

40-8084



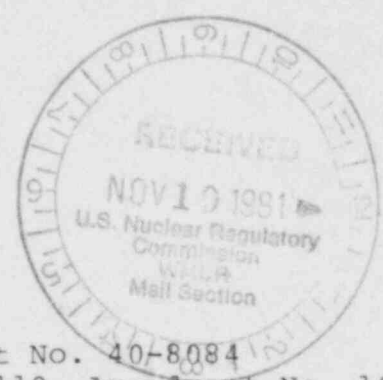
RIO ALGOM CORPORATION

Lisbon Mine

LaSal Route
MOAB, UTAH 84532

Phone: (801) 259-5904

November 4, 1981



Mr. Ross A. Scarano, Chief
Uranium Recovery Licensing Branch
Division of Waste Management
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Applicant.....	Re:.....
Check No. 35443	Docket No. 40-8084
Amount Fee Category	SUA-1119, Amendment No. 10
Type of Fee	
Date Check Rec'd. 11/1/81	
Received By.....	

Dear Mr. Scarano:

Subsequent to your letter of 22 September, 1981, issuing Amendment No. 10 to our Source Materials License, we have been forced by current uranium market conditions to reduce our operation to half production. The need for additional tailings capacity will therefore be accordingly reduced and, in order to conserve cash expenditure at this stage, we plan to raise the lower tailings embankment by 15 feet instead of the approved 25 feet. Your approval of this plan is therefore requested.

Stability analyses for 10 foot and 25 foot raises of this embankment were submitted to and approved by the Commission in our submittals dated 4 March and 17 March, 1981 respectively, and therefore, since the required raise lies within this range and because the same basic design configuration will be used, it should be unnecessary to spend additional funds for a 15 foot raise stability analysis. However, with the lesser raise it will be necessary to provide a greater freeboard and this is shown to be 12.2 feet on the enclosed flood storage graph. The plan is also to remove all the potentially collapsible material at the toe of the existing embankment that would be required for a 25 foot embankment raise. We consider this to be safer and more economical in the long term and the details of this are shown on a typical embankment cross section on sheet 3 of 8 of the construction drawings of our consultant's report entitled, "Technical Specifications for Tailings Dam Improvements and Flood Control Structures, Lisbon Valley Operations, Near Moab, Utah Rio Algom Corporation" dated 14 October, 1981, which is enclosed.



We are proceeding with all other flood control structures as authorized by the Commission and submit the following replies to the questions you had concerning license conditions:

41. Mr. Harry Pettengill of your staff and Mr. Glenn Brown of Region IV, U. S. Nuclear Regulatory Commission, Office

10515

Mr. Ross A. Scarano, Chief :
November 4, 1981
Page 2

of Inspection and Enforcement, Arlington, Texas 76011, were notified by our R. S. Pattison over the telephone yesterday that we have already removed vegetation growth and topsoil from the embankment face and borrow area and are starting foundation excavation. These gentlemen were also notified of the method we intend to use for foundation excavation and re-compaction in which no more than 250 foot lengths will be removed at any time and that we will be recompacting this potentially collapsible material at the same time as excavating. It is expected that this phase of the work will be completed by 19 November, 1981. It is further expected that ten percent and 80 percent stages of embankment placement (including the sand blanket) will be completed on 24 November and 15 December respectively and that final completion of construction will be at the end of December 1981.

43. Additional gradation test data on the copper tailings is enclosed which shows the percent passing the number 200 mesh sieve at values of less than ten percent in all cases.

44. Samples of borrow material were collected on 22 September, 1981 and sent out to a soils testing laboratory for shear testing. Our consultants do not expect there to be any problem with the shear strength of this material and copies of the test results will be forwarded to you as soon as they are known.

45. A program of embankment piezometers to measure pore water pressures during construction is outlined on Page 18 of the enclosed report on "Technical Specifications for Tailings Dam Improvements and Flood Control Structures, Lisbon Valley Operations, Near Moab, Utah for Rio Algom Corporation" and the typical installation is shown on Drawing Sheet #3 of the same report.

