

LICENSEE: RTI

REPORT NO. 90-004

ADDRESS: 108 Lake Denmark Rd

Rockaway, NJ 07866

LICENSEE CONTACT: John Schlecht

Telephone No. _____

LICENSE NUMBER	DOCKET NUMBER	CATEGORY	PRIORITY	PROGRAM CODE
<u>29-13613-02</u>	<u>030-0702a</u>	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

INSPECTION DATE(S) 12/20/90
INSPECTION LOCATION(S) _____

TYPE OF INSPECTION

Rockaway Facility

- SPECIAL ROUTINE
- ANNOUNCED UNANNOUNCED
- DAYSHIFT BACKSHIFT

SUMMARY OF FINDINGS AND ACTION

- NO NONCOMPLIANCE, 591
- NO NONCOMPLIANCE LETTER
- NONCOMPLIANCE, 591
- NONCOMPLIANCE, LETTER
- ACTION ON PREVIOUS NONCOMPLIANCE, APPENDIX B
- SUPPLEMENTAL INFORMATION, APPENDIX C

PERSONS CONTACTED (Name, Title)

- * John Schlecht, Site RSO/Plant Mgr
- * Paul Shapiro, Corp RSO
- * J. Scandalios, President
- Andy Friedrich, Q.C. tech/Operator
- JAMES Farmer, Operator
- Angel Cordero, Operator Trainee

* attended exit meeting

Mildred Taylor 12/31/90
Inspector Signature, Date

Alann Roberts 1/14/91
Inspector Signature, Date

APPROVED _____

1. ORGANIZATION

a. Describe the management structure.

President C NC C NCb. Describe the radiation protection organization. C NC*Pres. (J. Scandalios)**Corp. RSO (P. Shapiro)**site RSO (J. Schlecht)*c. Individuals identified in the license as being responsible for the programs still hold these positions. C NCd. Audit and/or Management Control program conducted as required. C NC NA NI1. records maintained y/n/na/ni2. appropriate scope y/n/na/ni3. deficiencies identified and corrected y/n/na/niComments*quarterly audits still conducted by Mike Stobidzin. No problems requiring a written response have been identified.**Only audits are performed by the corporate RSO. Written report of audit given to site RSO. Corrective actions were taken for identified deficiencies*

2. Scope of Licensed Activities

(C) NC

- a. Describe the types of current activities.

(C) NC

Commercial Irradiation of pharmaceuticals, spices, ~~etc~~ and cosmetics
 No irradiation of flammable or explosive material.

- b. Describe the current workload in terms of the number of workers, number of shifts, or other appropriate information.

7 days per week

3 shifts per day except Sat. & Sun (2 shifts)

3 people per shift (1 operator & 2 materials handlers)

- c. Describe any changes since the last inspection, and any which may be planned.

Comments

Plan to add more sources in Spring (March - May)
 @ 200,000 Ci

3. TRAINING AND INSTRUCTIONS TO EMPLOYEES C NC

- a. Instruction to all persons working in a restricted area (19.12). C NC NA NI
- b. Additional required training for operators and other specified workers. C NC NA NI
1. approved training program y/n/na/ni
 2. training provided by John Schlecht
 3. operators completed on-the-job training y/n/na/ni
 4. tests are given
 - a. written tests y/n/na/ni
 - b. oral y/n/na/ni
 - c. practical y/n/na/ni
 - d. records of tests maintained y/n/na/ni
 - e. deficiencies noted and corrected y/n/na/ni
 5. training records reviewed by NRC inspector for period 7-90 to 12-90
 6. qualified operator on site during all irradiator operations y/n/na/ni
- c. Periodic training is implemented as required. C NC NA NI
1. records of retraining maintained y/n/na/ni
 2. Describe frequency and scope of periodic training: ~1-2 hours / month

Comments

M. Heminger qualified as operator 95% on written test

T. Strausser expected to be approved any day
passed test - pending RSO approval

2 material handlers still have not passed Radiation Safety Test due to language barrier. (they are Spanish speaking and do not have a good command of the english language.)

These individuals are prohibited from entering the irradiator cell. Notices stating this are posted in the control room.

