

APR 13 1989

Docket Nos. 040-08980
99990001

Heritage Minerals, Inc.
ATTN: John F. Lord
Manager
P.O. Box 12
Lakehurst, New Jersey 08733

Gentlemen:

Subject: Inspection No. 9999001/89-01

This refers to your letter dated March 10, 1989, in response to our letter dated February 21, 1989.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a future inspection of your activities.

As Dr. Laurence F. Friedman of my staff explained to Max Eltawil, your consultant, your application for an NRC license will be forwarded to the Fuel Cycle Safety Branch for review.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

cc:
Public Document Room (PDR)
Nuclear Safety Information Center (NSIC)
State of New Jersey

ITEM # 2 A/2

OFFICIAL RECORD COPY

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bcc:
Region I Docket Room (w/concurrences)
L. Rouse, NMSS/IMSB

RI:DRSS
Friedman/bc

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04/10/89

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RI:DRSS
Kinneman

04/10/89

OFFICIAL RECORD COPY

RL HERITAGE - 0002.0.0
04/06/89

Heritage Minerals, Inc.

ROUTE 70 MILE MARKER 41
P.O. BOX 12, LAKEHURST, NJ 08733
201-657-9022 FAX 201-657-5184

March 10, 1989

United States Nuclear Regulatory Commission
Region I, Nuclear Material Section B
475 Allendale Road
King of Prussia, PA 19406

Attention: Mr. John D. Kinneman, Chief

Re: Docket No. 99990001
Routine Inspection
No. 99990001/89-001

Dear Mr. Kinneman:

In response to your letter of February 21, 1989, and notice of violation attached thereto, we wish to inform you that we have taken the following corrective action as per your recommendation.

An application for an NRC license authorizing the possession and use of source material has been prepared and is submitted herewith.

As we have explained to Dr. Friedman during the routine inspection, Heritage Minerals is eager to cooperate fully with the NRC to ensure that our operation is in full compliance with the regulations and that our employees are fully protected.

Very truly yours,

Kaurie Clayton for

John F. Lord
Manager

JFL:ljc

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APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS. IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND,
MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA,
RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIALS SAFETY SECTION B
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA,
PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR
WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
NUCLEAR MATERIALS SAFETY SECTION
101 MARIETTA STREET, SUITE 2500
ATLANTA, GA 30323

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR
WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA,
NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH,
OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON,
AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS
TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
NUCLEAR MATERIALS SAFETY SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94696

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
- B. AMENDMENT TO LICENSE NUMBER _____
- C. RENEWAL OF LICENSE NUMBER _____

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

Heritage Minerals, Inc.
P. O. Box 12
Lakehurst, NJ 08733

3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED.

Heritage Minerals, Inc.
Highway 70, Mile Marker 41
Lakehurst, NJ 08733

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

T. V. Cuculic

TELEPHONE NUMBER

(201) 657-9022

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT

10. RADIATION SAFETY PROGRAM

11. WASTE MANAGEMENT

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 2G AMOUNT ENCLOSED \$ 350.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN, IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948, 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION

SIGNATURE—CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

John F. Lord

John F. Lord

Plant Manager

03/06/89

FOR NRC USE ONLY

TYPE OF FEE FEE LOG FEE CATEGORY COMMENTS

AMOUNT RECEIVED CHECK NUMBER

APPROVED BY

8904260155 890408
REG1 0A999 EMVHERIT
9999001 PDC

DATE

ATTACHMENT

Answers to Questions 5 through 11

5. Radioactive Material
- a. Elements: Thorium - 232
Uranium - 238
 - b. Form: Monazite sand, a naturally occurring mineral in which Th, U and rare earth elements are present as complex phosphates. The monazite is a minor constituent in the titanium-zircon ore deposit being processed at Heritage Minerals.
 - c. Maximum amount which will be processed at any one time: This plant operates continuously on a 24 hour per day basis. The maximum capacity of the plant is 50 tons per hour of raw ore which contains about 8 kg of source material.
6. Purpose for which source material will be used:
The source material is coincidental to other mineral species, as it exists naturally in the ore. It is not being separated for marketing. However, in the course of ore processing to recover the titanium and zircon minerals, two intermediate products contain more than 0.05% (500 ppm) source material. These two materials are the table concentrate and the monazite waste. During further processing in the plant these two materials are converted to other products (zircon product and combined plant tailings) which are both well below 0.05% source material.
7. Mr. Tony V. Cuculic will be responsible for the radiation safety program. He is attending courses in radiation protection at Rutgers University.

8. No restricted areas are designated in the plant since the maximum radiation level anywhere in the plant is below 300 micro-R/hr (See NRC Inspection Report No. 99990001/89-001).

No special training is required for individuals working in the plant except for general safety-conscious work habits such as the wearing of protective clothing, eye glasses and dust masks.

9. Facilities and Equipment: The plant consists of gravity separation equipment (spirals and shaking tables) which separate heavy minerals from light minerals in a water medium. The heavy minerals are then dried in an oil-fired rotary dryer, then separated from each other using electrostatic and magnetic separation equipment.
10. Radiation Safety Program: A sampling program has been established wherein product samples will be taken periodically at various points in the plant, as well as airborne dust samples. All samples will be analyzed for source material. Periodical surveying will also be carried out.
11. Waste Management: No specific precaution is necessary since the only plant waste material is the combined plant tailings which contain less than 0.05% source material. It also meets with the Branch Technical Position Option 1.