

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

**INDUSTRIAL/ACADEMIC INSPECTION FIELD NOTES**  
**Region I**

Inspection Report No. 93-001 License No. 37-20584-01  
Licensee (name and address) Docket No. 030-19945  
Valley Forge Laboratories, Inc. 6 Berkeley Road Devon, Pennsylvania 19333  
Licensee Contact: G. David Simcoe Telephone No. (215) 688-8517  
Last Amendment No. 04 Date of Amendment: June 23, 1992  
Priority: 4  
Program Code(s): 03121  
Date of Last Inspection: May 31, 1989  
Date of This Inspection: June 29 1993  
Type of Inspection: ( ) Announced (x ) Unannounced  
(x ) Routine ( ) Special  
( ) Initial ( ) Reinspection

Next Inspection Date: June of 1997 (x ) Normal ( ) Reduced ( ) Extended

Summary of Findings and Action:

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

Inspector: Richard Gibson Jr. Date June 30, 1993  
(Signature)

Approved: Thomas M. Reick Date 7/1/93  
(Signature)

1. ORGANIZATION

a. Briefly describe the organizational structure:  
 Dr. James J. Schuster - President; Michael J. Boyle - Vice President; Paul D. Spiegel - Director of Construction Services; G. David Simcoe - RSO, Director of Marketing/Administration.

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

Remarks:

c. Licensee is required to have a Radiation Safety Committee ( ) Y (x) 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] (x) Y ( ) N
- (2) Fulfills duties as RSO (x) Y ( ) N

Remarks.

G. David Simcoe is the Radiation Safety Officer for the license

2. INSPECTION HISTORY ( ) N/A - Initial inspection

- a. Last inspection conducted on: May 31, 1989
- b. Violations or deviations were identified ( ) Y (x) N
- c. Response letter or 591 dated June 5, 1989
- d. Violations from Previous Inspection

<u>Requirement</u>	<u>Violation</u>	<u>Corrective Action Taken (Y/N)</u>	<u>Status</u>
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Not Applicable

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

Explain. Not Applicable

3. SCOPE OF PROGRAM

- a. License has multiple authorized locations of use (x) Y ( ) N
- b. If so, list location(s) inspected ( ) N/A

Visited a temporary job site at Smith Kline and Beechman on the corner of 320 N and route 23. Paul Restall Construction is the contractor.

c. List those individuals contacted during inspection:  
 \* Dr. James J. Schuster \* Paul D. Spiegel G. David Simcoe Jeff Jones  
 Kelvin Coll

\*Indicates presence at exit meeting

d. Briefly describe scope, including types of use involving byproduct material, frequency of use, staff size, etc.:  
 The Licensee posses nine Troxler model 3400 moisture/density gauges for use in soil compaction measurements at construction site and/or landfill. There are thirteen authorized users, approximately seven being frequent users. The gauges are used daily at various temporary job sites for an average of a week. All gauges contains 8.0 millicuries of cesium - 137 and 40 millicuries of americium - 241.

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: Upper management
- (2) Frequency: Sporadically
- c. Records maintained. (x ) Y ( ) N

Remarks:

Upper management at times would visit the field sites on occasions to get a feel for gauges use in the field and to ensure that they are used properly.

5. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

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

Remarks:

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

(1) If so, briefly describe training program:  
 Manufacturer training from Troxler Electronic Laboratories, INC. and Geophysical Consultant, INC.

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

Remarks:

Training certificates for all authorized users on file.

6. FACILITIES AND EQUIPMENT

- a. Facilities as described in license application

[L/C]

(x ) Y ( ) N

Remarks:

Office spaces are located on the second level of the facility. Storage space for the moisture/density gauges is located on the ground level of the facility.

b. Areas for storage and use of RAM

- (1) Adequate method used to prevent an unauthorized individual from entering restricted area (x ) Y ( ) N
- (2) RAM is secured to prevent unauthorized removal from an unrestricted area [20.207] (x ) Y ( ) N

Remarks:

All gauges when not in use are stored in a lockable storage area on the ground level. Doors to the outside area and the door to the storage area have keys that are maintained by the authorized users. The transportation cases for the gauges have pad locks.

c. Survey instruments

(x ) N/A

- (1) Appropriate operable survey instruments possessed ( ) Y ( ) N
- (2) Calibration performed as required ( ) Y ( ) N
- (3) Records maintained ( ) Y ( ) N

Remarks:

Brief discussion of the requirement for survey instruments under the new part 10 CFR 20 which goes into effect January of 1994.

7. RADIOLOGICAL PROTECTION PROCEDURES

- a. Radioactive materials used in accordance with current procedures [L/C] (x ) Y ( ) N
- b. Individuals understanding of current procedures is adequate [L/C]

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

Remarks:

In several interviews with some of the authorized users, there were a clear understanding by the users of the operating and emergency procedures.

8. MATERIALS

- a. Isotope, chemical form, quantity and use as authorized [L/C] (x ) Y ( ) N

Remarks:

Each gauge contains a cesium - 137 sealed source and an americium - 241 sealed neutron source with 10 millicuries and 40 millicuries respectively.

b. Leak tests and Inventory

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

Remarks:

Leak tests are performed by the RSO at six month intervals, and are analyzed by Troxler Electronic, INC. Review records of gauges No. 7,8,11, and 13 from June of 1989 to January of 1993.

Physical inventory - the licensee maintains a running utilization log of all gauges. The log indicates the whereabouts of each gauge, date and initial of the user. Review logs for all gauges from January of 1990 to current.

9. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL

- a. Describe how packages are received and by whom: (x ) 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

(x ) N/A

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

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier: Landauer Frequency: quarterly
  - b. Supplier is NVLAP - approved (x ) Y ( ) N
  - c. Reports reviewed by: Radiation Safety Officer Frequency: quarterly
  - d. NRC inspector reviewed personnel monitoring records for period from July of 1989 to March of 1993
  - e. NRC forms or equivalent
- (1) NRC-4: (x ) Y ( ) N Complete: (x ) Y ( ) N ( ) N/A

(2) NRC-5: (x) Y ( ) N Complete: (x) Y ( ) N ( ) N/A  
[20.401(a)]

f. List maximum exposures (millirem):  
Maximum personnel exposure for the quarter, 1/15/92 to 4/14/92 was 70 millirem.

Remarks:  
Examine user badges and noted last issued on April 15, 1993.

12. PERSONNEL RADIATION PROTECTION - INTERNAL (x) 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 N/A
- a. RAM in effluents to unrestricted areas ( ) Y ( ) N
  - b. Release in accordance with regulatory limits [20.106(a)] ( ) Y ( ) N

Remarks:

- c. Describe waste disposal method(s) - solid and liquid:
- 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
- f. Records maintained [20.401(b)] ( ) Y ( ) N

Remarks:

14. NOTIFICATION AND REPORTS

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

Remarks:

No reported theft or loss, incidents or overexposures.

15. POSTING AND LABELING

- a. NRC-3 "Notice to Workers" is posted [19.11] (x) Y ( ) N
- b. Parts 19, 20, and 21, and license are posted  
or a notice indicating where documents can be  
examined is posted [19.11, 21.6] (x) Y ( ) N
- c. Other posting and labeling per [20.203] (x) Y ( ) N

Remarks:

NRC-3 "Notice to Workers" and a "Caution Radioactive Material" sign are posted on the door to the storage area.

16. ENVIRONMENTAL MONITORING PROGRAM N/A

- a. Licensee has implemented an environmental  
monitoring program [L/C] ( ) Y ( ) N
- b. Records maintained ( ) 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 (x) Y ( ) N
- b. Shipments are:
  - ( ) delivered to common carriers
  - ( ) transported in licensee's own private vehicle
  - (x) both
  - ( ) no shipments since last inspection

Remarks: Licensee makes shipments in POA from facility to temporary job sites. Shipment by the licensee have been made on occasion to the manufacturer for minor repairs. Three CPN gauges have been shipped by the licensee to CPN via Federal Express permanently.

**Complete only if shipments made since last inspection:**

c. Shipments

- (1) Authorized packages used [173.415,416] (x ) Y ( ) N ( ) N/A
- (2) Package type used: DOT 7A
- (3) For DOT-7A packages, performance test record on file [173.415(a)] (x ) Y ( ) N ( ) N/A
- (4) For DOT-55 packages, use is approved by NRC [173.416(a)] ( ) Y ( ) N (x ) N/A
- (5) Other Type B packages used are approved [173.416(a)] ( ) Y ( ) N (x ) N/A
- (6) Licensee has COCs on file with NRC [71.12(c)(1)] ( ) Y ( ) N (x ) N/A
- (7) Licensee has a QA program approved by NRC [71.12(b)] ( ) Y ( ) N (x ) N/A
- (8) For special form sources, performance test record on file [173.476(a)] ( ) Y ( ) N (x ) N/A
- (9) Packages properly labeled [172.403, 173.441] (x ) Y ( ) N ( ) N/A
- (10) Packages properly marked [173.200] (x ) Y ( ) N ( ) N/A
- (11) Proper shipping papers prepared and used [172.200-204] (x ) Y ( ) N ( ) N/A
- (12) Shipping papers readily accessible during transport [177.817(e)] (x ) Y ( ) N ( ) N/A
- (13) Vehicles placarded as necessary [172.500, 504] ( ) Y ( ) N (x ) N/A
- (14) Cargo blocked and braced [177.842(d)] (x ) Y ( ) N ( ) N/A
- (15) Any incidents reported to DOT [171.15-16] ( ) Y ( ) N (x ) None

Remarks:

No reported incidents since last inspection.

18. RECORDKEEPING FOR DECOMMISSIONING (x ) 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 model 14C
- b. NRC Serial No.: 019616
- c. Last date of calibration: February 1, 1993
- d. Inspector's measurements were compared to licensee's ( ) Y (x ) N
- e. Describe the type and results of measurements:

Performed radiation survey of gauge at temporary job site, levels indicated - 12 millirem per hour on contact.

Performed radiation survey of the storage area and gauges inside, levels indicated - 5 millirem per hour general area; 12 to 15 millirem per hour on contact with gauges; and 1.3 millirem per hour out side door to storage area.

20. BULLETINS AND INFORMATION NOTICES N/I

- a. Bulletins, Information Notices, etc., received by the licensee ( ) Y ( ) N
- 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

22. LIST OF VIOLATIONS  
None 591 - issued

23. PERFORMANCE EVALUATION FACTORS

Licensee:Valley Forge Laboratories, INC.  
6 Berkeley Road  
Devon, Pennsylvania 19333

Inspector: Richard Gibson Jr.

Inspection Date: June 29, 1993

- 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 (x ) N
- e. Inadequate consulting services or inadequate audits ( ) Y (x ) N

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

Regional follow-up on above PEFs citations: