

November 5, 2008

Mr. Alan D. Cox, Project Manager  
Grants Reclamation Project  
Homestake Mining Company  
P.O. Box 98/Highway 605  
Grants, NM 87020

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING 2008 ANNUAL  
SURETY UPDATE FOR THE HOMESTAKE MINING COMPANY GRANTS  
RECLAMATION PROJECT, SUA-1471 (TAC LU0134)

Dear Mr. Cox:

By letter dated March 28, 2008 (ML080990194), Homestake Mining Company (HMC) submitted its annual financial surety update for the Grants Reclamation Project (Grants), as required by 10 CFR Part 40, Appendix A, Criteria 9 and 10, and License Condition (LC) 28 of HMC's Source Materials License SUA-1471. The HMC proposed new surety for Grants is \$47,763,197 and is comprised of total project decommissioning and reclamation costs of \$40,850,422, a contingency fee of \$6,127,563 estimated at 15 percent of the aforementioned total project costs, and an estimated long-term surveillance fee of \$785,211.

The U.S. Nuclear Regulatory Commission staff has completed its review of the proposed new surety for Grants using the guidance provided in NUREG-1620, Rev. 1, "Standard Review Plan for the Review of a Reclamation Plan for Mill Tailings Sites Under Title II of the Uranium Mill Tailings Radiation Control Act of 1978," June 2003. In order to complete our review, the staff is requires additional information as described in the enclosure.

If you have any questions regarding this letter or the enclosure, please contact John Buckley, at (301) 415-6607, or by e-mail at [john.buckley@nrc.gov](mailto:john.buckley@nrc.gov).

Sincerely,

**/RA/**

John T. Buckley, Senior Project Manager  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Programs

Docket No.: 40-8903  
License No.: SUA-1471

Enclosure: Request for Additional Information

cc: Homestake Mailing List

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Grants Reclamation Project  
Homestake Mining Company  
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**Request For Additional Information (RAI)  
2008 Annual Financial Surety Update**

RAI 1: Provide a Description of the Proposed Decommissioning Activities and ensure the Worksheets Correspond to Current Project Conditions

Basis

The Decommissioning Cost Estimate (DCE) does not include a description of the proposed decommissioning plan beyond the summary schedule Gantt chart and accompanying notes. As a consequence, the reasonableness of overall costs to accomplish specific decommissioning activities outlined in the project schedule is difficult to assess. A narrative text description of the process, key milestones, and critical path analysis should be supplied to identify not only the specific activities involved but also how these activities impact adherence to schedule and budget constraints.

The Scenario F Schedule states, "The construction of the No. 3 Evaporation Pond is scheduled in 2007." Evaporation Pond 3 was approved for construction and operation on August 7, 2008, however, the necessary New Mexico water discharge permits have not yet been approved and are expected to take approximately one more year. Therefore, an estimate for the construction costs for Evaporation Pond 3 should be added to the cost estimate for either calendar year 2009 or 2010, depending on when construction is expected to occur. In addition, the cost estimate should be amended to remove costs shown in Worksheet 4 for parts and supplies for operation of Evaporation Pond 3 (711020 and 712010) during 2009.

The spreadsheets should use consistent terminology to describe activities and unit costs. In particular:

- Does the line item for "Groundwater Management" in the spreadsheet "Life of Project Roll-Up 1" correspond to the section "Aquifer Remediation" in the spreadsheet "Gantt Schedule"? If not, please describe how the costs are related to the activities in the Gantt chart.
- Does the line item for "Irrigation System Management" in the spreadsheet "Life of Project Roll-Up 1" correspond to the item "Crop Irrigation Program" in the spreadsheet "Gantt Schedule"? If not, please describe how the costs are related to activities in the Gantt chart.

RAI 2: Submit Additional Detail to Support the Cost Estimate (Appendix C, NUREG-1620)

Basis

Worksheets (1), (2), and (3) all present costs at too high a level of aggregation to allow an evaluation of the adequacy of the overall cost estimate. The following comments, unless otherwise noted, are addressed to worksheet (4) "Costs per year 2" and worksheet (5) "Unit Costs and Quantities." Additional detail should be provided for the following:

Enclosure

- Under Tailings Facility Closure/Reclamation (XXXXXX-810-23-3600), Outside Services (714090) no details are provided for determination of the unit cost estimate (\$25,000) listed as “Current Reclamation Repairs” in worksheets (4) and (5) and showing 30 units, or \$750,000 in the year 2015. No activity described in the Project Schedule for 2015 clearly corresponds to this expenditure.
- Under Water Treatment (XXXXXX-810-23-5100), Fuel (717050), the unit costs for diesel and gas listed in worksheets (5) and (6) “Grants project unit costs,” and consequently total costs in worksheet (4), appear low. Unless the unit costs are based on long-term supply contracts, they should be increased and yearly escalation should be considered.
- Also under Water Treatment (XXXXXX-810-23-5100), Utilities (610020), no references or rationale are provided for estimates of quantities of total kilowatts required for electrical and gas meters. Although worksheet (6) provides unit costs in \$/KWH and \$/CCF for electricity and natural gas, no explanations are provided for those costs. These costs also are not estimated to escalate during the period 2009 to 2017.
- Also under Water Treatment (XXXXXX-810-23-5100), Water Analysis (711030), the analytical unit costs supplied in worksheet (6) could not be evaluated since no detail is provided identifying the analysis methods required under the A through J lists.
- Also under Water Treatment (XXXXXX-810-23-5100), Monitoring/Regulatory (XXXXXX-810-23-5200), and General and Administrative (XXXXXX-811-23-5500), salaries for consulting services (711040), salaries general (600000), and salaries groundwater (600001) do not provide adequate detail to evaluate staff funding. NUREG-1620 requires that all costs be estimated on the basis of a third party independent contractor, meaning that total overhead and profit must be included in the unit costs. Consulting service line items should provide some rationale for the cost estimate to include expected role and term of service. For example, In Situ Biotesting and Remediation includes a hydrologist/engineer (quantity of 1 in 2009 at rate of \$15,000) and bioengineer (quantity of 1 in 2009 at rate of \$50,000). It is not clear if the hydrologist/engineer is a full or part time position, nor is it clear that the rate is fully loaded with overhead and profit. Without some description of role or length of commitment, the feasibility of these costs cannot be evaluated for reasonableness. Similarly, the listed fringe rate under General and Administrative of \$252,000 per year (\$28,000 for each of 9 positions listed in worksheet (5), page 23 of 24) does not appear to include adequate overhead and profit where the total salaries for the 9 positions exceed \$600,000 per year.