46. The enclosed report, "Technical Specifications for Tailings Dam Improvements and Flood Control Structures, Lisbon Valley Operations, Near Moab, Utah for Rio Algom Corporation" dated 14 October, 1981 provides construction specifications for the 15 foot lift of the lower tailings pond embankment and includes a quality assurance soils testing program which details frequencies of tests to be performed during embankment construction.

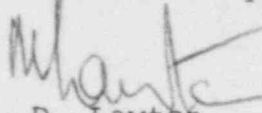
47. It will be at least two months before we will be ready to place rip-rap in the diversion channels.

We trust that this information meets with your requirements at this time. If you have any questions regarding this

Mr. Ross A. Scarano, Chief
November 4, 1981
Page 3

matter, please feel free to call.

Yours sincerely,


M. D. Lawton
President



R. S. Pattison
General Plant Superintendent

MDL:RSP:jem
Enclosures

cc: File

INTER-OFFICE MEMORANDUM

File No. _____

To: R.S. Pattison

Date: September 14, 1981

From: T.W. Warner

Subject: Analysis of Keystone-Wallace Tailings material to be used as a sand blanket on lower dam 25 ft. raise.

On September 9, 1981 samples were collected from the three claims which are to be used for the tailings dam wall raise. Three random samples per claim were gathered for analysis for a total of nine samples.

The nine samples were run through a series of three vibrating screens (a +65 mesh, a +200 mesh and a -200 mesh). Each sample was run for approximately ten minutes, seperated and weighed.

Sample Results: Wet Samples

CCC Fraction - Sample #1

+65 mesh	98 grams	64.1%
+200 mesh	40 grams	26.1%
-200 mesh	<u>15 grams</u>	<u>9.8%</u>
	153 grams	100.0%

CCC Fraction - Sample #2

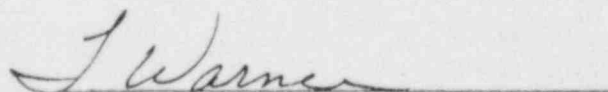
+65 mesh	114 grams	67.9%
+200 mesh	40 grams	23.8%
-200 mesh	<u>14 grams</u>	<u>8.3%</u>
	168 grams	100.0%

CCC Fraction - Sample #3

+65 mesh	135 grams	64.1%
+200 mesh	58 grams	27.8%
-200 mesh	<u>16 grams</u>	<u>7.6%</u>
	209 grams	100.0%

cont.

CCC South	-	Sample #1		
		+65 mesh	142 grams	64.0%
		+200 mesh	61 grams	27.5%
		-200 mesh	<u>19 grams</u>	<u>8.5%</u>
			222 grams	100.0%
CCC South	-	Sample #2		
		+65 mesh	153 grams	73.6%
		+200 mesh	44 grams	21.2%
		-200 mesh	<u>11 grams</u>	<u>5.2%</u>
			208 grams	100.0%
CCC South	-	Sample #3		
		+65 mesh	143 grams	62.7%
		+200 mesh	66 grams	29.0%
		-200 mesh	<u>19 grams</u>	<u>8.3%</u>
			228 grams	100.0%
CCC East	-	Sample #1		
		+65 mesh	126 grams	69.2%
		+200 mesh	47 grams	25.8%
		-200 mesh	<u>9 grams</u>	<u>5.0%</u>
			182 grams	100.0%
CCC East	-	Sample #2		
		+65 mesh	164 grams	68.9%
		+200 mesh	54 grams	22.7%
		-200 mesh	<u>20 grams</u>	<u>8.4%</u>
			238 grams	100.0%
CCC East	-	Sample #3		
		+65 mesh	114 grams	70.8%
		+200 mesh	35 grams	21.7%
		-200 mesh	<u>12 grams</u>	<u>7.5%</u>
			161 grams	100.0%



T.W. Warner
Maintenance Planner

INTER-OFFICE MEMORANDUM

File No. _____

To: R.S. Pattison
 From: T.W. Warner
 Subject: Analysis of Keystone-Wallace Tailings material to be used
 as a sand blanket on lower dam 25 ft. raise.

