

BINGHAM-MAGNA DITCH

Questions and Answers

June 2007

Background

1. What is the Bingham-Magna Ditch?

In 1930 the Utah Copper Company, a predecessor of Kennecott Utah Copper Corporation (Kennecott), constructed a ditch to transport waste water from copper extraction facilities in the Bingham Mine area to the tailings pond and mining mills northwest of Magna. The canal was abandoned and filled in by the end of the 1930s. No surface expression of the ditch remains today.

2. Where did it run?

The historic ditch originated west of Copperton, ran east to about 7000 West, then north through what are now West Jordan, West Valley, Kearns and Magna. It ended at the Utah and Salt Lake Canal northwest of Magna. The ditch course is shown on the attached map.

Arsenic

3. What is arsenic?

Arsenic is a naturally occurring metal in the Earth's crust. In the case of the Bingham-Magna Ditch, arsenic was a byproduct of copper extraction operations. Recent sampling indicates that a thin layer of sediment lining the bottom of the ditch contains levels of arsenic that exceed Environmental Protection Agency (EPA) and Utah Department of Environmental Quality (UDEQ) clean up levels used at other sites in this part of the Salt Lake Valley.

4. How can arsenic exposure impact health?

Arsenic does not readily accumulate in the body. Most arsenic that is absorbed into the body is efficiently passed in the urine. Swallowing arsenic-contaminated soil is the most likely route of exposure. Exposure to high levels of arsenic over a prolonged period of time may increase cancer risks. Exposure may also irritate the digestive tract and cause nausea.

It is important to remember that the same adverse health effects can be caused by a variety of other factors. Not everyone exposed to arsenic will develop health problems. An individual's age, habits and overall nutrition also affect risk.

5. What do the arsenic-contaminated sediments from the Bingham Ditch look like?

The contaminated sediments are rust-colored and fine grained. Soils underlying the ditch are often stained orange; however, testing data indicate that not all of the stained soils contain high levels of arsenic.

6. What can residents living near the Bingham Magna Ditch do to reduce the possibility of exposure to arsenic-contaminated sediments?

As long as sediments from the Bingham-Magna Ditch remain buried, they pose little risk to human health. Until the Bingham-Magna Ditch soils are fully evaluated, parents should keep children and pets away from any exposed orange-colored soils. Practicing everyday good hygiene will reduce the potential for exposure from contact with contaminated soil. Some simple precautions include:

- Wash your hands thoroughly before eating or handling food.
- Wash children's hands regularly to reduce the likelihood that they will put dirty fingers in their mouths.
- Peel and wash all home garden fruits or vegetables before eating them.
- Wash children's outdoor toys when they get dirty or dusty.

Characterization Plan

7. What is a characterization plan?

A document the agencies use to detail how soil samples will be collected and analyzed to assess the level of potential contamination, what types of contaminants there are, and where the contaminants are located.

8. Who will implement the characterization plan?

Kennecott will perform the characterization with regulatory oversight by UDEQ and EPA. The Agencies will also perform periodic audits of the investigation as needed to assess the quality of the data collected.

9. Why is Kennecott involved?

Kennecott acquired certain assets of the companies that built, operated, and closed the Bingham-Magna Ditch. Kennecott has for over a decade worked closely with EPA and UDEQ to address the environmental legacy of over 100 years of copper mining and milling in the Oquirrh Mountains. Consistent with this record, Kennecott has noted publicly that it believes it is in the public interest that contaminated sediments associated with the ditch be removed and that it is willing to assist with the removal.

10. Are these contaminated sediments causing groundwater contamination?

Based on preliminary analysis, it does not appear that the arsenic contaminated sediments are causing groundwater contamination. This will be further evaluated as part of the characterization effort.

Sampling

11. How do I have my property tested?

Only properties along the immediate alignment of the ditch will be tested. In order for testing to be done on a property, the owner must grant Kennecott, EPA, and UDEQ written access for sampling. EPA and UDEQ will identify those properties that require testing and will contact those owners directly to request access.

12. How will sampling be done?

We expect that sampling at residential properties will take about 30 minutes. Generally, samples will be collected from several locations in each yard. Each sample consists of about 1 cup of soil. If the area is covered with grass, the section of grass will be carefully removed. Then the soil will be removed using a small shovel or scoop. The sampling team will refill the hole with fresh topsoil and replace the grass.

In some locations, deeper samples may need to be collected using a backhoe or geoprobe (a tool that pushes a sampling tool into the ground). These types of samples will generally not be collected in residential yards.

13. Do I have to pay for testing?

No. Kennecott is funding all soil sampling.

14. Do I have to be home when testing is done?

It is not necessary for you to be present when samples are being taken. You will be contacted prior to sampling to schedule a time and arrange any specific details.

15. When will I find out the results?

As soon as Kennecott, UDEQ, and EPA receive testing data from the certified laboratory and perform a quality assurance check, a report will be mailed to the property owner (and property resident, if different from the property owner). Data should be available about 8 weeks after testing occurs.

16. How will the results of the characterization be reported?

A final characterization report will be prepared and made available to the public.

Next Steps

17. What happens if arsenic is found on my property?

If the levels for arsenic are higher than the recommended standard for residential areas the agencies will identify alternatives to address the contamination. These alternatives may include removal of contaminated soils. Kennecott has offered to fully fund clean-up of contaminated soils associated with the Bingham-Magna Ditch where necessary.

18. What happens next?

Kennecott, UDEQ and EPA are working closely together to finalize a detailed characterization plan. We expect sampling to begin in July. In the meantime, Kennecott, UDEQ, and EPA will be contacting property owners along the ditch to obtain written permission to access their property for sampling.

19. What is the schedule?

The characterization plan will be completed by the end of June and sampling will begin in July. Following sampling and analysis, a characterization report will be prepared. Based on the characterization results, the Agencies will evaluate alternatives to address contamination. If removal of contaminated soils is necessary in residential areas, this work will likely begin Spring 2008.

20. How do I stay involved?

Kennecott, UDEQ and EPA will keep property owners informed of progress through future mailings and public meetings. The Agencies will seek community input in evaluation of alternatives and implementation of response actions. UDEQ will shortly create a website to provide information on this project. Look for a link under “Issues to Watch” at www.deq.utah.gov.

21. Who can I contact with questions?

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