
Whitewood Creek Superfund Site

Residential Information Sheet - 2012

OVERVIEW

This information sheet provides information on the Former Whitewood Creek Superfund Site, located in Lawrence, Meade and Butte Counties in western South Dakota. The site is along 18 miles of Whitewood Creek from the Crook City Bridge to the confluence with the Belle Fourche River. This information sheet is to remind site residents about the EPA Site Remedy, and precautions that should be taken by a site resident to continue to protect the health and safety of the residents.

SITE BACKGROUND

The Black Hills gold rush of the late 1870's brought a host of mining companies to the area. Gold ore was milled and tailings were discharged into Whitewood Creek. As Whitewood Creek flowed out of the Black Hills and onto the surrounding plains, the tailings settled and filled the old streambed and flood plain. These areas in the flood plain are known as TAILINGS DEPOSITS. The tailings that settled in the flood plain were generally deposited from 1880 to 1930. The wind blew some of these tailings onto natural soils adjacent to the flood plain. These adjacent areas are referred to as TAILINGS IMPACTED SOILS.

SUMMARY OF SITE RISKS

EPA determined that the contaminant of concern at the Whitewood Creek Superfund Site is arsenic. TAILINGS DEPOSITS and TAILINGS IMPACTED SOILS at the site contain elevated levels of arsenic in the naturally occurring form of arsenopyrite (fool's gold). Arsenopyrite is present in the local geology where gold occurs.

Shallow ground water in the creek flood plain, directly below the TAILINGS DEPOSITS, may exceed drinking water standards for arsenic. There are no wells for domestic use in this shallow aquifer *and State regulations prohibit shallow well construction in the Whitewood Creek flood plain.*

EPA determined that the way in which people may be affected by arsenic at the site is through incidental ingestion of small amounts of TAILINGS DEPOSITS or TAILINGS IMPACTED SOILS over a lifetime. *Ingestion of low levels of arsenic, on a daily basis, over a lifetime may affect the skin.* A pattern of skin abnormalities, including the appearance of dark and light spots on the skin, and small coms on the palms of the hands, the soles of the feet and the torso

may possibly develop. These skin conditions are not considered to be a health concern in their own right, but some coms may have potential to develop into skin cancer.

EPA's remedy is designed to minimize risk from arsenic to individuals. Site residents can further minimize risk by practicing the additional precautions outlined in this information sheet.

SITE REMEDY

EPA chose a twofold remedy: (1) existing residential yards containing TAILINGS DEPOSITS or TAILINGS IMPACTED SOILS were cleaned up in 1991 and 1992 by removing these materials or covering them with clean soil, and (2) county ordinances were adopted to minimize exposure to TAILINGS DEPOSITS and TAILINGS IMPACTED SOILS in future development. In addition to the County ordinances, an existing State rule prohibiting shallow well construction in the Whitewood Creek flood plain will be continued.

ONGOING ACTIVITIES

The EPA requires the soils in the remediated residential areas to be evaluated and/or sampled every five years to verify that these areas remained clean. Also, remediated areas must be re-sampled if floodwaters encroach upon cleaned up residential yards within the site.

The first residential yard sampling was completed in 1996.

In the spring of 2012, Homestake, the SD Department of Environment and Natural Resources, and the US EPA will be conducting a five-year review of the effectiveness of the controls along the superfund site. This five-year review will include visits to all of the remediation sites in the area, along with a review of the effectiveness of the controls.

Homestake continues to perform annual required routine inspections, monitoring, and maintenance of the site.

COUNTY ORDINANCES

The county ordinances currently in effect include the following components:

- Residential and commercial development on TAILINGS DEPOSITS is prohibited.
- Residential development is allowed in TAILINGS IMPACTED SOIL AREAS that the owner has remediated and in areas that have soil arsenic levels below 100 parts per million.
- Excavation and use of tailings material outside of the TAILINGS DEPOSITS is prohibited. (Mining

of the tailings is allowed subject to the regulations of the individual county, the State of South Dakota and applicable federal requirements.)

- Importation of TAILINGS DEPOSITS or TAILINGS IMPACTED SOILS to residential yards is prohibited. These materials cannot be used for driveways or fill in yards or gardens.

Please refer to property maps that have been provided to site residents showing areas affected by the county ordinances. These maps identify tailings deposits, tailings impacted soils, remediated areas, and clean areas. These maps, as well as planning, permitting and zoning information are available at the following county offices:

Butte County Civil Defense Office
Belle Fourche, SD
Ms. Elain Jensen, Tele # (605) 892-2743

Lawrence County Office of Planning & Zoning
Deadwood, SD
Ms. Amber Vogt, Tele # (605) 578-3871

Meade County Planning Office
Sturgis, SD
Mr. Kirk Chaffee, Tele # (605) 347-3818

PERSONAL PRECAUTIONS

Personal precautions that should be practiced by site residents to reduce arsenic exposure include:

- Minimize time spent in TAILINGS DEPOSITS and TAILINGS IMPACTED SOILS. Small children should not play in TAILINGS DEPOSITS due to potential for ingestion of these materials.
- Practice good personal hygiene. When site residents are exposed to TAILINGS DEPOSITS or TAILINGS IMPACTED SOILS, exposed areas (hands and face) and clothing should be washed.
- Avoid fruit and vegetable gardening in TAILINGS DEPOSITS and TAILINGS IMPACTED SOILS. The best areas for gardening are those sampled and known to have low arsenic concentrations.
- Practice caution when using manure in gardens. Manure collected from areas of TAILINGS DEPOSITS or TAILINGS IMPACTED SOILS may have arsenic impacted soils incorporated with the manure.

SITE RESIDENT'S ROLE

Residents have an important role in implementing the remedy and minimizing risk. Site residents are asked to do the following:

1. *Notify Homestake if floodwaters reach residential yards within the site.*
2. *Notify potential property owners of the Whitewood Creek Superfund Site and provide them with this information sheet. Warning signs and deed restrictions were not included in the remedy in response to public comment. The assistance of site residents is necessary to educate potential property owners.*
3. *Practice the personal precautions outlined in this information sheet.*
4. *Contact your County Planning, Zoning and Building Permit Coordinator, address and telephone contact as listed above, before any planned construction on your property.*
5. *Please notify the Homestake representative listed below if you are aware of any planned building activities within the Whitewood Creek Superfund Site.*

SITE DOCUMENTS AND CONTACTS

Documents regarding the former Whitewood Creek Superfund Site, including the Record of Decision and Consent Decree, are available for public review at the Lawrence County Register of Deeds Office, 90 Sherman Street, Deadwood, SD 57732 (605) 578-3930. For other information contact the Lawrence and Meade County Planning Offices, the Butte County Civil Defense Office, or:

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