United States Environmental Protection Agency
Region 8 Emergency Response Unit
Denver, CO

Report: Camp Bird Removal Objectives
Date: 11/17/2016

Site Name: Camp Bird Mine
Site ID: A8H9
On Scene Coordinator: Martin McComb
Contact: mccomb.martin@epa.gov
Website: https://epaosc.org/campbird

Notice: Preliminary Information
Category: Site Description
Last Updated: 11/17/2016

The Camp Bird is a famous gold mine located near Ouray, CO. A large amount of mine waste is located at the entrance to the mine's Level 14. Three water bodies run in direct contact to this mine waste: Sneffels Creek, Imogene Creek and Canyon Creek (which is formed by the confluence of Sneffels and Imogene Creeks).

Aerial View of the Camp Bird Mine at the Entrance to Level 14 in 2002[1]

[1] Source: Mining History Association, http://www.mininghistoryassociation.org/CampBird.htm.

Notice: Preliminary Information
Category: Site Assessment
Last Updated: 11/17/2016

EPA response personnel have visited the site during a variety of stream flow regimes. Mine waste is being actively eroded into all three water bodies: Sneffels Creek, Imogene Creek and Canyon Creek. This mine waste contains heavy metals. Circumstances at the Site meet the requirements for a removal action under Section 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Contaminated Material Entering Canyon Creek at the Camp Bird Mine

Notice: Preliminary Information
Category: Removal Action Objectives
Last Updated: 11/17/2016

EPA's On Scene Coordinator has identified the following goals for a removal action at the Camp Bird Mine Site:

Area A: Imogene Creek as is it enters the Site.
Objective: Stabilize the creek to account for a 100-year flood event. Stabilization shall include engineering controls (flow control structures) and/or excavation of the right descending bank away from the creek bed.

Area B: Sneffels Creek, Imogene Creek and Canyon Creek as they pass through the Site.
Objective: Remove choke point on Canyon Creek, widen all river channels and armor both banks with rip-rap to account for a 100-year flood event. Apply topsoil, terrain features and revegetate river channel within the constructed floodplain.

Area C: East section of the oldest waste pile on the south side of Canyon Creek.
Objective: Move the portion of the waste pile that is east of the small north-south running drainage to the west and on the other side of the small side drainage. Consolidate the waste in this area and armor the toe of slope along the small drainage. Revegetate all disturbed areas east of the small drainage.

Area D: Slopes of both tailings ponds on the north side of Canyon Creek.
Objective: Stabilize the slopes of tailings ponds by either a) cutting the slopes back away from the creek and creating a 3:1 slope with suitable cover material or b) stabilizing the existing slopes with erosion fabric, rip rap and other cover material.

Area E: Slope of the mine waste piles on the south side of Canyon Creek.
Objective: Excavate the slopes of all mine waste piles away from the creeks and create a protected 3:1 slope.

Area F: All areas with exposed surface soil.
Objective: Cover all exposed area with non-contaminated material. Revegetate all exposed areas to the extent practical.

Areas of Interest at the Camp Bird Site