

RECORD OF DECISION
COLORADO SCHOOL OF MINES RESEARCH INSTITUTE SITE
GOLDEN, CO

March 31, 2004

Prepared By:

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Record of Decision

PART 1: THE DECLARATION

A. Site Name and Location

The CSMRI Site has historically included the soil stockpile (material removed from the settling pond) formerly located near the Colorado School of Mines (School) softball field, the Fenced Area (including the settling pond), and the Clay Pits area located south of the intersection of Birch and 12th Streets. For the purposes of this document only, the Site is defined as the Fenced Area (excluding the settling pond) and the Clay Pits area.

The Site is located on the south side of Clear Creek, east of U.S. Highway 6, in the northeast quarter of the northwest quarter of Section 33, Township 3 South, Range 70 West as shown in Figure 1-1. The main entrance to the Site is located about 475 feet northwest of the intersection of Birch and 12th Street in Golden, Colorado. A chain-link fence restricts access to the Site, except for a small area located south of 12th Street known as the Clay Pits area. A settling pond was previously located within the perimeter fence but the pond was cleaned up and closed by the U.S. Environmental Protection Agency (EPA) in 1997 as part of an Emergency Removal Action under CERCLA and is not part of the School's remedial action.

The Site (excluding the Clay Pits area and the former settling pond area) covers an area of about six acres and is currently defined by the shaded area shown in Figure 1-2. The Clay Pits area also is shown in Figure 1-2. In accordance with CERCLA and the NCP, 40 Code of Federal Regulations (CFR) Parts 300.5 and 300.400(e), the term "on-site" refers to the areal extent of contamination and all suitable areas in proximity to the contamination. Consequently, the Site boundary may be modified or expanded to address the needs of the remedial action.

B. Statement of Basis and Purpose

This record of decision document presents the Selected Remedy for the CSMRI Site, in Golden Colorado, which was chosen in accordance with CERCLA, as amended by SARA, and, to the extent practicable, the NCP. This decision is based on the Administrative Record file for this Site. The State of Colorado concurs with the Selected Remedy.

C. Assessment of Site

The response action selected in this Record of Decision is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment. The remedial investigation found soils with elevated radionuclide activities, primarily radium, thorium, and uranium, in the vicinity of the former buildings and some nearby areas. Elevated metals concentrations, primarily arsenic, cadmium, lead, and mercury, also were detected in the Site soils. Uranium concentrations in excess of the Maximum Contaminant Level (MCL) were found in ground-water monitoring wells along with concentrations of chlorinated solvents below the MCL.

D. Description of Selected Remedy

The selected remedy involves the excavation and removal of all of the affected material to an approved landfill. Alternative 5A assumes all of the material can be placed in a local RCRA solid-waste landfill. Alternative 5B assumes that landfill acceptance criteria may require some of the material to be transported to a more specialized landfill, a RCRA hazardous waste landfill. Both versions of this alternative would require the construction of the temporary access road to

U.S. Highway 6. The transportation route from U.S. Highway 6 would be dependent on the landfill selection.

Excavated material would be stockpiled prior to shipping to maximize the use of the trucks (eliminates waiting time for trucks). Alternative 5A would require about 760 truckloads to transport the material to the landfill. Alternative 5B would require between 680 and 720 truckloads to the solid-waste facility and the equivalent of 40 to 80 truckloads to the specialized waste facility (or shipping site).

Upon completion of the off-Site disposal, confirmed by a final Site status survey, all of the property would be available for unrestricted use. Backfill material would be required to bring the Site to a useable elevation and for storm-water control and safety.

After removal of the affected material, ground water and nearby surface water in Clear Creek would be monitored to ensure effectiveness of the removal of the source material from the Site. The surface areas will be used for beneficial purposes while the ground water monitoring is ongoing to show that source removal and natural attenuation were effective.

E. Statutory Determinations

The Selected Remedy is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable. The remedy does not satisfy the statutory preference for treatment as a principal element of the remedy for the following reasons, treatment is not cost effective and there are concerns about the effectiveness of the technology to properly manage the risks at the Site. Because this remedy will not result in hazardous substances, pollutants, or contaminants remaining on-Site above levels that allow for unlimited use and unrestricted exposure, a five-year review will not be required for this remedial action.

F. Data Certification Checklist

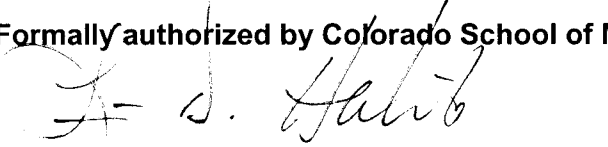
The following information is included in the Decision Summary section of this Record of Decision. Additional information can be found in the Administrative Record file for this site:

- Chemicals of concern and their respective concentrations.
- Baseline risk represented by the chemicals of concern.
- Cleanup levels established for chemicals of concern and the basis for these levels.
- How source materials constituting principal threats are addressed.
- Current and reasonably anticipated future land use assumptions and current and potential future beneficial uses of ground water used in the baseline risk assessment and ROD.
- Potential land and ground-water use that will be available at the site as a result of the Selected Remedy.
- Estimated capital, annual operation and maintenance (O&M), and total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected.

- Key factor(s) that led to selecting the remedy (i.e., describe how the Selected Remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision).

G. Authorizing Signatures

Formally authorized by Colorado School of Mines:



Linn D. Havelick
Director, Environmental Health & Safety

March 31, 2004

Date