

October 1, 1964

Mr. Page Edwards
Manager of Mines
Vanadium Corporation of America
Shiprock, New Mexico

Dear Mr. Edwards:

The final report by the AEC's Health and Safety Laboratory (HASL) on air sampling in the tailings area of your mill during the period, October 7-9, 1963, has been received.

To provide you with the information obtained, I am enclosing, for your retention, copies of those pages of the HASL Technical Memorandum, 64-14, Uranium Mill Tailings Study, July 31, 1964, which are concerned with the Vanadium Corporation of America mill at Durango, Colorado.

The results of the composited samples of tailings which were collected at the mill prior to the air sampling program and were analyzed by the Idaho Health and Safety Laboratory for various isotopes are as follows:

Ra ²²⁶	$5.16 \pm 0.03 \times 10^{-4} \mu\text{c/gm}$
Th ²³⁰	$7.75 \pm 0.03 \times 10^{-4} \mu\text{c/gm}$
U	294 $\mu\text{gm/gm}$
Pb ²¹⁰	0.69 nc/gm

Please contact me if there is any questions concerning the information.

Very truly yours,

Original Signed by
Donald I. Walker
Donald I. Walker
Director

Enclosure:

HASL 64-14 Report, pages 1, 2, 3, 4, 5*, 13, 13**
14, 14**, 15, 15**, 16, 16**, 17, 17**, 18, 18**,
19, 20, 21, 22, 23, 24*, 27*, 29*, 30*, 31, 32*,
43*, 46*, and Table VI (3 pages)

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DATE		10/1/64

Dear Mr. Edwards,

The final.... during the period, October 7-9, 1963, has been received.

To provide you..... which are concerned with the Vanadium Corporation of American mill at Durango, Colorado.

The results ofare as follows:

Ra ²²⁶	$5.16 \pm 0.03 \times 10^{-4}$ uc/gm
Th ²³⁰	$7.75 \pm 0.03 \times 10^{-4}$ uc/gm
U ^{nat}	294 ugm/gm
Pb ²¹⁰	0.69 nc/gm

Please contact.....the information.

Vty

DIW

Encl: HASL 64-14 Report, Pages 1, 2, 3, 4, 5*, 13, 13**, 14, 14**, 15, 15**, 16, 16**, 17, 17**, 18, 18**, 19, 20, 21, 22, 23, 24*, 27*, 29*, 30*, 31, 32*, 43*, ~~XXX~~ and 46*; Table VII (3 pages).

* denotes partial page

** denotes photograph following indicated page

Dear Mr. Edwards

The final report by the AEC's Health and Safety Laboratory (HASL)

on air sampling in the tailings area of your mill during the period,

October 7-9, 1963, has been received.

To provide you with the information obtained, I am enclosing, for your

retention, copies of those pages of the report which are concerned with

the Vanadium Corporation of America mill at Durango,
Colorado.

I am also ~~enclosing~~ enclosing a copy of the data obtained from the

composited samples of tails which were collected prior to the air

sampling program. These samples were analyzed by the Idaho Health

and Safety Laboratory for U^{nat} , Th^{230} , Ra^{226} , and Pb^{210} .

Very truly yours,

DIW

ENcl: HASL Report, Pages 1, 2, 3, 4, 5*, 12*, 13, 13a**, 14, 14a**, 15, 15a**, 16, 16a**, 17, 17a**, 18, 18a**, 19, 20, 21, 22, 23, 24*, 27*, 29*, 30*, 31, 32*, 43*, 46*; TABLE VI, (2 pages)

* denotes partial page

** denotes Photograph

VANADIUM CORPORATION OF AMERICA

PAGE EDWARDS, GENERAL MANAGER
WESTERN MINES

SHIPROCK, NEW MEXICO

October 9, 1964

RECEIVED
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J. S. ATOMIC ENERGY COM.
REGULATORY
MAIL SECTION

Mr. Donald A. Nussbaumer
Source and Special Nuclear Material Branch
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Re: 40-2038

Dear Mr. Nussbaumer:

For Div of Compliance

The work schedule in effect at this time for mill production operators at our Shiprock facility is on the basis of 7 days on, 1 day off, 7 days on, 4 days off, 7 days on, 2 days off. This represents an average work week of 42 hours.

We have three (3) technicians who are scheduled for an average work week of 40 hours on the sequence of 10 days on and 4 days off.

