

**From:** Elaine Brummett  
**To:** internet:thardgrove@cogema-mining.com  
**Date:** 12/2/04 1:54PM  
**Subject:** PSB surety RAI

**CC:** Betty Garrett; internet:dwichers@cogema-mining.com; Jill Caverly; Robert Nelson; Stephen Cohen

SUBJECT: PATHFINDER MINES CORPORATION - REQUEST FOR ADDITIONAL  
INFORMATION CONCERNING ANNUAL SURETY UPDATE FOR THE SHIRLEY  
BASIN MILL TAILINGS SITE (TAC LU0064)

Dear Mr. Hardgrove:

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the September 15, 2004, annual surety update provided by Pathfinder Mines Corporation (PMC) for the Shirley Basin, Wyoming, tailings site. The staff found several items that need further explanation or detail before the surety evaluation can be completed, as listed below.

1. Exhibit B (and page 1) of the submittal provides a summary of unit costs provided to PMC by a contractor. Many of these items can be independently checked but the rock cost is often variable based on location, availability etc. It is noted that the Lucky Mc cost estimate for large riprap placement is \$4.50/cy but for Shirley Basin it is \$0.43/cy (page 1). To verify riprap placement cost, PMC should provide a copy of the rock bid from the contractor.
2. It was noted in an electronic message to you on October 5, 2004, that the quantities for the radon barrier material did not match the summary of costs. This is also the case for the topsoil volume. PMC should provide corrected pages for the surety estimate submittal.
3. PMC states that wells will be abandoned by filling them with bentonite to an elevation of above the current water level and then filling most of the balance of the well with soil. However, PMC's current well permit (excerpts faxed to NRC on October 22, 2004) do not state that soil is a permissible backfill material. Therefore, PMC should amend its well abandonment procedures to include the use of bentonite in the entire well, except for the top 2 or 3 feet, which will be sealed using a cement cap. PMC should also revise the cost estimate to reflect these changes.
4. The cost estimate summary shows 10 percent of construction costs for contractor profit and mobilization/demobilization. Also, 5 percent of the contractor cost is listed for construction management. Other site activities have no indicated management cost. PMC should follow cost estimating guidance in Appendix C of NUREG-1620 to document that all project management and miscellaneous costs are included in the surety estimate.

So that staff can complete the evaluation in a timely manner, please provide your response, or a schedule for your response, within 30 days. If you have any questions concerning this letter or the enclosure, please contact me at (301) 415-6606 or via e-mail to [esb@nrc.gov](mailto:esb@nrc.gov).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Elaine Brummett, Project Manager  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety  
and Safeguards  
Office of Nuclear Material Safety  
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