In order to facilitate evaluation of the estimated decommissioning costs, please revise the cost estimate to include the information listed above and increase the level of detail, especially for lump sum items such as consulting services. The revised cost estimate should be sufficiently detailed to facilitate evaluation by the Nuclear Regulatory Commission (NRC) that the licensee has provided a reasonable cost estimate for all major decommissioning activities. Using the NUREG-1620 recommended outline format could help ensure that adequate details are provided in the DCE.

RAI 3: Revise or Justify Estimates for Unit Costs and other Key Assumptions (Appendix C, NUREG-1620)

Basis

The DCE does not substantiate the assumptions regarding unit costs such as labor rates, transportation, packaging, disposal costs, parts and supplies, “outside services,” and other unit costs. Appendix C, NUREG-1620 requires that assumptions and references used in the cost estimate be identified and included. Unusual items should be supported by relevant information, and comparisons should be based on comparable decommissioning efforts. The DCE should also include a clear and reasonable basis for costs and listed assumptions. Key items that need to be revised or justified include:

- References and rationale are not provided for equipment expenses of approximately \$24,000 per year for Water Treatment (XXXXXX-810-23-5100), item 717060 in worksheet (4). Worksheet (5) “Unit Costs and Quantities” does not specify whether the equipment expenses it describes for item 717060 are per month or per year. If the unit costs are intended to be per year, the cost rates appear underestimated and an explanation for the costs should be provided. For example, heavy equipment such as the Large Forklift is estimated at a unit rate of \$2,000 with a quantity of one per year. Rental rates for heavy equipment such as a large forklift may reasonably be estimated at \$2,000 per month, in which case the listed quantity of just one month per year would need to be verified. Note that NUREG-1620 specifically indicates that equipment owned by the licensee should not be considered in the estimate to reduce cost calculations.
- Driller unit costs per well for installation, development, and abandonment of wells do not appear to adequately account for initial mobilization costs of the drill rig. While the unit costs appear reasonable for large scale deployments (for example abandonment of 180 alluvial wells in 2016), the fixed costs for mobilization of the drill rig for the numerous small tasks would be expected to exceed the single unit cost for well installation, development or abandonment.
- Under monitoring costs, several items need additional explanation and justification, including parts and supplies, outside services, surveying, and the analytes and tests to be conducted under the water analysis, vegetation analysis, and soil analysis.

RAI 4: Provide Estimates for Missing Costs, Provide Details on How Those Costs Are Included, or Justify Why They Are Not Included (Appendix C, NUREG-1620)

Basis:

The DCE does not appear to include costs for activities, equipment, labor, consumables, and other goods and services expected to be incurred in the decommissioning. These missing costs should be added. Costs that appear to be missing costs include the following:

- Disposal of wastes such as building materials and equipment due to decommissioning and demolition of the Reverse Osmosis (RO) plant and miscellaneous shop facilities does not appear to be included in the detailed cost estimate. NUREG-1620 specifically does not allow for salvage/potential re-use of materials in the cost estimate. Disposal

costs should include testing and/or decontamination of building materials for disposal purposes wherever the facilities may be contaminated from long term placement on the site (for example concrete building pads in contact with site soils).

If these costs are already included in the cost estimate, the DCE should provide more details about these costs and their justification so these costs can be identified and their reasonableness evaluated. If these costs are not appropriate for this site, the DCE should describe the basis for concluding that these costs are not appropriate. In addition to estimates for these costs, the DCE should include estimates of associated amounts and unit costs and a discussion of how the amounts and unit costs were determined.

RAI 5: Correct the CPI Factor Listed in Worksheet (8) "NRC Long Term Maintenance and Surveillance Fee"

Basis:

The NRC long term maintenance and surveillance fee of \$250,000 in 1978 dollars was escalated using the most current (February 2008) CPI Index for the current year (211.693) and dividing that index by the CPI Index for November 1978 (67.4). Using the CPI Index numbers provided in the submission, the correct CPI Factor is 3.140846 rather than 2.140846, as provided in worksheet (8). The CPI Factor should be corrected to 3.140846. However, the fee in current year dollars of \$785,211 is effectively corrected by multiplying the fee by the incorrect factor and adding in the fee a second time. Although the calculated value is correct the listing for the CPI factor is incorrect.

RAI 6: Clarify the CPI Factor Used in Worksheet (9) "Grants Project Physical Reclamation Costs 2008 Dollars"

Basis:

The physical reclamation costs listed in worksheet (9) have been escalated from January 2003 values to 2008 values. The 2008 CPI value (211.693) divided by the January 2003 value (181.7) gives a CPI escalation factor of 1.165068795. Worksheet (9) lists a factor of 0.165068795 rather than 1.165068795. However, the reclamation cost in current year dollars is effectively corrected by multiplying the 2003 values by the incorrect factor and adding in the 2003 value a second time. Although the calculated value is correct the listing for the CPI factor is incorrect.

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