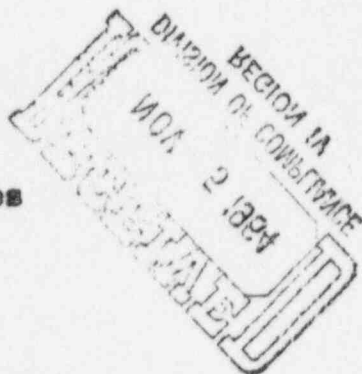
Administrative laboratory, office and crushing-sampling personnel are employed on a 5 day, 40 hour per week basis.

In order that we may maintain uniformity in our radiation survey calculations, we request that the averaging of employees' exposures to airborne radioactivity over a 28-day period be applicable to all job classifications.

Very truly yours,

P. Edwards

PE:lm
encls: 3 copies



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UNITED STATES
ATOMIC ENERGY COMMISSION

SOURCE MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954, and Title 10, Code of Federal Regulations, Chapter 1, Part 40, "Licensing of Source Material," and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, possess and import the source material designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission, now or hereafter in effect, including Title 10, Code of Federal Regulations, Chapter 1, Part 20, "Standards for Protection Against Radiation," and to any conditions specified below.

Category II-A; Priority I

<p>Licensee</p> <p>1. Name Vanadium Corporation of America</p> <p>2. Address P. O. Box 757 Shiprock, New Mexico</p>	<p>3. License No. <u>SUA-789</u></p> <p>4. Expiration Date <u>September 30, 1967</u></p> <p>5. Docket No. <u>40-2038</u></p>
<p>6. Source Material</p> <p>Uranium</p>	<p>7. Maximum quantity of source material which licensee may possess at any one time under this license</p> <p>Unlimited</p>

CONDITIONS

8. Authorized use (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)
- For uranium ore processing in accordance with the procedures described in the licensee's application dated June 18, 1963, as supplemented April 27, 1964, except (1) as otherwise provided by conditions of this license and (2) that exemptions or specific authorizations pursuant to Commission regulations are not authorized unless provided by conditions of this license.
9. Authorized place of use: The licensee's uranium processing facility located near Shiprock, New Mexico.
10. The licensee shall immediately notify the Director, Region IV, Division of Compliance, USAEC, Denver, Colorado, by telephone and telegraph of any failure in an earth dam retention system which results in a release of radioactive material into unrestricted areas. This requirement is in addition to the requirements of 10 CFR 20.

8606120776-288

Allan E. Jones, Manager
Grand Junction Office

October 13, 1964

E. C. Van Blarcom
Division of Raw Materials

DIVISION OF COMPLIANCE INSPECTION VCA - SHIPROCK MILL - LICENSE R-157

DRM:ECVB

The Shiprock mill was inspected for compliance on August 12 and 13, 1964.

Air concentrations of radionuclides on-site were within AEC limits except in the yellow cake handling area, but time studies indicated that even here no undue exposures had occurred. Off-site air concentrations were within limits.

Seepage flows from tailings liquor holding ponds at five locations have been sampled and analyzed. These samples and samples of the San Juan River all show concentrations within AEC limits.

External radiation surveys showed radiation levels within limits.

No unusual technical problems on radiation control were reported.

cc:
CO (2 copies)



DRM	DRM	DRM	CO
Van Blarcom:lh	Beard	Nininger	Dubinski
10/13/64	10/13/64	10/ /64	10/ /64

From CO - Hdqrs

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OCT 25 1964

DML:DPH
40-2038
SUA-789, Amendment No. 1

Vanadium Corporation of America
Shiprock, New Mexico

Attention: Mr. Page Edwards, General Manager
Western Mines

Gentlemen:

Pursuant to your application dated October 9, 1964, Item 13 is hereby added to AEC Source Material License No. SUA-789.

- "13. For the purpose of complying with Section 20.103(b), 10 CFR 20, the limits given in Appendix B, Table I, of this part may be deemed to apply to the exposures to the concentrations specified for 160 hours in any period of 28 consecutive days. In any such period where the number of hours of exposure is less than 160 hours, the limits specified in the Table may be increased proportionately. In any such period where the number of hours of exposure is greater than 160 hours, the limits specified in the Table shall be decreased proportionately."

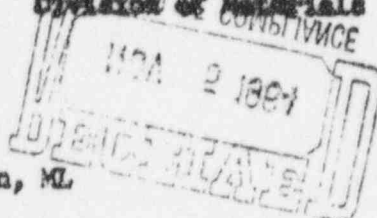
FOR THE ATOMIC ENERGY COMMISSION

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Donald A. Busabaumer, Chief
Source and Special Nuclear Materials Branch
Division of Materials Licensing



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