40-8903

From: "Cox, Al (Grants)" <ACox@barrick.com>
To: <RCL1@nrc.gov>
Date: 06/05/2007 9:29:51 AM
Subject: Fw: ATSDR Presentation

Ron,
Knew you would like a copy of ATSDR's presentation.

Best Regards.....Al

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Appaji.Sairam@epamail.epa.gov <Appaji.Sairam@epamail.epa.gov>
To: Cox, Al (Grants)
CC: dana.bahar@state.nm.us <dana.bahar@state.nm.us>; David.Mayerson@state.nm.us <David.Mayerson@state.nm.us>; jerry.schoeppner@state.nm.us <jerry.schoeppner@state.nm.us>
Sent: Tue Jun 05 07:06:50 2007
Subject: ATSDR Presentation

<<ATSDRPresentation.ppt>>

Attached is ATSDR's presentation made by Andy Dudley at the Community Meeting last week in Grants.

(See attached file: ATSDRPresentation.ppt)
Sai Appaji
Remedial Project Manager
USEPA Region 6, Superfund Division
Dallas, TX 75202
Tel: 214-665-3126

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ATSDR/U.S. EPA/NMED
Homestake Mill Public Meeting
May 30, 2007

Andy Dudley
Environmental Health Scientist

ATSDR Facts

- Created by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, otherwise known as the SUPERFUND legislation
- In 1986, SUPERFUND Amendments broadened ATSDR's responsibilities
- Mandated to conduct public health assessments on all National Priority List (NPL) sites

ATSDR Facts Continued

- Conduct health consultations
- Prepare toxicological profiles
- Perform health studies
- Maintain a National Exposure and Disease Registry (Four sub-registries)
- Non-regulatory agency within the Public Health Service

ATSDR's involvement at Homestake

- Homestake is a NPL site
- EPA requested ATSDR to analyze groundwater monitoring data
- Preparing a health consultation

Secondary MCLs

- Non-enforceable guidelines that regulate contaminants for aesthetic (color, smell, taste) effects
- Also regulates for effects that may cause cosmetic (skin or tooth discoloration) effects
- States may choose to adopt them as enforceable standards

Contaminants that exceeded secondary MCLs

- Aluminum
- Iron
- Manganese
- Sulfates
- Total Dissolved Solids (TDS)

Maximum Contaminant Levels (MCLs)

- Legally enforceable drinking water standards
- Molybdenum: No MCL currently. ATSDR drinking water comparison value 40 ppb (LTHA)
- Selenium: 50 ppb
- Uranium: 30 ppb

Historical Data

- Some wells sampled as far back as 1975
- Many wells only sampled a couple of times
- Uranium concentrations as high as 12,300 ppb (1979)
- Selenium concentrations as high as 1,800 ppb (1977)
- Molybdenum concentrations as high as 4,930 ppb (1980)

Contaminants of concern

- Molybdenum
- Selenium
- Uranium

Molybdenum

- Naturally occurring essential trace element
- The Institute of Medicine found little evidence that in generally healthy people any molybdenum excess caused adverse health effects
- Estimated exposure doses based on the maximum concentration in September 2005 were below the tolerable intake level by an order of magnitude.

Selenium

- Essential nutrient for humans and animals-used as a nutritional feed supplement or poultry and livestock.
- Most selenium leaves the body usually within 24 hours after being ingested.
- Excessive amounts of selenium eaten over long periods can lead to brittle hair and deformed nails.
- Long-term selenium poisoning has not been reported in U.S. , including those in the west where selenium levels are naturally high in the soil.

Uranium

- Natural uranium is radioactive but poses little radioactive danger because it gives off very small amounts of radiation.
- In animals, kidney damage is the principal toxic effect of uranium.
- Epidemiological studies of uranium miners and mill workers have not shown unusual rates of kidney disease.
- Plants can adsorb uranium from the soil onto their roots without absorbing it into the body of the plant.
- Because of the nature of uranium, not much of it gets into fish and vegetables, and most of that which gets into livestock is eliminated quickly.

September 2005 Sample Results

- 35 wells sampled
- 28 owners on Village of Milan water supply
- 6 owners not – 2 wells exceeded uranium MCL (39.5 ppb and 46.7 ppb); none exceeded for molybdenum and selenium

May 2006 Sample Results

- 33 wells sampled
- None of the wells had molybdenum above the drinking water comparison value
- 10 wells had uranium concentrations above the MCL
- The maximum uranium concentration was 265 ppb; this residence is on Village of Milan water.
- Four wells had selenium above the MCL; the maximum was 101 ppb (location of this well is not on Village of Milan water)

Conclusions

- Several wells have levels of selenium and uranium above current drinking water standards and those residents should use an alternate source of water.
- Historical concentrations were much greater than the past two sampling events.
- Don't anticipate adverse health effects for current levels. The dose makes the poison.

Recommendations

- Drink bottled water if residents wells have levels of molybdenum, selenium, or uranium above the MCL or drinking water standard.
- Residents should thoroughly wash all root vegetables including beets, carrots, potatoes, radishes, etc. or remove the skin before consuming them.

Questions

- Our web address is www.atsdr.cdc.gov