



Colorado Department  
of Public Health  
and Environment

# EAGLE MINE SUPERFUND SITE

## 2010 COLLECTION AND CONVEYANCE SYSTEM AUDIT REPORT

March 2011



## Introduction

The Eagle Mine Water Treatment Plant treats contaminated water from flooded mine workings and groundwater from the Consolidated Tailings Pile at the Eagle Mine Superfund Site in Eagle County. The mine water reaches the plant via a pipeline, part of which is on a historic trestle, and a bypass line built in early 2010 when the trestle line froze. The Colorado Department of Public Health and Environment and the U.S. Environmental Protection Agency responded to stakeholder concerns by requesting an audit of the water treatment plant by the Colorado Water Quality Control Division and an audit of the water collection/conveyance systems by URS Corp., an EPA contractor.

URS Corp. submitted its final report, *Audit of Collection and Conveyance Systems for the Eagle Mine, Minturn, CO*, to the Colorado Department of Public Health and Environment and the U.S. Environmental Protection Agency in January 2011. The pipeline report made recommendations for improving water collection and conveyance, reducing scale build-up in the line and improving site security. A summary of the recommendations follows.

## Scope of the Report

The URS pipeline audit examined the following collection and conveyance systems: the Mine Water Transport Pipeline, the Waste Rock Pile #8 (WRP 8) runoff collection system and the Consolidated Tailings Pile (CTP) groundwater extraction trenches. URS performed audits of these systems on Sept. 30 and Oct 1, 2010, examining the systems listed above and interviewing the operators.

## Summary of Recommendations

### Groundwater Extraction Trenches

- Install remote monitoring and computer operated equipment to monitor water levels in manholes;
- Develop pump maintenance and replacement schedules;
- Monitor for signs of scaling in main lines;
- Make improvements to the electrical systems, including burial of lines, lockable housings and reconnection of a sump-pump alarm system to indicate motor failure.

### Existing Mine Water Transport Pipeline

- Inspect the line to determine the extent of scaling; clean or replace sections as necessary;
- Install a chemical feed system to keep iron and manganese from solidifying in the pipe.

### **New Bypass Line**

- Bury the line, except for accessible valves and other maintenance features;
- Check couplings for leakage, with special attention prior to the first snowfall and prior to spring snowmelt.

### **Mine Draw Down Vault**

- Install a metal hatch;
- Enclose valves and other equipment;
- Add redundant, remote methods to measure and control the mine pool water level.

### **Pump-Back System**

- Connect and test the pump-back system;
- Enclose electrical service.

### **Adits**

- Install a new pipeline from a seeping adit to the nearest manhole;
- Bury piping as necessary;
- Secure the mine draw down valve.

### **WRP 8 and Vicinity**

- Inspect the diversion system during spring runoff;
- Replace corroded piping;
- Remove debris blocking the culvert in Rock Creek;
- Improve run-on/run-off control systems and acid rock drainage collection/conveyance systems.

Based on an initial review of the audit report, CBS has agreed to implement a majority of the recommendations as part of its ongoing operations and maintenance. Meanwhile, a separate audit of the Eagle Mine Water Treatment Plant by Andy Poirot, Steamboat Springs district engineer for the Colorado Water Quality Control Division has been completed, and the agencies are awaiting the final report. The audit evaluated equipment, maintenance, and operating and emergency procedures.

### **FOR INFORMATION, CONTACT:**

#### **Colorado Department of Public Health and Environment:**

Wendy Naugle, Project Manager  
(303) 692-3394

Toll free: 1 (888) 569-1831, ext 3394  
wendy.naugle@state.co.us

Warren Smith, Community Involvement Manager

(303) 692-3373

Toll free: 1 (888) 569-1831, ext.3373  
warren.smith@state.co.us

#### **Environmental Protection Agency**

Mike Holmes, Project Manager  
(303) 312-6607

Toll free: 1(800) 227-8917, ext. 6607  
holmes.michael@epa.gov

Jennifer Chergo, Public Affairs Specialist  
(303) 312-6601

Toll free: 1 (800) 227-8917, ext. 6601  
chergo.jennifer@epa.gov

#### **On the Web:**

[www.epa.gov/region8/sf/co/eagle/#6](http://www.epa.gov/region8/sf/co/eagle/#6)

[www.cdphe.state.co.us/hm/rpeagle.htm](http://www.cdphe.state.co.us/hm/rpeagle.htm)

#### **View Documents at:**

Minturn Town Hall

P.O. Box 309

Minturn, CO 81645

(970) 827-5645

Colorado Department of Public Health and Environment

4300 Cherry Creek Drive South

Denver, CO 80246-1530

(303) 692-3331

EPA Superfund Records Center

1595 Wynkoop Street

Denver, CO 80202-1129

(303) 312-6473