Plan: Environmental Action Statement, Public Review Draft: Addressing Injuries to Migratory Birds and Other US Department of Interior Natural Resources at the Kennecott Utah Copper Corporation North Zone Wetland Site. January 31, 2008.
- ²³ U.S. Environmental Protection Agency, Superfund Program, Kennecott North Zone Tailings, Site Description: <http://www.epa.gov/region8/superfund/ut/kennecottnorth/>
- ²⁴ Ibid.
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