

APPENDIX E

INDUSTRIAL/ACADEMIC INSPECTION FIELD NOTES*
Region I

Inspection Report No. 91-001

License No. 29-01022-14

Licensee (name and address)

Docket No. 030-29741

Department of the Army
123 Army Communications
Electronics Company
Fort Monmouth, NJ 07703-5204

} INSPECTION at
Abuden Proving Ground,
MD - calibration for

Licensee Contact DAVE JAMISON

Telephone No. _____

Last Amendment No. 06

Date of Amendment 2/20/91

Priority:

current
7 K
03124 *MSGMT SYSTEMS*

← This is incorrect.
It should be
03222

Program Code(s):

Date of Last Inspection 9/9/90

Date of This Inspection 6/12/91

Type of Inspection:

- Announced
- Routine
- Initial

- Unannounced
- Special
- Reinspection

Next Inspection Date _____

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: Jamison White
Sherr Minnick
Elyse B. Alden
(Signature)

6/26/91
6/26/91
Date 6/26/91

Approved: [Signature]
(Signature)

Date 6/26/91

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

A/S

1. ORGANIZATION

a. Briefly describe the organizational structure:

Dick Schaefer, Supervisor TRADE at APG
↑
Dave Jamison - calibration supervisor

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

() Y () N *ND*

Remarks.

This facility is authorized by the Rad Safety group at Ft Monmouth.

c. Licensee is required to have a Radiation Safety Committee

() Y () N *NA*

(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 *NI*

(2) Fulfills duties as RSO

() Y () N

Remarks.

2. INSPECTION HISTORY

() N/A - Initial inspection

a. Last inspection conducted on

9/9/90 at Ft. Monmouth

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 (X) Y () N

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

*Building 5106?, TMDE electronics building
incl. Calibration facility*

c. List those individuals contacted during inspection

*Dick Schaefer
Dave Jamison*

*Indicates presence at exit meeting

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

120 Ci Co-137 (now decayed to 65 Ci)

1.4 and 50 uCi Pu-239 sources

misc small check/calib sources

TMDE performs all calibrations for all Army facility survey meters. The APG facility is one of 5 TMDE calib facilities in the country.

4. INTERNAL AUDITS OR INSPECTIONS

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

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

(1) Audits conducted by AENR

(2) Frequency 3-yr

c. Records maintained. () Y () N *NF*

Remarks.

*Calibration performed
of ~100 meters/month*

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] *11.A* Y () N

(1) If so, briefly describe training program:
*as described in application 5/7/86
Supplement E*

- (2) Training program implemented *NI* () 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] *Facility meets general description of Supplement F* 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.

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.

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

- (1) Leak tests of sealed sources performed as required [L/C] () Y () N *NI*
- (2) Inventory of RAM performed as required [L/C] () Y () N *↓*
- (3) Records maintained () Y () N *↓*

Remarks.

CS-137 (~65 Ci) wipe tested every 6 mo.
Pu-239 (~1.4 uCi, 50.2 uCi) wipe tested every 3 mo.

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]:

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier Ames - Kentucky Frequency M
- b. Supplier is NVLAP - approved Y N
- c. Reports reviewed by _____ Frequency _____
- d. NRC inspector reviewed personnel monitoring records for ~~the~~ period summary of 1990 to exposure
- e. NRC forms or equivalent
- | | | | |
|------------|---|-----------|---|
| (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 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
- b. Release in accordance with regulatory limits [20.106(a)] () Y () N *NA*

Remarks.

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

No waste generated

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
- 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 *NA*
 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:

- 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)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (5) Other Type B packages used are approved [173.416(a)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (6) Licensee has COCs on file with NRC [71.12(c)(1)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (7) Licensee has a QA program approved by NRC [71.12(b)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (8) For special form sources, performance test record on file [173.476(a)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (9) Packages properly labeled [172.403, 173.441] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (10) Packages properly marked [173.200] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (11) Proper shipping papers prepared and used [172.200-204] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (12) Shipping papers readily accessible during transport [177.817(e)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (13) Vehicles placarded as necessary [172.500, 504] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (14) Cargo blocked and braced [177.842(d)] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A |
| (15) Any incidents reported to DOT [171.15-16] | <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> 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)] | <input type="checkbox"/> Y <input type="checkbox"/> N |
| b. Records include all information outlined in [30.35(g)] | <input type="checkbox"/> Y <input type="checkbox"/> N |

Remarks.

19. INDEPENDENT MEASUREMENTS

- a. Survey instrument used GM
- b. NRC Serial No. 000923
- c. Last date of calibration _____
- d. Inspector's measurements were compared to licensee's () Y (X) N

e. Describe the type and results of measurements:

measurements of CS-137 calibration source
.15 mR/hr at 3 feet
9 mR/hr at surface

20. BULLETINS AND INFORMATION NOTICES

- a. Bulletins, Information Notices, etc., received by the licensee () Y () N NI
- b. Licensee took appropriate action in response to Bulletins, INs, etc. () Y () N ↓

Remarks.

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

licensing (Supp F) require that "Radiation Areas and High Rad Areas" be equipped with positive indicators, which will energize a conspicuous audio or visual alarm when the source is exposed and/or in its operating position."

In fact, the calibration facility is equipped with an audible signal which continuously sounds while the source is up. However, when long irradiations (e.g. of TLDs) are required, the audible alarm is shut off [this was the case during the inspection]. The room was locked during this irradiation time. A visible signal and a visual room monitor were in operation while the source was up. Both are visible to persons entering the room, and are visible from the leaded window to persons outside the rooms. Outside the locked door, the area is also roped off by RAM signs.

22. LIST OF VIOLATIONS - None

Calibration procedures were reviewed.

Shielding is provided for operators performing calibration with the Co-137 source. Remote viewing of meter face is used. Written procedures are available and appear to be followed. Individuals are sent to manufacturer's training (Echoline, Ludlum et al) in addition to Dept Army. Individuals feel this has helped reduce time spent calibrating since various meters differ in setup methods for calib. Two-point calibration of all possible scales are done (don't do extreme high ranges).

Recalibration of sources every two years.
Reevaluate exposure rates every six months.
Last calibrations: Aug 90 - CS-137, Sept 89 - Pu-239
Aug 90 - Pu-239

23. PERFORMANCE EVALUATION FACTORS

Licensee
(name &
location)

Dept Army - TADE
Shepherd Power Ground,
MD

Inspector

OLLRICH/WHITE/UNION

Inspection Date

6/12/91

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

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

It would be useful, at the next Ft. Monmouth inspection, 1) to find out if any other remote locations are used, ~~and~~ 2) to review inventory for sources at such location and 3) to find out how often the Ft. Monmouth RSO is in contact with site personnel.

Regional follow-up on above PEFs citations: