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Introduction

Cotter Corporation has prepared this updated financial estimate for reclamation at its Cañon City Milling Facility (CCMF) located in Fremont County, adjacent to the City of Cañon City, Colorado. CCMF maintains a radioactive materials milling license, RML 369-01, issued under the auspices of the Atomic Energy Act as administered by the Colorado Department of Public Health and Environment (CDPHE) as an Agreement State. CCMF is also listed on the National Priorities List and is subject to remedial actions under the Comprehensive Environmental Remediation, Cleanup, and Liability Act via a Consent Decree and associated Remedial Action Plan (RAP), Consent Decree, Order, Judgment and Reference to Special Master, Civil Action No. 83-C-2389, *State of Colorado v. Cotter Corporation*, United States District Court, District of Colorado. CDPHE is the Lead Agency for the Consent Decree and RAP. As such, remedial activities are and will be carried out in accordance with the applicable provisions of each regulatory schema.

This document is an update to the financial assurance estimate transmitted by letter dated June 27, 2003 for the Mill Surety, and letter dated February 5, 2001 for the RAP Surety. Changes that have occurred since 2003 and will occur in calendar year 2010 are:

- Demolition of the Kiln and Kiln Feed buildings and removal of contaminated soils,
- Cleanup of the Kiln Discharge building to near-background levels,
- Demolition of the old mill maintenance shop,
- Demolition of the wood-stave tanks and wagon wheel building and removal of the associated contaminated soils,
- Identification, investigation and corrective actions for the Northwest Plume,
- Excavation of the front gate ore pad,
- Excavation of the Western Slope ore pad,
- Dewatering of deep-seated fluids in the Primary and Secondary impoundments,
- Excavation of the 1958 ore pad and removal of concrete structures, and
- Covering of the Secondary Impoundment with the first layer of final cover.

Activities that have occurred under the auspices of the RAP are:

- Excavation of additional uranium and molybdenum contaminated soils in the Old Ponds Area.

Report Organization

The attached estimate includes the total surety estimate along with detail estimates of the RML Surety and RAP Surety. The major category details are shown in attached tables and or separate attached documents. The following major categories include:

- Building demolition,
- Soil excavation,
- Borrow area preparation and excavation,
- Long-term stabilization of the tailings impoundments,
- License groundwater remediation,
- Final site reclamation, and
- Seeding.

Added to the direct project costs are factored or lump sum estimates for:

- Radiation and industrial hygiene,
- Planning and preparation,
- Contractor supervision and profit,
- State administration fee,
- State attorney cost,
- Final survey, and
- Contingency.

Many of the factored estimates are based on STP-04-003, *NRC Process to Identify Decommissioning Sites with Inadequate Funding for Remediation*. The purpose of the document is limited to determining adequacy of funding for decommissioning activities and provides factors to be applied to make that determination. Cotter has used these factors in conjunction with the guidance contained in Volume 3 of NUREG 1757.

Cost Estimate Descriptions

Direct Costs

The basis for this estimate is the document submitted to CDPHE, *Financial Assurance Estimate, Cotter Corporation Cañon City Milling Facility, RML 369-01, June 27, 2003*. The document developed in support of the 2003 estimate has been updated during this effort to reflect guidance, inflation, third party estimates when available, and industry-accepted estimation methodologies and rates.

The industry estimation source used in the 2003 estimate for rates and methodologies is the ECHOS (Environmental Cost Handling Options and Solutions, June 2003) database produced by R.S. Means. As part of this effort the equipment rental, building demolition and labor rates contained in the 2003 estimate were traced to the ECHOS database. R.S. Means stopped publishing updates to the ECHOS database in 2007. Therefore Cotter used *RS Means Heavy Construction Cost Data, 23rd Annual Edition, 2009* rate tables to estimate costs for demolition of buildings, dirt moving, shearing, miscellaneous demolition activities, and equipment Operations and Maintenance (O&M).

Labor rates used in this estimate can be found at: http://www.bls.gov/oes/2008/may/oes_0800001.htm, Eastern and Southern Colorado nonmetropolitan area, Construction and Extraction Occupations.

Third party estimates were used for:

- blasting operations,
- seeding, fertilizing and mulching,
- rip rap purchase and delivery,
- synthetic liner purchase and installation,
- nuclear density gauge transportation and disposal, and
- mill demolition.

These estimates are identified when used in the spreadsheet via “*6” footnote.

The third party estimate for mill demolition was provided by the firm that demolished the old Kerr McGee mill in New Mexico, the last uranium mill demolished in the United States. Consequently, many pages of calculations contained in the 2003 estimate were deleted based on that third party bid.

An inflation factor was used to estimate current costs for several line items based on 2003 third party estimates, and they are identified via “*5” by footnote in the attached document. The inflation factor used, 18%, is from the Consumer Price Index for all Urban (CPI-U) for 2003 to 2009.

Mobilization/Demobilization

The mobilization and demobilization amount is from *RS Means Heavy Construction Cost Data, 23rd Annual Edition, 2009* and includes a 50-mile roundtrip.

Excavate Soils

The quantity of soil to be excavated has been adjusted as a result of the study submitted to CDPHE in 2007.

Groundwater Remediation

Because the groundwater remedy has not been selected, the groundwater estimation contains a 20% of capital costs for engineering fees.

Factored/Lump Sum Estimates

Contractor supervision, overhead and profit were estimated at 11.75% of direct costs, a factor previously approved by CDPHE.

The State Administration fee, 10%, is applied to project total costs. This factor has also been previously accepted by CDPHE.

As stated previously, Cotter uses factors from STP-04-003 to account for planning and preparation (15%), final survey (7%) and contingency (25%), all applied to project total costs.