On September 9, 1981 samples were collected from the three claims which are to be used for the tailings dam wall raise. Three random samples per claim were gathered for analysis for a total of nine samples.

The nine samples were run through a series of three vibrating screens (a +65 mesh, a +200 mesh and a -200 mesh). Each sample was run for ten minutes, separated and weighed.

Sample Results: Dry Samples

CCC Fraction - Sample #1

+65 mesh	302 grams	68.0%
+200 mesh	127 grams	28.6%
-200 mesh	15 grams	3.4%
Totals	444 grams	100.0%

CCC Fraction - Sample #2

+65 mesh	255 grams	68.9%
+200 mesh	96 grams	26.0%
-200 mesh	19 grams	5.1%
Totals	370 grams	100.0%

CCC Fraction - Sample #3

+65 mesh	218 grams	67.1%
+200 mesh	95 grams	29.2%
-200 mesh	12 grams	3.7%
Totals	325 grams	100.0%

cont.

CCC South - Sample #1		
+65 mesh	143 grams	67.5%
+200 mesh	61 grams	28.8%
-200 mesh	8 grams	3.7%
Totals	212 grams	100.0%

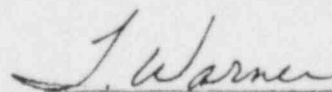
CCC South - Sample #2		
+65 mesh	171 grams	72.8%
+200 mesh	57 grams	24.2%
-200 mesh	7 grams	3.0%
Totals	235 grams	100.0%

CCC South - Sample #3		
+65 mesh	167 grams	63.0%
+200 mesh	86 grams	32.5%
-200 mesh	12 grams	4.5%
Totals	265 grams	100.0%

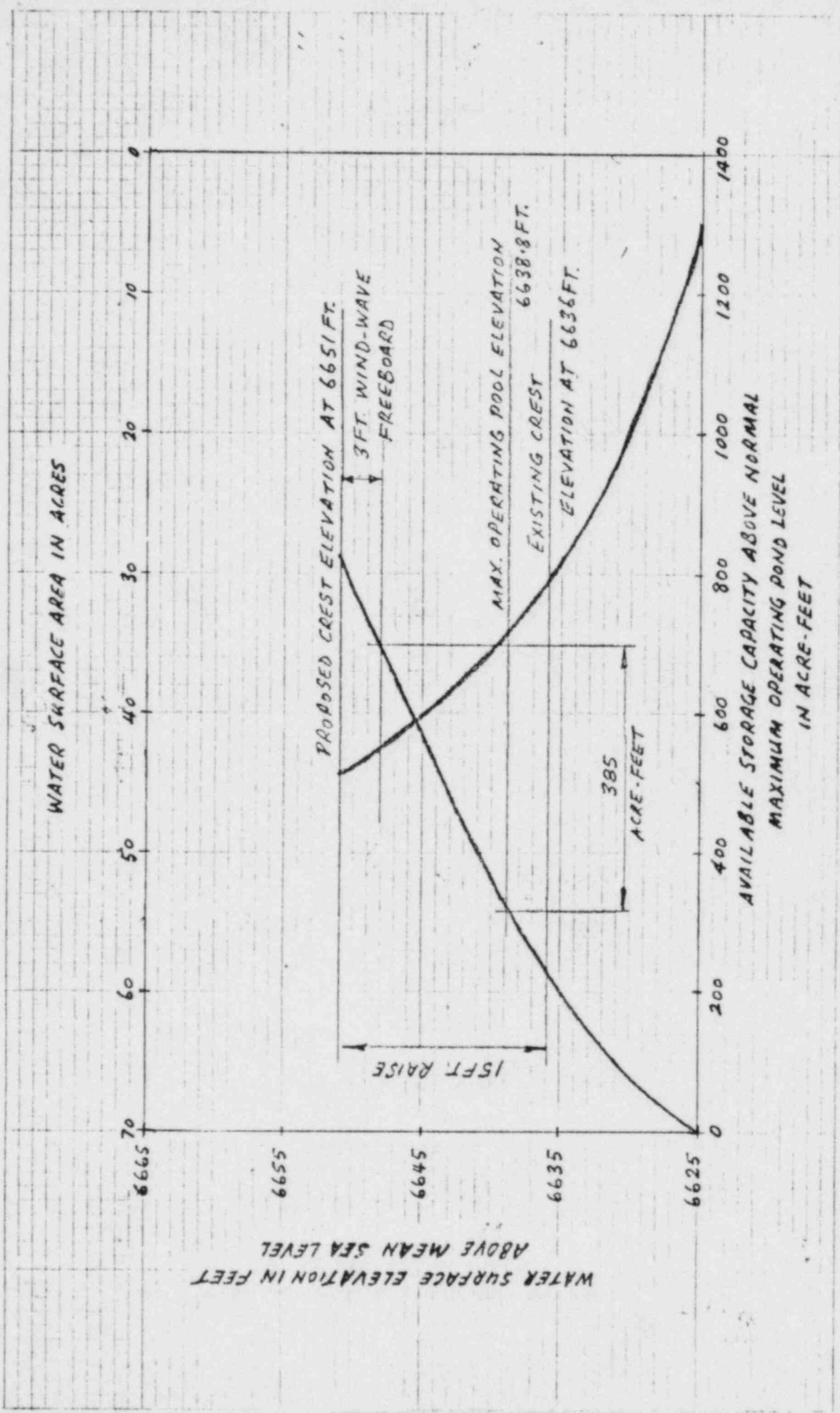
CCC East - Sample #1		
+65 mesh	120 grams	67.4%
+200 mesh	50 grams	28.1%
-200 mesh	8 grams	4.5%
Totals	178 grams	100.0%

CCC East - Sample #2		
+65 mesh	177 grams	66.5%
+200 mesh	74 grams	27.8%
-200 mesh	15 grams	5.7%
Totals	266 grams	100.0%

CCC East - Sample #3		
+65 mesh	191 grams	67.7%
+200 mesh	76 grams	27.0%
-200 mesh	15 grams	5.3%
Totals	282 grams	100.0%



T. Warner
Maintenance Planner



AVAILABLE FLOOD STORAGE RELATIONSHIPS
FOR LOWER TAILINGS POND



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEE CLASSIFICATION MEMO

DOCKET NO.: 70-8084
TO: William O. Miller, Chief
License Fee Management Branch, ADM
FROM: H. Pettengill
SUBJECT: MATERIALS LICENSE AMENDMENT CLASSIFICATION

*Doug - Here's
prelim. copy of Mr.
Report had to be sent to
Repro so Docket
Room hasn't seen it
yet.
Nancy*

Applicant: Rio Algom Corporation
License No.: SUA-1119 Fee Category: 2A
Application Dated: 11-4-81 Received: 11-16-81
Applicant's Classification: _____

The above application for amendment has been reviewed by NMSS in accordance with §170.31 of Part 170, and is classified as follows:

1. Safety and Environmental Amendments to Licenses in Fee Categories 1A through 1H, 2A, 2B, 2C, and 4A.
 - (a) Major safety and environmental _____
 - (b) Minor safety and environmental X _____
 - (c) Safety and environmental
(Categories 1D through 1G only) _____
 - (d) Administrative _____
2. Justification for Reclassification: _____

3. The application was filed (a) _____ pursuant to written NRC request and the amendment is being issued for the convenience of the Commission, or (b) _____ other (state reason): _____

MAIL CONTROL #: 10575
CASEWORK #: 04008084040E
CHECK INCLUDED:

☒ No
☒ Yes

Amount: \$3500
Date of check: 11/12/81
on check: 35493

Signature: Harry J. Pettengill
Uranium Recovery Licensing Branch
Division of Waste Management, NMSS
Date: 11/12/81