

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

**INDUSTRIAL/ACADEMIC INSPECTION FIELD NOTES
REGION II**

Inspection Report No. 92-11 License No. 47-00260-02
Docket No. 30-00652

Licensee (Name & Address):

Union Carbine - Technical Center (Bldg 740)
S. Charleston, WV Kanawha Turnpike

Licensee Contact _____ Telephone No. _____

Last Amendment No. 42 Date of Amendment 5/19/92 Priority 2

Program Code 3610 Date of Last Inspection 7/16/92

Date of Inspection: 7/27-28/92

Type of Inspection: Announced Initial Routine
 Unannounced Reactive Special
 Closeout

Summary of Findings and Action:

- No violation cited, Clear 591 issued
- Violation(s), 591 issued
- Violation(s), Regional letter issued¹
- Violations(s), Escalated Enforcement¹
- Other Regional Action
- Headquarter Action
- Followup on Previous violations

Were non-cited violations identified during this inspection.
 No Yes

¹Documentation of violations in field notes must include, requirement violated, how it was violated, who violated requirement and when it was violated.

²Documentation for non-cited violations (NCV) must include the information included in note 1 above, as well as why the violation is not being cited (Use V.G.1 to identify licensee identified SL IV or V violations and V.A to identify inspector identified SL-V violations) and corrective action taken or planned by the licensee.

A-101

Overall Assessment Licensee Performance: _____

Good

Date of Next Inspection 7/94

Change to Normal Inspection Frequency:

- None
- Reduce Frequency
- Increase Frequency

Explanation for change in Frequency:

Inspector _____
(Signature)

8/4/92
(Date)

Inspector _____
(Signature)

(Date)

Approved [Signature]
(Section Chief Signature)

1/4/93
(Date)

1. ORGANIZATION

a. Briefly describe the organizational structure:

Michael Green → RSO
Jim Rodgers, P.E. → [unclear]
[unclear] → [unclear]

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.

RSC meets at least annually. When tracer studies resume, RSC will probably meet quarterly.

Met 10/28/91, 1/18/91, 2/1/90

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

a. Last inspection conducted on 7/16/92

b. Violations or deviations were identified () Y (X) N

c. Response letter of 591 dated 7/16/92

d. Violations from Previous Inspection

Requirement Violation Corrective Action Taken (Y/N) Status

		N/A	

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

Explain.

3. SCOPE OF PROGRAM

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

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

c. List those individuals contacted during inspection

- * Michael Green, RSO
 - Jim Boggess, Rad. Tech.
 - * Jay Brubaker, Group Leader
- *Indicates presence at exit meeting

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

- ~ 1/2 ECDs in about a month,
- plan to restart some tracer work, haven't done tracer work for "many" years (probably about 10 years)
- ~ half-dozen gauges around center. "Dozens" in storage.
- planned tracer studies will involve C-14 with combination of disposal to sewer, incineration or storage until solids can be disposed of. Talking to Earl about incineration.

4. INTERNAL AUDITS OR INSPECTIONS

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

b. Audits or inspections are conducted () Y () 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:

Briefings by PSO + items in safety letters

(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 in Bldg. 747 (annex)

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
- (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.

*Sealed sources for gauges + ECPs
Plan to begin using unsealed sources (C-14) in tracer studies in about a month.*

b. Leak tests and Inventory

(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.

Sample
~~1991~~
Jul 92
Jan 92
Jul 91
Jan 91
Jul 90
Feb 90

9. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL

- a. Describe how packages are received and by whom: () N/A
Received by rad. protection "staff"
- 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)] *7 when applicable* () 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 on installation and diving leak tests/investives.

11. PERSONNEL RADIATION PROTECTION - EXTERNAL

- a. Film or TLD supplier Lantaver Frequency quarterly, monthly
- b. Supplier is NVLAP - approved () Y () N
- c. Reports reviewed by Rad. tech Frequency on receipt
- d. NRC inspector reviewed personnel monitoring records for period 1/91 to 3/30/92
- e. NRC forms or equivalent
- | | | | |
|------------|-------------|-----------|---------------------|
| (1) NRC-4: | () Y () N | Complete: | () Y () N () N/A |
| (2) NRC-5: | () Y () N | Complete: | () Y () N () N/A |
- [20.401(a)]

- f. List maximum exposures (millirem):
- M Switched from monthly film to quarterly TLD last year.

Remarks.

12. PERSONNEL RADIATION PROTECTION - INTERNAL

N/A

- a. Potential for exposure of individuals to airborne RAM exists
- b. Monitoring for airborne radioactivity conducted [20.201(b) to meet 20.103]
- c. Records maintained [20.401 and L/C]

() Y () N Not at present.
 () Y () N
 () Y () N

- d. Briefly describe licensee's monitoring system for airborne radioactivity [L_C]

Licensee maintains the airborne monitoring instrument as described in licensee application, but is not using it at present since only sealed sources are in use.

- 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
- b. Release in accordance with regulatory limits [20.106(a)]

() Y () N
 () Y () N

Remarks.

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

*Storage, return to manufacturer
 However, see item 3d.*

- 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.

Approx 50 gauges are in storage at the Tech Center. Items d(1)(2) were checked for the gauges in storage.

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, 20, and 21, and license are posted or a notice indicating where documents can be examined is posted [19.11, 21.6] 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
() 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)] | () 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)] | (<input checked="" type="checkbox"/>) Y () N |
| b. Records include all information outlined in [30.35(g)] | (<input checked="" type="checkbox"/>) Y () N |

Remarks.

19. INDEPENDENT MEASUREMENTS

- a. Survey instrument used Xetex 350B
- b. NRC Serial No. 23378
- c. Last date of calibration 5/11/92
- d. Inspector's measurements were compared to licensee's Y () N
- e. Describe the type and results of measurements:

*Readings agreed with licensee's instrument.
No problems identified.*

20. BULLETINS AND INFORMATION NOTICES

a. List of Bulletins, Information Notices, etc. applicable to Licensee that have been issued since last inspection:

b. Bulletins, Information Notices, etc., received by the Licensee Y N

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

Remarks:

21. STORAGE OF LOW-LEVEL RADIOACTIVE WASTE BECAUSE ACCESS TO BURIAL SITE HAS BEEN DENIED (SEE Temporary Instruction 2800/20)

NOTE: Currently applies to licensees in Puerto Rico

a. If LLW is stored because access to a burial site has been denied, answer (1), (2), and (3) below:

(1) Adequate controls 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

Remarks.

NA

22. EXIT INTERVIEW

a. Name and Title of Senior Licensee Representative Present.

Jay Brubaker, Group Leader

b. Issues Discussed (Violations, Non-cited Violations, other issues).

None.

c. Was proprietary information reviewed by or received by the inspector? Yes No

¹Briefly state the requirement and how and when the licensee violated the requirement. For non-cited violations indicate why the violation was not cited.

ATTACHMENT A

PERFORMANCE EVALUATION FACTORS CHECKLIST

Licensee (name & location) Union Carbide - Tech Center
S. Charleston WV

Inspector J. Ennis

Inspection Date 7/27-28/92

- a. Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight () 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
- e. Inadequate consulting services or inadequate audits () Y () N

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

RSC has had little to do for several years. Meeting annually, mostly to meet requirements. RSO says that meeting may go to quarterly when use of unsealed sources resumes in Aug-Sep. 92.

Regional follow-up on above PEFs citations:

Reviewed: DMC 1/4/93
Section Chief Date

ATTACHMENT B

LIST OF OTHER PERTINENT PEFs

- Users not familiar with safety procedures or license conditions
- Excessive missed surveillances
- Lack of audits
- RSO not separated from responsibility for production activities
- Repeated failure to correct violations identified by consultant or licensee
- Failure to implement adequate corrective actions on previous violations
- Inability to readily retrieve records and documentation pertaining to licensed program
- Reportable events/misadministrations since last inspection
- Numerous diagnostic misadministrations
- Numerous repeat violations
- Financial instability of licensee
- Frequent resignations of staff
- Inability to perform all required surveys on time
- Lack of training documentation
- Failure to assess the performance of personnel training
- Allegations/Office of Investigations referrals since last inspection
- Licensee not inventorying radioactive materials
- Lack of structure to identify staff responsibilities
- Company subject to name change, developed into a subsidiary, or transferred
- Failure to provide training to individuals before authorizing them to use licensed materials
- Radiation waste not being disposed of at same rate of generation
- Failure to retrain authorized users
- Inadequate RSO attention to radiation safety program
- Incomplete responses to previously identified violations
- No evidence of licensee capable of responding to a radiological event
- Inadequate surveys
- RSO spends insufficient time at facility
- Identified violations similar to those previously identified

APR 18 1990

ENCLOSURE 1

MATTER TO BE REVIEWED DURING INSPECTION

Licensee: Wison Carbide-Tech. Center
Location: S. Charleston, W. V. License No. _____

PART 1 (INITIAL INSPECTION)

Type of matter to be looked into:

None

Special Instructions/Details:

 _____ Initial Inspector	_____ Date
_____ Section Chief Review	_____ Date

PART 2 (FOLLOW-UP INSPECTION)

Follow-up Action

Status (Open/Closed):

_____ Follow-up Inspector	_____ Date
_____ Section Chief Review	_____ Date

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MEMORANDUM TO LICENSE REVIEWER
 DESIGNATING PROBLEM AREA(S) THAT SHOULD BE ADDRESSED
 DURING THE NEXT LICENSE REVIEW

Inspector Name: J. Ennis
Date: 7/27/92
License Number: 47-00260-02
Licensee Name and Address: Union Carbide - Technical Center S. Charleston, WV
Specific license condition or date of application or letter that needs to be reviewed (identify type of document and date): L.C.s 6 + 10
Give a brief description of the problem you noted with this license. If there is more than one problem area, number the items or use a separate sheet for each item: LC 10 refers to conditions 6A, 6B, + 6D. There is no condition 6D. It is intended to authorize all nitric (6A, 6B, + 6C) to be used at the Tech Center +

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ENCLOSURE 3

**Materials
Event/Incident Follow-up**

Licensee Name and Address:

License Number:

Part 1 (Initial Notification)

Description of Event/Problem:

Recommended Action:

Inspector/Reviewer

Date

Section Chief

Date

Part 2 (Follow-up Action)

Description of Action Taken:

Status:

Follow-up Inspector

Date

Section Chief

Date