

CLIMAX URANIUM COMPANY

UNIT OF AMERICAN METAL CLIMAX, INC.

P. O. BOX 989

GRAND JUNCTION, COLORADO

March 30, 1962

United States Atomic Energy Commission
Division of Licensing and Regulation
Washington 25, D. C.

Attention: Mr. Eber R. Price
Assistant Director

Reference: LR:CGW
40-1142 *LR File Copy*



Gentlemen:

In reply to your letter of March 8, 1962, we wish to state that it is our conviction that we have conscientiously acted to prevent exposures of our employees to concentrations of radioactive materials which, if ingested, would cause them to receive doses in excess of those permitted by the Atomic Energy Commission's "Standards for Protection Against Radiation".

The chronology of our investigation of the exposure of the Roaster Operator to airborne radioactive materials was as follows: March 16, 1961, a shift composite breathing zone sample indicated a concentration of 2.7×10^{-11} $\mu\text{c}/\text{ml}$. of air. Since general air samples collected in this area earlier in the month of March had not indicated concentrations of airborne radioactive materials in excess of the concentrations permitted by the Regulation, this single result of March 16 was not considered to be conclusive evidence that the Roaster Operator was, in fact, exposed to this concentration. May 8, 1961, airborne breathing zone samples of the Roaster Operator indicated that the airborne uranium concentration was 3.2×10^{-12} $\mu\text{c}/\text{ml}$. of air. On May 10, 1961, a breathing zone sample of the Roaster Operator indicated an airborne uranium concentration of 7.8×10^{-11} $\mu\text{c}/\text{ml}$. of air. While the sample of May 10 was being collected, the Sampler noted that during the period of time in which the Roaster Operator was occupied in cleaning the accumulated dust from the roaster decks, a large amount of dust was dispersed in the air. (See our letter of August 2, 1961). At this time a differentiation of the sample collected on May 10 was made which indicated that during a period of approximately 15-20 minutes, the Roaster Operator's breathing zone sample indicated a concentration of 1.0×10^{-9} $\mu\text{c}/\text{ml}$. of air and that during the remainder of the day the breathing zone sample indicated a concentration of 8.8×10^{-12} . On May 12, 1961 this differential sampling was repeated. The results of this breathing zone sample indicated that the concentration during the cleanup period was

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4.3×10^{10} and 5.6×10^{12} $\mu\text{c}/\text{ml}$. of air during the remainder of the day. A microscopic examination of the breathing zone samples made during the cleanup period on May 12 indicated that the bulk of the sample consisted of particles larger than those normally considered to be respirable.

On May 16, we placed an order for the Cascade Impactor described in our letter of August 2, 1961. This instrument was received on May 19 and our Sampler began to familiarize himself with the use of the instrument. On June 1 the first Cascade Impactor test was run; June 2, the second test was run; June 14, the third test; June 16, the fourth test; and June 19, the fifth test. For results of these tests, please refer to our letter of August 2, 1961. The results of our fifth Cascade Impactor test were not available for evaluation until approximately June 26 because of the time required for analysis of the size fractions obtained by this instrument. On June 23 another shift composite breathing zone sample was taken. This sample indicated a concentration of 3.2×10^{11} $\mu\text{c}/\text{ml}$. of air.

On August 2 we sent a letter to your office requesting that particle size differentiation be allowed in our evaluation of the exposure of the Roaster Operator. This letter was written 27 working days after June 26, the date on which we had available to us a complete evaluation of the environmental conditions under which the Roaster Operator was working.

On June 28, 1961, we ordered the capital expenditure of \$9,300 for the installation of a dust collector, hoods and incidental piping as described in our letter of August 2, 1961. On August 2, 1961, we conducted breathing zone sampling of the Roaster Operator, results of this shift indicated an exposure of 4.4×10^{12} $\mu\text{c}/\text{ml}$. of air. During this shift the Roaster Operator did not cleanup dust from the roaster platforms. On August 11 a shift composite breathing zone sample of the Roaster Operator indicated a concentration of 3.1×10^{11} $\mu\text{c}/\text{ml}$. of air.

August 6, 1961 to March 8, 1962 or 149 working days have elapsed since our request for your evaluation of the exposure of these employees. Throughout this period of time, in the absence of a reply to our letter of August 2, 1961, and based on the data which we presented in that letter; we have considered that the Roaster Operator was not, in fact, exposed to concentrations of radioactive material exceeding that allowed by the AEC's "Standards for Protection Against Radiation". Our contention is that, in the absence of a determination by the AEC with regard to the correctness of our evaluation of the exposure of the Roaster Operator, that the determination of the exposure was not completed until June 26, 1961, and the Division of Licensing and Regulation was notified of the condition within 27 working days of our determination of the exposure concentration of these

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individuals, and that our findings were that the Roaster Operator, in fact, was not exposed to concentrations of airborne radioactivity exceeding the "Standards for Protection Against Radiation" at such time as the Commission authorized the sample procedure as outlined. Since it is our belief that the time limits specified in "Standards for Protection Against Radiation" should establish a cocommittent responsibility on the AEC, we would appreciate your response and reply to our letter requesting authorization pursuant to Section 20.103(c).

The dust collection system previously mentioned in this letter and our prior correspondence has been installed and is operating in an efficient and effective manner. At this time we contemplate no further measures to reduce the airborne concentration exposure of the Roaster Operator since indications are that the working conditions are compatible with the "Standards for Protection Against Radiation". Specifically, the average breathing zone concentration on a shift composite sampling basis indicates an exposure of 2.1×10^{-11} $\mu\text{c/ml}$. of air.

Very truly yours,

CLIMAX URANIUM COMPANY

Anthony M. Mastrovich

A. M. Mastrovich
General Manager

AMM/REM/kb

FROM: Climax Uranium Co. Grand Junction, Colorado A. M. Mastrovich		DATE OF DOCUMENT: 3-22-62		DATE RECEIVED: 4-5-62		NO: 3576	
TO: Eber Price		LTR. <input checked="" type="checkbox"/>		MEMO: <input type="checkbox"/>		REPORT: <input type="checkbox"/>	
		ORIG: <input checked="" type="checkbox"/>		CC: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	
CLASSIF: U		POST OFFICE		FILE CODE: 40-1112		REG. NO:	
DESCRIPTION: (Must Be Unclassified) Ltr. furnishing steps of corrective action, in conn with our ltr of 3-8-62.		ACTION NECESSARY <input type="checkbox"/>		CONCURRENCE <input type="checkbox"/>		DATE ANSWERED: <input type="checkbox"/>	
		NO ACTION NECESSARY <input type="checkbox"/>		COMMENT <input type="checkbox"/>		BY: <input type="checkbox"/>	
ENCLOSURES:		REFERRED TO		DATE		RECEIVED BY	
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U. S. ATOMIC ENERGY COMMISSION

MAIL CONTROL FORM FORM AEC-3265 (8-60)

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UNIT OF AMERICAN METAL CLIMAX, INC.
P. O. BOX 989
GRAND JUNCTION, COLORADO

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Assistant Director



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Division of Licensing and Regulation
Washington 25, D. C.