

Rio Algom Mining LLC

June 30, 2023

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
2023 Financial Assurance Update**

Dear Mr. Lancaster,

Rio Algom Mining LLC (RAML) respectfully submits this *2023 Financial Assurance Update* as required by condition 22 of United States Nuclear Regulatory Commission (NRC) license SUA-1473. RAML's *2023 Financial Assurance Update* is consistent with [10 CFR 40, Appendix A](#), Criteria 9 and 10 and [NUREG-1620](#), Appendix C. Changes have not been made to the cost estimate assumptions found in RAML's *2021 Financial Assurance Update* [Agencywide Documents Access and Management System (ADAMS) Accession Nos. [ML21181A169](#) and [ML21180A446](#)], which describes a conceptual plan to complete decommissioning at RAML's Ambrosia Lake West mill and was approved by NRC (ADAMS Accession No. [ML22024A444](#)). Instead, RAML has adjusted all costs in the *2021 Financial Assurance Update* for inflation. After adjustment, the remaining cost to complete mill decommissioning is \$22,174,992, as described in the tables in Attachment 1:

Table 1. Summary of financial assurance elements consistent with [NUREG-1620](#), Appendix C

Table 2. Estimates for (VIII) Adjustments

Table 3. Summary of adjustments consistent with [10 CFR 40, Appendix A](#), Criterion 9(f)

The *2023 Financial Assurance Update* exceeds the amount of \$21,000,000 in SUA-1473, Amendment 64, condition 22 (ADAMS Accession Nos. [ML23068A461](#) and [ML23073A403](#)) by \$1,174,992. RAML is working with the issuing bank to revise its Irrevocable Letter of Credit and will follow up with a request to amend SUA-1473 condition 22 to update the financial assurance amount when the revised financial instrument is issued.

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
Attachment 1 2023 Financial Assurance Update Tables

AMBROSIA LAKE WEST MILL LICENSE SUA-1473
ATTACHMENT 1 - 2023 FINANCIAL ASSURANCE UPDATE TABLES

Table 1. Summary of financial assurance elements consistent with NUREG 1620 Appendix C

NUREG 1620 Appendix C Section	Report Section	Cost
(I) Facility Decommissioning	3(I)	\$ 8,514,309
(II) Ground-Water Cleanup and Well Decommissioning	3(II)	\$ 1,937,741
(III) Radiological Survey and Monitoring	3(III)	\$ 1,442,553
(IV) Project Manager Costs and Miscellaneous	3(IV)	\$ 4,383,950
(V) Labor and Equipment Overhead, Contractor Profit	3(V)	\$ -
(VI) Long-term Surveillance Fee	3(VI)	\$ 1,015,633
(VII) Contingency	3(VII)	\$ 2,892,390
(VIII) Adjustments to Surety Amounts	3(VIII)	\$ 1,988,416
	TOTAL	\$ 22,174,992

Orange text indicates value changed from 2021 Financial Assurance Update submittal

Table 2. Estimates for (VIII) Adjustments

(VIII) Adjustments	Estimate Date	Estimate Date CPI	Jan 2023 CPI	Inflation	Original Amount	Inflated Amount	Notes	Adjustment Amount
(A) Adjustments for inflation								\$1,988,416
I (A) Salvageable building and equipment decontamination.					\$ -	\$ -		\$ -
I (B) Non-salvageable building and equipment demolition and disposal:					\$ -	\$ -		\$ -
I (C) Cleanup of contaminated areas	May 2021	269.195	299.170	1.11	\$ 8,514,309	\$ 9,462,382	Inflation adjustment May 2021 - January 2023	\$ 948,073
II (A) Method of Cleanup					\$ -	\$ -		\$ -
II (B) Volume of aquifer to be restored, area and thickness of aquifer, number of required pumping cycles, and cycling time					\$ -	\$ -		\$ -
II (C) Verification sample analysis	May 2021	269.195	299.170	1.11	\$ 1,754,049	\$ 1,949,363	Inflation adjustment May 2021 - January 2023	\$ 195,314
II (D) Well decommissioning	May 2021	269.195	299.170	1.11	\$ 183,692	\$ 204,146	Inflation adjustment May 2021 - January 2023	\$ 20,454
III (A) Soil samples for radium (and uranium and thorium, if needed) (e.g., number, cost to collect, and analyze)	May 2021	269.195	299.170	1.11	\$ 433,356	\$ 481,610	Inflation adjustment May 2021 - January 2023	\$ 48,254
III (B) Decommissioning equipment and building smear samples and alpha surface surveys	May 2021	269.195	299.170	1.11	\$ 36,564	\$ 40,636	Inflation adjustment May 2021 - January 2023	\$ 4,071
III (C) Gamma survey frequency, location, and techniques (e.g., type, number, unit cost)					\$ -	\$ -		\$ -
III (D) Environmental monitoring	May 2021	269.195	299.170	1.11	\$ 121,088	\$ 134,571	Inflation adjustment May 2021 - January 2023	\$ 13,483
III (E) Personnel monitoring	May 2021	269.195	299.170	1.11	\$ 851,545	\$ 946,365	Inflation adjustment May 2021 - January 2023	\$ 94,820
IV (A) Project management	May 2021	269.195	299.170	1.11	\$ 969,210	\$ 1,077,132	Inflation adjustment May 2021 - January 2023	\$ 107,922
IV (B) Engineering design, review, and change	May 2021	269.195	299.170	1.11	\$ 938,976	\$ 1,043,531	Inflation adjustment May 2021 - January 2023	\$ 104,555
IV (C) Mobilization	May 2021				\$ -	\$ -		\$ -
IV (D) Legal expenses	May 2021	269.195	299.170	1.11	\$ 220,000	\$ 244,497	Inflation adjustment May 2021 - January 2023	\$ 24,497
IV (E) Power during reclamation	May 2021	269.195	299.170	1.11	\$ 19,496	\$ 21,667	Inflation adjustment May 2021 - January 2023	\$ 2,171
IV (F) Quality control					\$ -	\$ -		\$ -
IV (G) Radiological safety					\$ -	\$ -		\$ -
IV (H) Construction completion report	May 2021	269.195	299.170	1.11	\$ 415,520	\$ 461,788	Inflation adjustment May 2021 - January 2023	\$ 46,268
IV (I) License termination activities	May 2021	269.195	299.170	1.11	\$ 91,500	\$ 101,689	Inflation adjustment May 2021 - January 2023	\$ 10,189
IV (J) Well maintenance & replacement					\$ -	\$ -		\$ -
IV (K) Other (describe):					\$ 1,729,248	\$ 1,984,501	Subtotal of IV (K)	\$ 255,252
National Environmental Policy Act	May 2020	256.394	299.170	1.17	\$ 380,000	\$ 443,398	Inflation adjustment May 2020 - January 2023	\$ 63,398
Section 106 compliance	May 2020	256.394	299.170	1.17	\$ 750,000	\$ 875,128	Inflation adjustment May 2020 - January 2023	\$ 125,128
Section 4 ponds Supplemental Characterization Work Plan	May 2021	269.195	299.170	1.11	\$ 124,316	\$ 138,159	Inflation adjustment May 2021 - January 2023	\$ 13,843
Operations & Maintenance Miscellaneous	May 2021	269.195	299.170	1.11	\$ 117,807	\$ 130,925	Inflation adjustment May 2021 - January 2023	\$ 13,118
Alternate concentration limit revision and licensing	May 2021	269.195	299.170	1.11	\$ 265,100	\$ 294,619	Inflation adjustment May 2021 - January 2023	\$ 29,519
Alternate release criteria area characterization and proposal	May 2021	269.195	299.170	1.11	\$ 92,025	\$ 102,272	Inflation adjustment May 2021 - January 2023	\$ 10,247
V Labor and Equipment Overhead, Contractor Profit					\$ -	\$ -		\$ -
VI Long-term surveillance fee	May 2021	269.195	299.170	1.11	\$ 1,015,633	\$ 1,128,724	Inflation adjustment	\$ 113,091
TOTAL								\$1,988,416

Purple cell indicates value was inflated from 2020

Yellow cell indicates value was inflated from 2021

AMBROSIA LAKE WEST MILL LICENSE SUA-1473
ATTACHMENT 1 - 2023 FINANCIAL ASSURANCE UPDATE TABLES

Table 3. Summary of adjustments consistent with 10 CFR 40, Appendix A, Criterion 9(f)

Factors for Surety Adjustments	2023 Comment
(1) Inflation	All costs inflation adjusted from 2021 estimate
(2) Changes in engineering plans	No change since 2021 financial assurance calculation.
(3) Activities performed	No change since 2021 financial assurance calculation.
(4) Spills, leakage or migration of radioactive material producing additional contamination in onsite subsurface material that must be remediated to meet applicable remediation criteria	No change since 2019 financial assurance calculation.
(5) Waste inventory increasing above the amount previously estimated	No change since 2019 financial assurance calculation.
(6) Waste disposal costs increasing above the amount previously estimated	No change since 2019 financial assurance calculation.
(7) Facility modifications	No change since 2019 financial assurance calculation.
(8) Changes in authorized possession limits	No change since 2019 financial assurance calculation.
(9) Actual remediation costs that exceed the previous cost estimate	No change since 2021 financial assurance calculation.
(10) Onsite disposal	No change since 2021 financial assurance calculation.
(11) Any other conditions affecting costs	No change since 2021 financial assurance calculation.






2023 Financial Assurance Update_20230630

Final Audit Report

2023-06-29

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