4. MATERIALS, FACILITIES, AND EQUIPMENT

(C) NC

a. Materials inventory as authorized by license. (C) NC

1. type and quantity authorized y/n/na/ni
2. six-month inventory as required by license y/n/na/ni
3. inventory records reviewed for the period 5-90 to 12-90
4. current inventory: 1.18 Million Curies as of 12-90 (date)

b. Irradiator facility safety systems as required. (C) NC NA NI

1. posted as required by 20.203(c)(1) yes/no
2. interlocked as required by 20.203(c)(2)(i) yes/no
3. entrance controlled in accordance with 20.203(c)(2) yes/no
4. exit controlled in accordance with 20.203(c)(3) yes/no
5. entry control devices function as required by 20.203(c)(6) yes/no
6. visible and audible signals operate correctly to warn of the presence of radiation: 20.203(c)(6) yes/no
7. level control for liquid shield: 20.203(c)(6)(iii) yes/no
8. source exposure procedure used yes/no
9. control devices tested at intervals required by 20.203(c)(6)(vii) yes/no
10. product carriers inspected as required: LC yes/no
11. records of control devices tests maintained yes/no

c. Inspector observed proper operation of the following:

1. personnel door interlock pass/fail/not tested
2. product conveyor door interlock pass/fail/not tested N/A
3. maze radiation monitor pass/fail/not tested
4. exit portal radiation monitor pass/fail/not tested N/A
5. visible and audible signals pass/fail/not tested
6. level control alarm for liquid shield pass/fail/not tested
7. clearance of cell at startup pass/fail/not tested
8. emergency shutdown switch in cell pass/fail/not tested
9. ventilation system interlock pass/fail/not tested

Other:

Entrance to cell cannot be achieved until
RESET pushed on RMS II near controls
and < 1mc/hr in maze.

d. Postings and labelings as required (C) NC NA NI

1. 20.203(b) radiation area y/n/na/ni
2. 20.203(e) use or storage areas with "Caution - Radioactive Material" y/n/na/ni
3. 20.203(f) containers and devices properly labeled y/n/na/ni
4. 19.11(a)(b) posting of documents y/n/na/ni
5. 19.11(c) posting of NRC-3 y/n/na/ni

Signs are in both Spanish and English.

5. INSTRUMENTS, EQUIPMENT, AND DEVICES

(C) NC

a. calibrated and operable meters available and used properly.

(C) NC NA NI

1. number, type, and ranges (e.g 2, ion chamber, 1 R/hr)

Number	Type	Range
2	Electrode PC6	—
2	" E-120	—
2	Ludlum #5	—
1	" #19	—

1 Ludlum #3

2. 2 mR/hr through 1 R/hr can be measured

(y) n/na/ni

3. calibrated by: Radiation Measurement / Eberline

(y) n/na/ni

4. calibration method as authorized

(y) n/na/ni

5. calibration performed as required frequency: 6 month

(y) n/na/ni

b. Water treatment systems function as required.

(C) NC NA NI

1. conductivity and pH tested and maintained within license limits.

(y) n/na/ni

2. current water quality:

conductivity 180-325 microsiemen/cm date: 7/1/90 - 12/20/90

pH 7.7-4.9 date: 7/1/90 - 12/20/90

3. ion-exchange resin replaced regenerated last date:

c. other special equipment (pool water monitors, ion-exchange resins, ventilation systems, automatic fire extinguishing system, etc.) operable and available as described in license

(C) NC NA NI

Describe:

annual Fire suppression system test is to be conducted last week of December.

Comments

All weekly, monthly, quarterly, & annual PM OK

There are a few items of 4th quarter & annual left to be done

6. RECEIPT AND TRANSFER OF MATERIALSC NC NA **NI**

- a. Procedures for picking up, receiving, and opening of packages performed as required by 20.205. C NC NA NI
1. written procedures available y/n/na/ni
 2. procedures approved in application y/n/na/ni
 3. survey of packages when received y/n/na/ni
 4. 20.401 records of survey of packages y/n/na/ni
 5. 20.401 records of receipt of packages y/n/na/ni
- b. Source loading procedures performed. C NC NA NI
1. date of last source load:
 2. radiation survey performed y/n/na/ni
 3. record of survey maintained y/n/na/ni
 4. report of survey sent to NRC y/n/na/ni
- c. Licensed material transferred as required. C NC NA NI
1. 30.41 verification of recipient's license y/n/na/ni
 2. 20.401, 30.51 records maintained y/n/na/ni
 3. Licensee makes shipments of radioactive materials
 - a. delivered by common carrier yes/no
 - b. transported in licensee's own vehicle as a private carrier. yes/no

*IF ABOVE IS ANSWERED "YES", COMPLETE 6.A: TRANSPORTATION

Comments

No new sources during July - Dec. 1990
 Presently have @ 30 drums of contaminated soil on site
 which they will be shipping to Barnwell, S.C. within the next
 few months.

