

APPENDIX E

INDUSTRIAL/ACADEMIC INSPECTION FIELD NOTES*
Region I

Inspection Report No. 91-001

License No. SMB-1541

Licensee (name and address)

Docket No. 040-08780

Heritage Minerals
RT 705 Mile Marker 41
PO Box 12
Lehigh Valley PA 18033

Licensee Contact Tony Cuculic

Telephone No. 201-657-9027

Last Amendment No. N/A

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 Unannounced
 Routine Special
 Initial 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 Ulrich
(Signature)

Date 5/22/91

Approved: [Signature]
(Signature)

Date _____

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

B-25

1. ORGANIZATION

a. Briefly describe the organizational structure:

Josh Ford - manager
Tony Cuculari - 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

~~John~~ John Ford
* Tony Cucular

*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. Red
levels from monazite pile cause
elevated background in mills 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.

*Insulin 19 due for calib 4/91
Insulin penicillin 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

Y () N

(2) in emergency procedures

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]:

*Surveys performed during decon activities in
wht and dig mill. See attached sheet.
No other surveys required at this time.*

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier Telidyne Frequency quarterly? during decon
- 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 2/28/91 for deposit of monazite - will require license amendment. They are also still looking for customers.

- 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
- b. Shipments are:
 - () delivered to common carriers
 - () transported in licensee's own private vehicle
 - () both
 - () no shipments since last inspection

() Y () N

Not at this time.

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. RECORDKEEPING FOR DECOMMISSIONING

() 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) 4-5 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 $< 1 \text{ dpm}$ & $< 29 \text{ dpm Bq}$. Counted by Teledyne Toxsys. No other decommissioning work or measurements will be performed until the monazite is disposed because buildings will need to be re-cleaned due to wind blown sand.
2. License forwarded Teledyne results of split sample in letter dated 4/7/91. Good agreement esp w/ Thorium analyses

22. LIST OF VIOLATIONS

23. PERFORMANCE EVALUATION FACTORS

Licensee
(name &
location)

Heritage Mineral

Inspector

E. Williams

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	2/28/90	
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.	340		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.	60		50	14	14	10	10	18	
Cleaner Belt	110		60	28	24	32	32	21	
Cleaner H.T.s	90		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 4
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
R.S.O

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	9/22/90	10/10/90	11/5/90	11/16/90	11/28/90	12/7/90	12/22/90	
Tables	38	36	30*	30	30	30	30	30	40	24	22	* INITIAL TABLE # 6
Launders	* 70	* 44	* 40	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	17	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	
>10 SUMP				60	60	38	38	38	40	15	20	
OLD SPIRALS					14	15	25*	30*	30*	18	32	* SOUTH SIDE
P-17 SUMP						28	38	38	25	30	20	
P-17 LAUNDER						20	48	38	25	26	26	
EXTENSION STAIR TO 2ND FLOOR							180	170	180	180	165	
FLOOR SUMP								150	-	-	16	

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

R.S.O

