December 23, 2009

Mr. Oscar Paulson
Rio Tinto Energy America
Kennecott Uranium Company
Post Office Box 1500
Rawlins, WY 82301-1500

SUBJECT: LICENSE AMENDMENT NO. 28, THE KENNECOTT URANIUM COMPANY'S SURETY SUBMITTAL/FIVE (5) YEAR REBASELINE REPORT, LICENSE CONDITION 9.7 (TAC J00602)

Dear Mr. Paulson:

By letter dated July 28, 2009, Kennecott Uranium Company (Kennecott) submitted the 2009 surety rebaselining report for the Sweetwater Uranium Facility for review by the U.S. Nuclear Regulatory Commission (NRC) staff. The staff determined that additional information was needed to complete its review of the surety submittal and a request for this information was provided to Kennecott by email dated October 16, 2009. In response to the staff's information request, Kennecott submitted a revised 2009 surety rebaselining report for the Sweetwater facility in a letter dated November 3, 2009.

The staff has completed its review of the revised Sweetwater surety report and determined that the proposed new surety, in the amount of $10,113,000, adequately demonstrates compliance with the requirements of 10 CFR 40, Appendix A, Criteria 9 and 10. The revised surety reflects the current estimated costs to reclaim, remediate, and decommission the Sweetwater facility, including costs for contingency and long-term surveillance. The staff's review is documented in the enclosed Technical Evaluation Report (Enclosure 1). License Condition 9.7 of Source Materials License SUA-1350 has been revised to reflect the new surety amount of $10,113,000. The modifications to Sweetwater's license are provided as Amendment No. 28 to Source Materials License SUA-1350 (Enclosure 2).

An environmental review was not performed since this action is categorically excluded under 10 CFR 51.22(c)(10)(i) as a change in a surety. If you have any questions concerning this letter or the enclosures, please contact, Mr. James Webb of my staff at (301) 415-6252 or via email to James.Webb@nrc.gov.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.

Sincerely,

/RA/

Keith I. McConnell, Deputy Director
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

Docket No.: 040-08584
License No.: SUA-1350

Enclosures:
1. Technical Evaluation Report
2. Kennecott License Amendment No. 28

cc: WDEQ

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(CLOSES TAC 600602)

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TECHNICAL EVALUATION REPORT FOR
KENNECOTT URANIUM COMPANY'S PROPOSED SURETY AND REBASELINE REPORT
FOR THE SWEETWATER URANIUM FACILITY

Docket No.: 040-08584 **License No**.: SUA-1350

Date: November 19, 2009

Facility: Kennecott Uranium Company Sweetwater Uranium Facility

Technical Reviewer(s): James Webb, Thomas R. Lancaster

Project Manager: James Webb

SUMMARY AND CONCLUSIONS:

By letter dated July 28, 2009 (ML092150090), Rio Tinto Energy America, Kennecott Uranium Company (Kennecott), submitted the annual surety and five (5) year rebaseline estimate for its Sweetwater Uranium Facility to the U.S. Nuclear Regulatory Commission (NRC). NRC staff identified several unit cost issues and issues related to the final disposition of the contaminated materials in a Request for Additional Information (RAI) (ML092930886). Kennecott provided a response to the RAI and a revised surety for the Sweetwater facility in a letter dated November 3, 2009 (ML093170316). The staff reviewed the above documents and has determined that the decommissioning and reclamation activities are adequately described and reasonable cost estimates for each activity were provided. Appropriate cost estimates were also provided for contingencies and long-term maintenance and surveillance. The staff has determined that the Kennecott rebaselining report adequately demonstrates compliance with the requirements of 10 CFR Part 40, Appendix A, Criteria 9 and Criteria 10.

BACKGROUND:

The Kennecott mill site is located in south-central Wyoming, in Sweetwater County, approximately 42 miles northwest of Rawlins, Wyoming. The mill was constructed in 1980 and processed ore from an adjacent open pit mine from 1981 until April 1983. The facility has been in standby status since 1983, and the original buildings and equipment are maintained. There is one tailings impoundment that has ponds on the top that are used in the pump and evaporate program to remediate groundwater contamination due to past leakage from the impoundment. The NRC bonded area of the site is approximately 1633 acres and includes the site of the proposed tailings impoundment and diversion channels.

In 2004, Kennecott's surety update included a rebaseline cost estimate. From 2005 through 2008, Kennecott surety updates were based on inflation as determined from the Consumer Price Index. The most recently approved surety is for 2008, in the amount of $8,944,000 which is covered by a Letter of Credit with the NRC being named as the beneficiary. For 2009, Kennecott is proposing a rebaseline cost estimate in the amount of $10,113,000.

TECHNICAL EVALUATION:

The NRC staff evaluated the surety update and rebaseline report against 10 CFR 40, Appendix A, Criterion 9 and Criterion 10, and the guidance in NUREG-1620, Appendix C. Criteria 9 and 10 of 10 CFR 40, Appendix A, require the licensee to supply sufficient information to the NRC to verify that the amount of coverage provided by the financial assurance will permit the completion of all decontamination and reclamation of the site, including the costs for contingencies and long-term surveillance. Additionally, the cost estimates must be calculated on the basis of completion of all activities by a third party and must be updated annually.

The staff noted that the submittal did meet the license requirement for a surety update to be submitted at least 3 months prior to the October 30 anniversary date specified in Kennecott's license. The costs are estimated based upon third party costs to reclaim, remediate, and decommission facilities and lands affected by past operations. Acceptable publications or current costs were used for unit costs. All unit costs, labor and equipment overhead, as well as contractor profit, were included. Unit costs taken from external sources such as the RS Means Cost Data or Wyoming Department of Environmental Quality Guideline No. 12, "Standardized Reclamation Performance Bond Format and Cost Calculation Methods" were selected such that overhead and contractor profit were included. From December 2005 to November 2007, contaminated soils from beneath the catchment basin were removed and placed in the tailings impoundment. Unit costs from this effort were used where possible, in current dollars, because they provide the most recent and local estimate of applicable construction costs. Also, the licensee added 15 percent for contingencies and long-term surveillance fees as required. A summary of the cost estimates are provided in Appendix A of the Kennecott Five Year Rebaseline Report. The final cost was rounded to the nearest thousand dollars for the purpose of the final rebaseline figure.

(1) Facility Decommissioning

The mill facility, including major equipment, structures, and concrete support, will be dismantled and disposed of in the tailings impoundment. The listing of major equipment, structures, and concrete structures that will be demolished, including quantity, volume and unit cost, are identified in Appendix A of the Kennecott Five Year Rebaseline Report, under "Mill Area Decommissioning." Funds have been set aside for revegetation of this area. All equipment, structures, and concrete from the mill area decommissioning effort, 11e.(2) byproduct material, will be placed within the tailings impoundment. The total cost for facility decommissioning will be $1,672,948.

(2) Cleanup of Contaminated Soils

The rebaseline report identifies the mill area and the tailings area for cleanup of contaminated soils. During the excavation of the catchment basin in 2007, contamination was discovered along the west wall of the excavation. The west wall of the excavation leads to the soils under the mill structure and supporting equipment (i.e., clarifier and raffinate tanks). The extent of the contamination under the mill, tank slabs, and solvent extraction building are not known at this time. The assumption for the depth and lateral movement of the contamination under the mill area was based on the experience gained from the catchment basin excavation.

The extent of the windblown tailings around the existing tailings impoundment was estimated in the 1997 pre-scoping survey. A total of 88 acres was identified as potentially contaminated. The reclamation cost estimate includes the cost for removal of the first 6 inches of soil over the entire 88 acres and the replacement of 12 inches of topsoil.

A total of 140,000 cubic yards and 71,000 cubic yards have been identified for cost estimates for these two areas, respectively. A summary of the cost estimate for these areas is provided in Appendix A of the Kennecott Five Year Rebaseline Report, under "Cleanup of Contaminated Soils." The total cost for cleanup of the contaminated soils will be $2,510,009.

(3) Groundwater Remediation

Cost estimates for groundwater remediation and well decommissioning assume that seven pumpback wells and 14 monitoring wells (two monitoring wells are also pumpback wells) will continue to operate and be sampled quarterly for hydrocarbons and three metals per License Condition 11.3. A study by Telesto Solutions in 2009 concluded that the concentrations of several metals and radionuclides in monitoring wells were not decreasing. A summary of the cost estimate for groundwater remediation and well decommissioning is provided in Appendix A of the Kennecott Five Year Rebaseline Report. The total cost for groundwater remediation and well decommissioning will be $796,857.

4) Existing Impoundment Reclamation

Future activities for the existing impoundment reclamation include the completion of dewatering, covering the tailings surface with embankment soil to a level close to the natural pre-construction ground surface, placing soil and revegetation, and monitoring for radon emanation and settlement. A summary of the cost estimate for the existing impoundment reclamation is provided in Appendix A of the Kennecott Five Year Rebaseline Report. The total cost for the existing impoundment reclamation is $2,083,527.

5) Radiological Surveys and Monitoring

Major cost areas for radiological surveys and monitoring include soil sampling, release of decommissioning equipment (scanning and free release), verification gamma surveys, environmental monitoring, and personnel monitoring. The total cost for radiological surveys and monitoring will be $579,140.

6) Project Management and Mobilization/Demobilization

Mobilization and demobilization of equipment were assumed to be 3.5 percent of the subtotal of reclamation costs. Project management was assumed to be 3.0 percent of the subtotal of reclamation costs and was based on the Wyoming Department of Environmental Quality Guideline No. 12. The total cost for project management and mobilization/demobilization is $496,761.

7) Contingency and Long-Term Surveillance Fee

A contingency fee of 15 percent of the subtotal was included in the overall total cost of the decommissioning and reclamation project. The contingency fee is $1,146,372. The long-term maintenance and surveillance fee was determined from the Bureau of Labor Statistics Consumer Price Index (CPI). The long term maintenance and surveillance fee is $827,044. The total contingency and long-term maintenance and surveillance fee will be $1,973,416.

Conclusion:

The NRC staff determined that the Kennecott surety cost estimates for the Sweetwater Uranium Facility adequately reflects the decommissioning activities, unit costs, and the required contingency and long-term surveillance fees. Also, the staff has determined that the Kennecott rebaseline report adequately demonstrates compliance with the requirements of 10 CFR Part 40, Appendix A, Criteria 9 and Criteria 10.

Proposed License Condition Change:

Revise License Condition 9.7 to change the required surety amount to read $10,113,000.00.