

DCS

MAY 22 1991

Docket No. 040-08980

License No. SMB-1541

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

Gentlemen:

Subject: Routine Inspection No. 040-08980/91-001

On April 10, 1991, Betsy Ullrich of this office conducted a routine safety inspection at Route 70, Lakehurst, New Jersey of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selective examination of representative records. The findings of the inspection were discussed with Tony Cuculic at the conclusion of the inspection.

We understand that all production activities have ceased, and no more monazite is being accumulated. Your proposal for on-site disposal of the monazite is in review.

We also understand that the equipment inside the wet mill and dry mill has been thoroughly cleaned and decontaminated. Ten wipe tests did not detect any removable contamination. However, the ambient radiation levels from the monazite pile requires that detailed radiation level surveys inside the mills be delayed until the monazite is removed.

Also, additional wipe tests will be delayed until the remediation areas outside the mills is completed, so that a final cleaning to remove wind-blown sand and monazite can be performed. We further understand that detailed records of areas surveyed and results of measurements will be submitted when decontamination activities are complete, along with a request to terminate the license. If any of our understandings are incorrect, please contact us in writing.

Within the scope of this inspection, no violations were identified.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room. No reply to this letter is required.

ITEM # 3 A13

OFFICIAL RECORD COPY

ML DL HERITAGE - 0001.0.0
04/22/91

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PDR ADDCK 04008980
C PDR

RETURN ORIGINAL TO IE:07
REGION T

Heritage Minerals Incorporated

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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

bcc:
Region I Docket Room (w/concurrences)
Management Assistant, DRMA

RI:DRSS
Ullrich/bj

04/24/91

RI:DRSS
Kinneman

05/22/91

OFFICIAL RECORD COPY

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04/22/91

APPENDIX E

INDUSTRIAL/ACADEMIC INSPECTION FIELD NOTES*
Region I

Inspection Report No. 91-001

License No. SMB-1541

Licensee (name and address)

Docket No. 040-08980

Heritage Minerals
P.O. Box 12
Lehman NJ 08733

Licensee Contact Tony Cuculis

Telephone No. 201-657-9022

Last Amendment No. NA

Date of Amendment _____

Priority: 3 E

Program Code(s): 11300

Date of Last Inspection N/A

Date of This Inspection April 10, 1991

Type of Inspection:

- Announced
- Routine
- Initial

- Unannounced
- Special
- Reinspection

Next Inspection Date April 1994

Normal Reduced Extended

Summary of Findings and Action:

- No violations, Clear 591 or letter issued
- Violations, 591 or letter issued
- Action on Previous Violations

Inspector: Kenneth Ullrich
(Signature)

Date 5/22/91

Approved: [Signature]
(Signature)

Date _____

* All areas indicated in field notes are not required to be addressed during each inspection.

1. ORGANIZATION

a. Briefly describe the organizational structure:

Jack Ford - manager
Tony Cuculis - RSO

b. Organizational structure meets license requirements. [L/C] Y N

Remarks.

c. Licensee is required to have a Radiation Safety Committee Y N

(1) If so, does RSC fulfill license requirements [L/C] Y N

(2) Records maintained Y N

Remarks.

d. Radiation Safety Officer

(1) Authorized on license [L/C] Y N

(2) Fulfills duties as RSO Y N

Remarks.

2. INSPECTION HISTORY N/A - Initial inspection

a. Last inspection conducted on _____

b. Violations or deviations were identified Y N

c. Response letter or 591 dated _____

d. Violations from Previous Inspection

<u>Requirement</u>	<u>Violation</u>	<u>Corrective Action Taken (Y/N)</u>	<u>Status</u>

e. Any previous violations not corrected () Y () N

Explain.

3. SCOPE OF PROGRAM

a. License has multiple authorized locations of use () Y (X) N

b. If so, list location(s) inspected (X) N/A

c. List those individuals contacted during inspection

~~W~~ Jackson Ford
* Tony Cuculari

*Indicates presence at exit meeting

d. Briefly describe scope, including types of use involving byproduct material, frequency of use, staff size, etc.

No use or production of monazite.
Both wet and dry mills have been cleaned
and are currently inoperative. Lead
levels from monazite pile cause
elevated background in mill however
currently have ~700 cubic yards monazite

4. INTERNAL AUDITS OR INSPECTIONS

a. Audits are required by license condition () Y (X) N

b. Audits or inspections are conducted () Y (X) N

(1) Audits conducted by _____

(2) Frequency _____

c. Records maintained. () Y () N

Remarks.

5. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

a. Instructions to workers per [10 CFR 19.12] Y () N

Remarks.

b. Training program required [L/C] () Y N

(1) If so, briefly describe training program:

Not at this time,

- (2) Training program implemented () Y () N
- (3) Retraining program required () Y () N
- (4) Retraining program implemented () Y () N
- (5) Records maintained () Y () N

Remarks.

6. FACILITIES AND EQUIPMENT

a. Facilities as described in license application [L/C] Y () N

Remarks.

b. Areas for storage and use of RAM

(1) Adequate method used to prevent an unauthorized individual from entering restricted area Y () N

(2) RAM is secured to prevent unauthorized removal from an unrestricted area [20.207] Y () N

Remarks.

Storage area is fenced on 2 sides - most of pile is also covered. There is some wind-blown drift occurring

c. Survey instruments () N/A

(1) Appropriate operable survey instruments possessed Y () N

(2) Calibration performed as required Y () N

(3) Records maintained

Y () N

Remarks.

*Hublum 19 due for calib 4/91
Hublum personal GM calib 3/91*

7. RADIOLOGICAL PROTECTION PROCEDURES

a. Radioactive materials used in accordance with current procedures [L/C]

Y () N

b. Individuals understanding of current procedures is adequate [L/C]

- (1) in general rules for safe use of RAM
- (2) in emergency procedures

Y () N
 Y () N

Remarks.

8. MATERIALS

a. Isotope, chemical form, quantity and use as authorized [L/C]

Y () N

Remarks.

b. Leak tests and Inventory

NA

(1) Leak tests of sealed sources performed as required [L/C]

() Y () N

(2) Inventory of RAM performed as required [L/C]

() Y () N

(3) Records maintained

() Y () N

Remarks.

9. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL

- a. Describe how packages are received and by whom: N/A
- b. Opening procedures established and followed [20.205(d)] Y N
- c. Incoming packages wiped per [20.205(b)] Y N
- d. Incoming packages surveyed per [20.205(c)] Y N
- e. Transfer(s) performed per [30.41] Y N
- f. Records of surveys and receipt/transfer maintained per [20.401(b) and 30.51] Y N

Remarks.

10. AREA SURVEYS

N/A

Briefly describe area survey requirements and licensee's implementation [L/C]:

Survey performed during Decon activities in wet and dry mills see attached sheet. No other surveys required at this time.

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier Telidyne Frequency Monthly Decon *supplies?*
- b. Supplier is NVLAP - approved Y N
- c. Reports reviewed by _____ Frequency on receipt
- d. NRC inspector reviewed personnel monitoring records for period Sept to Dec 90
- e. NRC forms or equivalent
- | | | | |
|---------------|--|-----------|---|
| NA (1) NRC-4: | <input type="checkbox"/> Y <input type="checkbox"/> N | Complete: | <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> N/A |
| (2) NRC-5: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N | Complete: | <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| [20.401(a)] | | | |
- f. List maximum exposures (millirem): 0

Remarks.

12. PERSONNEL RADIATION PROTECTION - INTERNAL

N/A

- a. Potential for exposure of individuals to airborne RAM exists () Y () N
- b. Monitoring for airborne radioactivity conducted [20.201(b) to meet 20.103] () Y () N
- c. Records maintained [20.401 and L/C] () Y () N
- d. Briefly describe licensee's monitoring system for airborne radioactivity [L\C]

- e. Bioassay program implemented as described in correspondence with NRC () Y () N

Remarks.

13. RADIOACTIVE EFFLUENT AND WASTE DISPOSAL

- a. RAM in effluents to unrestricted areas () Y () N NA
- b. Release in accordance with regulatory limits [20.106(a)] () Y () N

Remarks.

- c. Describe waste disposal method(s) - solid and liquid:

Submitted letter dated 2/12/91 for deposit of monazite - will require license amendment. They are also still looking for customer.

- d. If LLW is stored because access to a burial site has been denied, answer (1), (2), and (3) below:
- (1) Adequate control of waste in storage is maintained () Y () N
 - (2) Package is labeled and package integrity is adequately maintained () Y () N
 - (3) Adequate records of surveys and material accountability are maintained () Y () N
- e. Disposal of waste in accordance with regulatory requirements [20.301] () Y () N *NA*
- f. Records maintained [20.401(b)] () Y () N *NA*

Remarks.

14. NOTIFICATION AND REPORTS

- a. Licensee in compliance with [19.13] (reports to individuals) () Y () N () N/A
- b. Licensee in compliance with [20.402] (theft or loss) () Y () N () None
- c. Licensee in compliance with [20.403] (incidents) () Y () N () None
- d. Licensee in compliance with [20.405] (overexposures) () Y () N () None

Remarks.

15. POSTING AND LABELING

- a. NRC-3 "Notice to Workers" is posted [19.11] () Y () N
- b. Parts 19 and 20 and license are posted or a notice indicating where documents can be examined is posted [19.11] () Y () N *NI*
- c. Other posting and labeling per [20.203] () Y () N

Remarks.

16. ENVIRONMENTAL MONITORING PROGRAM

- a. Licensee has implemented an environmental monitoring program [L/C]
b. Records maintained

Y N
 Y N

Remarks.

- c. Briefly describe the licensee's environmental monitoring program:

17. TRANSPORTATION (10 CFR 71.5(a) and 49 CFR 171-189)

- a. Licensee makes shipments of RAM

Y N

- b. Shipments are:

Not at this time.

- delivered to common carriers
 transported in licensee's own private vehicle
 both
 no shipments since last inspection

Remarks.

Complete only if shipments made since last inspection:

- c. Shipments

- (1) Authorized packages used [173.415,416]

Y N N/A

- (2) Package type used _____

- (3) For DOT-7A packages, performance test record on file [173.415(a)]

Y N N/A

- | | |
|--|----------------------|
| (4) For DOT-55 packages, use is approved by NRC [173.416(a)] | () Y () N () N/A |
| (5) Other Type B packages used are approved [173.416(a)] | () Y () N () N/A |
| (6) Licensee has COCs on file with NRC [71.12(c)(1)] | () Y () N () N/A |
| (7) Licensee has a QA program approved by NRC [71.12(b)] | () Y () N () N/A |
| (8) For special form sources, performance test record on file [173.476(a)] | () Y () N () N/A |
| (9) Packages properly labeled [172.403, 173.441] | () Y () N () N/A |
| (10) Packages properly marked [173.200] | () Y () N () N/A |
| (11) Proper shipping papers prepared and used [172.200-204] | () Y () N () N/A |
| (12) Shipping papers readily accessible during transport [177.817(e)] | () Y () N () N/A |
| (13) Vehicles placarded as necessary [172.500, 504] | () Y () N () N/A |
| (14) Cargo blocked and braced [177.842(d)] | () Y () N () N/A |
| (15) Any incidents reported to DOT [171.15-16] | () Y () N () None |

Remarks.

- | | |
|---|-------------|
| 18. <u>RECORDKEEPING FOR DECOMMISSIONING</u> | () N/A |
| a. Records of information important to the safe and effective decommissioning of the facility maintained in an independent and identifiable location until license termination [30.35(g)] | () Y () N |
| b. Records include all information outlined in [30.35(g)] | () Y () N |

Remarks.

19. INDEPENDENT MEASUREMENTS

a. Survey instrument used Ludlum 19

b. NRC Serial No. 19635

c. Last date of calibration _____

d. Inspector's measurements were compared to licensee's Y N

e. Describe the type and results of measurements:

public road (background) 45 uR/h
office - 7 uR/h
monazite - edge of fence 1000 uR/h
kiln area - 300 uR/h
inside wet & dry mills - 20-25 uR/h except
in areas near monazite pile (40-60 uR/h)
rad level walking around ground outside
wet/dry mills range 20-40 uR/h average.
Some higher spots exist due to spillage
of feed stock and/or monazite

20. BULLETINS AND INFORMATION NOTICES

a. Bulletins, Information Notices, etc., received by the licensee Y N NT

b. Licensee took appropriate action in response to Bulletins, INs, etc. Y N NT

Remarks.

21. CONTINUATION OF REPORT ITEMS - USE BACK OF PAGE IF NECESSARY

1. 10 wipes taken of machinery inside dry and wet mills, all $< 1 \text{ dpm}$ α , $< 29 \text{ dpm}$ β/γ . Counted by Teledyne Intoxics. No other decommissioning work or measurements will be performed until the monazite is disposed because buildings will need to be re-cleaned due to windblown sand.
2. Recense forwarded Teledyne results of split sample in letter dated 4/7/91. Good agreement, esp w/ thorium analysis.

22. LIST OF VIOLATIONS

23. PERFORMANCE EVALUATION FACTORS

Licensee (name & location) Heritage Mineral

Inspector E. Ullrich
Inspection Date 4/11/91

- a. Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight () Y (X) N
- b. RSO too busy with other assignments () Y (X) N
- c. Insufficient staffing () Y (X) N
- d. Radiation Safety Committee fails to meet or functions inadequately () Y () N (X) N/A
- e. Inadequate consulting services or inadequate audits () Y () N (X) N/A

Remarks (consider above assessment and/or other pertinent PEFs):

Regional follow-up on above PEFs citations:

DECONTAMINATION SURVEY

DIRECT GAMMA RAY READINGS in Micro R/hr

DRY MILL

Area Description	Dates								Remarks
	9/6/90	9/10/90	9/28/90	10/16/90	11/5/90	11/21/90	12/7/90	12/28/90	
Filter	120		70	70	60	46	46	47	
Chutes	220		130	150	110	*	100	120	
Dryer	160		150	150	-*	*	*	170	* NO READING
Flue	170	220	120	120	-*	*	*	*	* NO READING
Dust Cyclone	500	750	750	430	400	*	*	400	* NO READING
Dryer Area	500	500	500	500	250	250	220	170	
Hot Belt	160			60	22	22	22	*	* NO READING
Rougher Elev.	310		100	110	16	12	12	12	
Dist. Belts	80		50	24	20	20	20	18	
Rougher Hopper	110		30	28	20	15	16	18	
R. H. T.	20		50	14	14	10	10	18	
Cleaner Belt	110		60	28	24	32	32	21	
Cleaner H.T.s	70		60	22	22	20	16	16	
Recleaner Belt	60		40	22	20	20	20	18	
Recleaner HTs	80		50	14	12	9	10	10	
Ti Mags.	24		25	18	12	18	10	10	
Zr Mags.	100		70	30	16	28	26	40	
Top Bins	70		30	40	60*	38	30	35	* BIN +
Storage Bins	130		60	50	20*	20	24	22	* ALL
Dust Piping	175		80	70	110	34	16	22	
1st Floor	50		70	20	20	20	20	16	
2nd Floor	50		40	18	22	14	12	12	
3rd Floor	50		30	26	33	20	22	18	
4th Floor	70		40	24	24	24	24	30	
Office	22		22	18	17	18	18	15	
SCALE RM			34	30	30	20	20	18	

T.V.C. - e - 9/28/90

DECONTAMINATION SURVEY

DIRECT GAMMA RAY READINGS in Micro R/hr

WET MILL

Area Description	Dates											Remarks
	9/6/90	9/10/90	9/13/90	9/20/90	9/28/90	10/10/90	11/5/90	11/16/90	11/28/90	12/17/90	12/28/90	
Tables	38	36	22*	30	30	30	30	30	40	24	22	* DIFFERENTIAL TABLE # 6
Launders	*70	*44	*30	40*	18	15	50	48	34	30	26	* CLASSIFIED
Sumps	50	50	110*	40	28	28	28	38	25	25	20	* P-14A
Pumps	28	25	22*	18	18	18	18	18	18	18	20	* 7
Piping	20	20	20	17	17	20	20	20	20	20	18	
1st Floor	30	40	24	19	30	20	30	20	22	-	22	
2nd Floor	30	44	16	16	16	15	16	15	15	15	15	
3rd Floor	22	22	22	22	22	22	22	22	22	22	44*	* EAST END
Office	24	9	9	9	9	10	10	10	10	10	9	
210 SUMP				60	60	38	38	38	40	15	20	
210 SPIRALS					14	15	25*	30*	30*	18	32	* SOUTH SIDE
217 SUMP						28	38	38	25	30	20	
P-17 LAUNDRY EXTENSION STAIR TO 2ND FLOOR						20	48	38	25	26	26	
FLOOR SUMP							180	170	180	180	165	
								150	-	-	16	

NOTE: Survey applies only to areas where source material was present.

