

Rio Algom Mining LLC

July 20, 2021

ATTN: Mr. Thomas Lancaster
United States Nuclear Regulatory Commission
Mail Stop T5-A10
Washington, DC 20555-0001

**Re: Rio Algom Mining LLC – Ambrosia Lake West Mill
License SUA-1473, Docket No. 40-8905
Request for Amendment to SUA-1473 Incorporating Radiation Protection and
Environmental Monitoring Program Manual**

Dear Mr. Lancaster,

Rio Algom Mining LLC (RAML) respectfully requests to amend its radioactive materials license, SUA-1473, Amendment 62 (Agencywide Documents Access and Management System Accession No. [ML20218A586](#)) to incorporate 1) the enclosed updated Radiation Protection and Environmental Monitoring (RPEM) program manual (Attachment 1) and 2) performance-based licensing.

RAML's proposed changes consist of modifications to license conditions 10, 11, 14, 16, 17, 19, 25, and 26. Proposed changes are described and justified in [Table 1](#). A proposed red-line version of the license is provided for NRC staff consideration in Attachment 2. RAML has not included a clean version of the proposed changes; please let me know if you would prefer RAML produce a clean version of the proposed amendment for NRC staff use.

If you have any questions or need additional information, please do not hesitate to call me at (916) 947-7637.

Sincerely,



Sandra L. Ross, P.G.
Site Manager
Rio Algom Mining, LLC

cc: Document Control

Enclosures as stated

Table 1. Proposed changes to SUA-1473 text and organization

Amendment 62 LC	Amendment 62 Text	Proposed LC	Proposed Text Change	Justification
1	Rio Algom Mining LLC	1	<i>No change.</i>	
2	P.O. Box 218 Grants, New Mexico 87020	2	<i>No change.</i>	
3	License Number SUA-1473, Amendment 62	3	License Number SUA-1473, Amendment ##	Update amendment number
4	Expiration Date Until terminated (Applicable Amendment: 29)	4	<i>No change.</i>	
5	Docket No. 40-8905 Reference No.	5	<i>No change.</i>	
6	Byproduct Source, and/or Special Nuclear Material: Uranium	6	<i>No change.</i>	
7	Chemical and/or Physical Form: Any	7	<i>No change.</i>	
8	Maximum amount that Licensee May Possess at Any One Time Under This License Unlimited	8	<i>No change.</i>	
9	Authorized Place of Use: The Licensee's Ambrosia Lake facility located in McKinley County, New Mexico.	9	<i>No change.</i>	
10	This licensee shall maintain a health physics and environmental monitoring program as described within submittals dated August 30, 1990, January 31, 1991, and January 13, 1998. The programs described in these submittals will be reviewed in a manner consistent with the requirements of License Condition 14. Any changes to the mill circuit as described in Section 6.2 of the August 30, 1990, submittal or as authorized by subsequent license conditions shall require approval by the NRC in the form of a license amendment.	10	This licensee shall maintain a radiation protection and environmental monitoring (RPEM) program as described within the submittal dated 20 July 2021.	Update LC 10 to include reference the revised Radiation Protection and Environmental Monitoring (RPEM) program and provide a framework for performance-based licensing. Because the mill has been decommissioned, remove references to the mill circuit to reflect current site conditions.
11	The licensee shall designate a Radiation Safety Officer (RSO) who will be responsible for the establishment and maintenance of a facility radiation protection program including personnel and environmental monitoring programs. The RSO shall possess minimum qualifications as specified in Section 2.4.1 of Regulatory Guide 8.31.	10E	The licensee shall designate a Radiation Safety Officer (RSO) who will be responsible for the establishment and maintenance of a facility radiation protection program including personnel and environmental monitoring programs.	Proposed LC 10E incorporates this requirement from Amendment 62 LC 11. RSO qualifications are specified in the RPEM program manual, which is incorporated into the license by reference in proposed LC 10.
12	The licensee is authorized to possess byproduct material in the form of uranium process tailings and other byproduct wastes generated by the licensee's uranium processing operations. Mill tailings, other than small samples for purposes such as research or analysis, shall not be transferred from the restricted area without prior approval of the NRC in the form of a license amendment.	12	<i>No change.</i>	
13	[DELETED by Amendment 62]	13	<i>No change.</i>	
14	Written standard operating procedures (SOPs) shall be established for all activities related to the closure of the facility involving radioactive materials that are handled, disposed or stored. These procedures shall specify radiation safety practices to be followed...	10B	Written SOPs shall be established for all activities related to the closure of the facility involving radioactive materials that are handled, disposed or stored and all surveillance activities including environmental monitoring and radiation monitoring instrument calibration. SOPs shall specify radiation safety practices to be followed. Occupational exposure calculations shall be performed in accordance with 10 CFR 19.13.b and 10 CFR Part 20, Subpart C and documented in accordance with 10 CFR 20.2106.	Proposed LC10B consolidates procedure requirements from Amendment 62 LCs 14, 16, and 17
14	... An up-to-date copy of each written procedure shall be kept in the area to which it applies for employee reference...	10C	An up-to-date copy of each SOP shall be kept in the area to which it applies for reference.	Proposed LC 10C incorporates this requirement from Amendment 62 LC 14. The word "employee" is removed editorially.
14	...All SOPs shall be reviewed annually to update procedures and be approved by the RSO to ensure that proper radiation protection principles are being applied.	10A	The RPEM program manual and all standard operating procedures (SOPs) shall be reviewed by the RSO annually to ensure that proper and current radiation protection principles are being applied. Revisions to SOPs, if needed, shall occur annually.	Proposed LC 10A consolidates procedure review requirements from Amendment 62 LCs 14 and 16. RAML maintains discretion to update its procedures through an internal process annually.

Amendment 62 LC	Amendment 62 Text	Proposed LC	Proposed Text	Justification
15	<p>The licensee shall be required to use a Radiation Work Permit (RWP) for all work where the potential for significant exposure to licensed radioactive material exists and for which no SOPs exist. All RWPs shall be approved by the RSO, or a designee qualified by way of specialized radiation protection training. The RWP shall describe the following:</p> <p>A. The scope of the work to be performed.</p> <p>B. Any precautions necessary to reduce exposures to radioactive materials.</p> <p>C. Supplemental monitoring required prior to, during, and after the completion of the work.</p>	15	<i>No change.</i>	
16	<p>The licensee shall establish written procedures for all surveillance activities including in-plant and environmental monitoring bioassay analysis and radiation monitoring instrument calibration. These procedures shall be reviewed and approved by the RSO annually to ensure that proper and current radiation protection principles are being applied.</p>	10B	<p>Written SOPs shall be established for all activities related to the closure of the facility involving radioactive materials that are handled, disposed or stored and all surveillance activities including environmental monitoring and radiation monitoring instrument calibration. SOPs shall specify radiation safety practices to be followed. Occupational exposure calculations shall be performed in accordance with 10 CFR 19.13.b and 10 CFR Part 20, Subpart C and documented in accordance with 10 CFR 20.2106.</p>	<p>Proposed LC10B consolidates procedure requirements from Amendment 62 LCs 14, 16, and 17</p>
17	<p>Occupational exposure calculations shall be performed in accordance with 10 CFR 19.13.b and 10 CFR Part 20, Subpart C and documented in accordance with 10 CFR 20.2106.</p>	10B	<p>Written SOPs shall be established for all activities related to the closure of the facility involving radioactive materials that are handled, disposed or stored and all surveillance activities including environmental monitoring and radiation monitoring instrument calibration. SOPs shall specify radiation safety practices to be followed. Occupational exposure calculations shall be performed in accordance with 10 CFR 19.13.b and 10 CFR Part 20, Subpart C and documented in accordance with 10 CFR 20.2106.</p>	<p>Proposed LC10B consolidates procedure requirements from Amendment 62 LCs 14, 16, and 17</p>
18	[DELETED by Amendment 4]	18	<i>No change.</i>	
19	<p>The results of all effluent and environmental monitoring required by this license shall be reported semiannually and in accordance with 10 CFR 40.65, with copies of the report sent to the NRC. Monitoring data shall be reported in the format shown in Regulatory Guide 4.14, Revision 1, April 1980, Table 3.</p>	19	<p>The results of all effluent and environmental monitoring required by this license shall be reported semiannually and in accordance with 10 CFR 40.65, with copies of the report sent to the NRC.</p>	<p>Remove second sentence including reference to Regulatory Guide 4.14. The reporting format in 10 CFR 40.65 differs from the reporting format in Regulatory Guide 4.14.</p>
20	<p>The results of sample analyses, monitoring surveys, equipment calibration, reports of audits and inspections, meetings, and training sessions required by applicable regulations or this license and any subsequent reviews, investigations, and corrective actions shall be documented. Unless otherwise specified in this license or in NRC regulations, all documentation shall be maintained for a period of five (5) years.</p>	20	<i>No change.</i>	
21	[DELETED by Amendment 52]	21	<i>No change.</i>	