6.A TRANSPORTATIONC NC NA **NI**

1. Are authorized packages used	173.415-416	yes/no
2. Types of packages used (for example, DOT-7A)	173.415	
3. Performance test records on file	173.416(a)	yes/no
4. Licensee aware of 6/30/85 cutoff on use () certified	173.416(b)	yes/no
5. NRC COC's on file	71.12(c)(1)	yes/no
6. Registered with NRC as user	71.12(c)(3)	yes/no
7. Documented NRC-approved Q/A program? NRC Q/A Approval number	71.12(b)	yes/no
8. Special Form Material Performance test records available for each source design	173.476(a)	yes/no/na
9. packages labeled as required	172.403 (a-f)	yes/no
a. Excepted		
b. White I		
c. Yellow II		
d. Yellow III		
10. surveys performed to select correct label category and compliance with radiation limits	175.475(i)	yes/no
11. Packages marked as required with	172.300-310	yes/no
a. shipping name		yes/no
b. Spec No.		
c. Certificate of Compliance Number (COC No.) etc.		
12. Shipping papers are prepared for each shipment	172.200	yes/no
13. Shipping papers contain required information	172.203(d)	yes/no
14. For private carrier shipments:		
a. vehicles placarded as required	172.500,504	yes/no
b. cargo blocked, braced, tied down in vehicle	177.842(d)	yes/no
c. any incidents reported to DOT	171.15-16	yes/no
15. Licensee carries shipping papers that are readily accessible when transporting radioactive material		

Comments

No transportation of material from July 1990 to
Dec. 1990

7. PERSONNEL MONITORING

a. Personnel dosimetry assigned and worn.

 C NC NA NI C NC NA NI

1. whole-body badge used

 y/n/na/nia. film _____ TLDb. exchange frequency: Monthlyc. supplier hand over

d. supplier NVLAP accredited 20.202

 y/n/na/ni

2. workers observed wearing dosimetry

 y/n/na/ni

b. Personnel dosimetry reports maintained.

 C NC NA NI1. records reviewed by management at a frequency of: monthly y/n/na/ni2. NRC inspector reviewed personnel monitoring records from July 90 to Dec 90 y/n/na/nia. whole body quarterly dose: typical "M"max 10 mrb. extremity quarterly dose: typical "M"max 10 mr

3. NRC forms or equivalent records completed

 y/n/na/ni

a. NRC-4

 y/n/na/ni

b. NRC-5

 y/n/na/ni

4. Termination and annual reports to individuals and NRC, as required by 20.407 and 20.408

 y/n/na/niComments

RESULTS

8. RADIATION SURVEYS AND LEAK TESTS

(C) NC NA NI

a. Facility and unrestricted area surveys conducted.

(C) NC NA NI

1. area or facility surveys recorded (y/n/na/ni)
2. surveys performed as required (y/n/na/ni)
3. frequency: quarterly (direct meas. + ^{contam.} swipes) (y/n/na/ni)
3. appropriate instruments used (y/n/na/ni)
4. NRC inspector reviewed survey records for the period 7/90 to 12/90
5. maximum radiation levels in unrestricted area: < 2 mR

b. Leak tests of sealed sources performed

(C) NC NA NI

1. performed by user and method approved (y/n/na/ni)
2. leak testing method used:
 - water sampling (yes/no)
 - ~~continuous monitoring of ionizers~~ (yes/no)
 - ~~periodic monitoring of ionizers~~ (yes/no)
 - ~~direct wiping of sources~~ (yes/no)
3. tested at six-month intervals 34.25(b) (y/n/na/ni)
4. records maintained (y/n/na/ni)
5. records reviewed by NRC inspector for the period 8/29/90 to 12/20/90

Comments

last leak test performed on 8/29/90 results were $< 1.0 \times 10^{-6}$ /el

9. EFFLUENT CONTROL AND WASTE DISPOSAL

C NC NA NI

a. Releases with the environment in accordance with requirements.

C NC NA NI

1. liquid releases are made to sewer unrestricted areas

y/n/na/ni

a. evaluations are adequate

y/n/na/ni

b. releases are within limits: 20.106, 20.303

y/n/na/ni

c. typical concentrations: records not reviewed.

