

**Homestake Mining Company  
(A Barrick Gold Corp.)  
Grants, New Mexico**



**EPA Region 6  
State Congressional District: 03  
Contact: Sai Appaji  
214-665-3126**

**EPA ID# NMD007860935  
Site ID: 0600816**

**Updated: May 2009**

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## **Current Status**

Homestake Mining Company (HMC) – (Merged with Barrick Gold, 2001) continues to operate the ground water extraction/injection system at the former mill site to dewater the large tailings impoundment and clean up ground water contaminated by tailings seepage. Collected ground water is piped to either the Reverse Osmosis (RO) plant for treatment and re-injection into the aquifers or two lined evaporation ponds for disposal. Homestake is also operating a secondary ground water extraction and irrigation system to remediate the down-gradient portion of the contaminant plume. The ground water restoration work is anticipated to continue beyond 2010.

In December 2008, the EPA completed a remedy system evaluation (RSE) at the site. The study's primary focus was on the ground water remediation system at the site. The EPA held a community meeting on January 21, 2009 to discuss the report findings and recommendations. During this meeting NMED also announced a Memorandum of Agreement with Homestake to provide public water supply to several area residents who are still dependent on private wells.

The EPA has received numerous comments from stakeholders on the draft RSE report. The EPA plans to address some pending issues in the RSE with the help of the US Army Corps of Engineers (USACE). The EPA met with the stakeholders on April 21-23, 2009, to discuss EPA's proposed follow-on RSE. This was an opportunity for the stakeholders to provide input in to this process. The EPA is now in the process of developing a scope of work for the follow-on RSE with input from the stakeholders.

The EPA is actively working with the Bluewater Valley Downstream Alliance (BVDA) a community organization in providing assistance through the Technical Assistance for Superfund Communities (TASC) program. The TASC program will provide technical assistance to the community in reviewing technical reports.

The Agency for Toxic Substances and Diseases Registry (ATSDR) released a draft Health Consultation report on May 19, 2008. After the comment period closed in July 2008, the ATSDR is yet to release the final version of the Health Consultation report.

In September 2006, the EPA completed the second five-year review for the Site. The conclusions of the Five-Year Report indicate the remedy is protective in the short term. For remedy to be protective in the long term additional institutional controls are required. A copy of this report can be found at the EPA Region 6 website.

HMC is proposing a construct a new evaporation pond to expand and enhance the water evaporation capacity at the Site to assist in timely ground water site remediation and cleanup activities. NMED is currently reviewing the discharge permit for the new evaporation pond.

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## **Benefits**

The initial action to connect the nearby residences to the municipal water supply provided a safe drinking water supply. In addition, the study on indoor radon levels showed that site contamination was not contributing to elevated indoor radon levels found in some area homes.

The contaminant plume has receded back almost 3/4 mile into the site boundaries of HMC by injecting fresh water down-gradient of the site. Nearly 4.5 billion gallons of contaminated water have been removed and 540 million gallons of treated water has been injected into the aquifer. The NRC is requiring that the Corrective Action Plan include clean-up of off-site contamination and require that the license be amended accordingly as well.

Reverse gradient injection has assured that contaminants in the ground water would not expand into the shallow aquifer, thus making the shallow water potentially usable in the down gradient areas. Once the tailings piles have been closed, the site will be transferred to DOE under general license.

## National Priorities Listing (NPL) History

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NPL LISTING HISTORY Site HRS Score: 35.21 Proposed Date: 12/30/82 Final Date: 9/08/83 NPL Update: Original
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Location: 5.5 miles north of Village of Milan in northwest New Mexico.

Population: Approximately 200 people live within a mile of the tailings piles.

### Setting:

- Uranium mill
- Two tailings piles: a large pile covering 200 acres and 100 feet in height and a small impoundment covering 40 acres and 25 feet in height.
- Nearest residence is 3,000 feet away.
- Nearest drinking water well is 3,000 feet away.
- Threatened population in four subdivisions located 1/2 to two miles from tailings piles.

### Hydrology:

- Tailings located on alluvium, overlying Chinle and San Andres aquifers.
- Alluvium used as domestic water supply; deeper San Andres is also an aquifer.
- Extensive injection/withdrawal system has altered shallow ground water flows and flushed alluvial and upper Chinle contamination under the State of New Mexico's Ground Water Discharge Plan (DP-200).

### Principal Pollutants

- Alkaline mill tailings
- Radium-226
- Selenium
- Uranium
- Radon

## Site Map

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## Human Health and Ecological Considerations

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Several hundred people depended upon the shallow aquifer as a water supply; an alternate water supply was provided to nearby residences in 1985 by Homestake under an Agreement with EPA. More recently in 2009 HMC is providing hookups to residents in the affected area that are currently not on alternate water. The hookups are provided through an MOU between HMC and NMED.

Seepage from the two tailings piles has contaminated the alluvial aquifer and portions of the Middle Chinle, Upper Chinle and Lower Chinle aquifers.

## Record of Decision

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Signed: Consent Agreement in November 1983 (Ground Water)  
No Action ROD September 27, 1989 (Radon)

## Site Contacts

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EPA Remedial Project Manager:	Sai Appaji	214.665.3126 or 800.533.3508
EPA Site Attorney:	Pamela Travis	214.665.8056 or 800.533.3508
EPA Community Involvement:	Stephen Harper	214.665.2727 or 800.533.3508
EPA Region 6 Public Liaison	Donn R. Walters	214-665-6483 or 1-800-533-3508
New Mexico Environment Dept:	David Mayerson	505.476.3777