Amendment 62 LC	Amendment 62 Text	Proposed LC	Proposed Text	Justification
22	The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR 40, Appendix A, Criteria 9 and 10, adequate to cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination of the mill and mill site, reclamation of any tailings or waste disposal areas, ground water restoration as warranted, and the long-term surveillance fee. Annual updates to the surety amount, required by 10 CFR 40, Appendix A, Criteria 9 and 10, shall be submitted to the NRC by June 30 of each year. Along with each proposed revision or annual update, the licensee shall submit supporting documentation showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15 percent contingency fee, changes in engineering plans, activities performed, and any other conditions affecting estimated costs for site closure. The basis for the cost estimate is the NRC-approved reclamation / decommissioning plan as supplemented by NRC-approved revisions to the plan. Annual updates should follow Appendix C to NUREG-1620, Rev. I, "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." The licensee's currently approved surety, Irrevocable Letter of Credit issued by the Imperial Bank of Commerce, New York Branch, in favor of the NRC, shall be continuously maintained in an amount no less than \$16,000,000 for the purpose of complying with 10 CFR 40, Appendix A, Criteria 9 and 10, until a replacement is authorized by the NRC.	22	<i>No change.</i>	
23	Prior to termination of this license, the licensee shall provide for transfer of title to byproduct material and land, including any interests therein (other than land owned by the United States or the State of New Mexico), which is used for the disposal of such byproduct material or is essential to ensure the long-term stability of such disposal site to the United States or the State of New Mexico, at the State's option.	23	<i>No change.</i>	
24	[DELETED by Amendment 60]	24	<i>No change.</i>	
25	Release of equipment or packages from the restricted areas for unrestricted release or disposal shall be in accordance with the "Guidelines for Decontamination for Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct or Source Materials," dated August 1987.	10D	Release of equipment or packages from the restricted area shall be in accordance with the "Surface and Volume Radioactivity Standards for Clearance" (ANSI/HPS N13.12-2013).	Propose adoption of the ANSI/HPS N13.12 dose-based surface release criteria as defined in the RPEM program manual.
26	Before engaging in any activity other than reclamation and which is not authorized by the license, the licensee shall prepare and record an environmental evaluation of such activity. The licensee shall provide a written evaluation of the activity and obtain prior approval of the NRC in the form of a license amendment.	10F	<p>Changes not previously assessed by the NRC or authorized by this license, as described in LC 10F(1) through LC 10F(3), will be evaluated by a Safety and Environmental Review Panel (SERP) against criteria defined in the RPEM program manual. If, based on its evaluation, the SERP concludes that the proposed change(s) meet the criteria in the RPEM program manual and do not negatively impact the performance of licensed activities previously reviewed and approved by the NRC by means of a Safety Evaluation Report, Technical Evaluation Report and Environmental Impact Statement or Environmental Assessment, the licensee may implement the proposed change(s) without a license amendment.</p> <p>An annual report on SERP-related activities, if any, for the previous calendar year will be submitted to the NRC by May 31 and will include: (1) a description of any changes approved by a SERP, (2) a description of the implementation of any changes approved by a SERP, and (3) a summary of the applicable safety and environmental evaluation(s).</p> <p>Via a SERP process, the licensee is authorized to implement:</p> <ul style="list-style-type: none"> (1) Changes to the RPEM program, (2) Changes to facility operations or physical structures in support decommissioning, and (3) Studies, tests, or experiments in support of site decommissioning. 	Propose framework for performance-based licensing.
27-43	<i>No changes proposed to LCs 27 through 43</i>	27-43		