2. records maintained

y/n/na/ni

3. describe disposal of water from the regeneration of ion-exchange resins, if applicable:

water from regeneration are collected in hold-up tank pH adjusted and sampled prior to release.

- but not reviewed
no regeneration took place from July 31, 1990 to December 20, 1992

b. Waste disposal in accordance with requirements.

C NC NA NI

1. Describe disposal of replaced resin, if applicable:

2. Describe any other methods of waste disposal:

3. Records of waste transfers maintained

y/n/na/ni

NO resin regeneration or replacement from July 31, thru Dec. 20, 1992

c. Burial of licensed material done in past.

Yes/No

1. location of past burials: outside machine room; NW corner of fenced area.

2. types of materials buried: miscellaneous waste.

3. describe the types of surveys performed, results, etc:

d. 10 CFR Part 61 requirements reviewed

y/n/na/ni

Comments

licensee has conducted study to determine if additional material ~~has been~~ is buried on site. All contaminated soil above 15 pCi/g has been removed & drummed. Licensee will be submitting a formal report no later than the end of January 1991.

10. NOTIFICATIONS AND REPORTS

C NC NA NI

a. Licensee is in compliance with

- 1. reports of thefts or losses (20.402)
- 2. reports of incidents (20.403)

y/n/na/ni
y/n/na/ni

b. Licensee took appropriate action in response to the following Bulletins, Circulars, and Information Notices.

y/n/na/ni

- 1. _____
- 2. _____
- 3. _____

Comments

11. OTHER LICENSE CONDITIONS NC NA NI

List any other license conditions which were reviewed during the inspection, and describe the results.

- a. *HE. Marten Welt, William Touris and Thomas Powell do not perform services for the company. Not are they an officer, employee or consultant of the company.* NC

b.

 NC

c.

 NCComments

12. INDEPENDENT AND CONFIRMATORY MEASUREMENTS

C NC NA NI

a. Areas Surveyed

Results

<u>area outside cell door (source up)</u>	<u>< 2.0 mR/hr</u>
<u>area around pool (source down)</u>	<u>1.0 mR/hr</u>
_____	_____
_____	_____

b. Survey Instruments Used

1. Type	a. <u>Ludlum 14C</u>	b. _____
2. NRC #	a. <u>019617</u>	b. _____
3. last calibration date	a. <u>7-2-90</u>	b. _____

c. Pool Water Sample

NRC - measured concentration _____

Licensee - measured concentration _____
(attach NRC lab results to field notes)

Comments

APPENDIX A - DOCUMENTATION OF NONCOMPLIANCE

Requirement	Basis for noncompliance
1. 10 CFR _____ Lic Cond _____ <i>clear</i>	
2. 10 CFR _____ Lic Cond _____	
3. 10 CFR _____ Lic Cond _____	
4. 10 CFR _____ Lic Cond _____	
5. 10 CFR _____ Lic Cond _____	
6. 10 CFR _____ Lic Cond _____	

APPENDIX B - LICENSEE ACTION ON PREVIOUS INSPECTION FINDINGS

Identification and summary of action taken	Status
Report No: _____ Severity Level _____ Describe previous violation: Corrective Action taken:	OPEN CLOSED
Report No.: _____ Severity Level _____ Describe previous violation: Corrective Action taken:	OPEN CLOSED
Report No: _____ Severity Level _____ Describe previous violation: Corrective action taken:	OPEN CLOSED

APPENDIX B (continued)

Identification and summary of action taken	Status
Report No: _____	Severity Level _____
Describe previous violation:	
Corrective action taken:	OPEN
	CLOSED
Report No: _____	Severity Level _____
Describe previous violation:	
Corrective action taken:	OPEN
	CLOSED
Report No: _____	Severity Level _____
Describe previous violation:	
Corrective action taken:	OPEN
	CLOSED

APPENDIX C - SUPPLEMENTARY INFORMATION

Unusual occurrence, conditions, etc.

Unresolved items

Description of attachments to field notes

Inspector's comments

ATTACHMENT A

PERFORMANCE EVALUATION FACTORS CHECKLIST

Licensee
(name &
location)

Process Technology of North Jersey
108 Lake Denmark Rd
Rockaway, N.J.

Inspector

Marlene Taylor

Inspection Date

12/20/90

- 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):

licensee is making great strides in improving their Radiation Safety Program.

Regional follow-up on above PEFs citations: