

JAN 25 1977

License No. 29-02786-03

✓ Ethicon, Incorporated
Manufacturing Division
ATTN: Dr. Charles Artandi
Vice President for Research
and Development
Somerville, New Jersey 08876

Gentlemen:

Subject: Region I Inspection No. 76-02

This refers to the inspection conducted by Dr. J. Glenn of this office on December 30, 1976 and January 14, 1977 of activities authorized by NRC License No. 29-02786-03 and to the discussions of our findings held by Dr. Glenn with yourself and Mr. Kendra of your staff at the conclusion of the inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

In addition, our inspector took samples of your irradiator pool water which were analyzed in our Regional Office Laboratory. The basic purpose of these independent measurements is to verify your capability for analyzing radioactive contaminants in pool water to determine the presence of leaking sealed sources. The results of our analysis showed that the activity in the pool water was below the minimum detectable activity. This result is in agreement with your analysis.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room.

8507130329 850502
PDR FOIA
@IDWANIB4-705 PDR

| | | | | | | |
|-----|---------|----------|----------|---------|--|----|
| WPC | OFFICE | FFMSB | FFMSB | FFMSB | | |
| | SURNAME | Glenn/16 | McCrinck | Nelson | | 42 |
| | DATE | 1/24/77 | 1/24/77 | 1/24/77 | | |

Ethicon, Incorporated

2

JAN 25 1977

No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

bcc:

IE Mail & Files (For Appropriate Distribution)

Central Files

Public Document Room (PDR)

Local Public Document Room (LPDR)

Nuclear Safety Information Center (NSIC)

REG:I Reading Room

State of New Jersey

| | | | | | |
|---------|--|--|--|--|--|
| OFFICE | | | | | |
| SURNAME | | | | | |
| DATE | | | | | |

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
REGION I

IRRADIATOR INSPECTION

(Field Notes)

Licensee *Ellison, Inc*
Somerville, N.J.

Facility *Somerville, N.J.*

License No. *29-02786-03*

Inspection Date *10/21/77*

Principal Inspector
C. Stearns, Radiation Specialist

Other Accompanying Persons
R.O. McIntyre, Chief Engineer
Rad. Safety Officer, TFE & MS

Individuals Interviewed
a. *VINCE FOERST, Spv. of Maintenance Dept.*
b. *Edward J. KENDRA*
c. *JOHN KOSIEROWSKI*
d. *Frank Thompson*
e. *Dr. Charles A. RIZZO - R. for RSO*

Titles
e. *Operator*
f. *Senior Technical Services*
g. *Operator*
h. *Operator*

Date of Interview

Place of Interview *also RSO*

(Demonstration of operation of over irradiation system)
(no formal interview)

Name of RSO
EO Kendra

Telephone No. of RSO *8-342-5500*
524
3913

Enforcement Action(s)
none

201-524-3913

R. McIntyre

A. Scope of Program

1. Number of individuals occupationally exposed 4 operators — 2 on day, 2 on night
2. Type of Irradiator (eg. Pool, Pit, etc.) room
3. Number of Curies 1,350, 409 of Co-60
4. Frequency of use: almost continuous times per embroidery night day
(8 shifts)

B. Exposure Evaluation

1. Personnel

- a. Film Badge X — minimal exposures
b. Dosimeter _____
c. Other _____

2. Facility

- a. Independent area radiation monitor YES
b. Survey meter when enter HRA key attached to survey meter

C. Surveys

1. Radiation levels in unrestricted areas Survey monthly — (with record)
2. Contamination smears in restricted area almost all ~~that~~ sampling
3. Leak Tests inspector at main entrance within main
and outside entrance to
a. Frequency semi annually — more — all negative
b. Method adequate wipes as per procedure — then sent to AEC for analysis
4. Interlocks into HRA
a. Frequency of Testing monthly — who
b. Functional at time of inspection yes — See Exh A, attached

W. B. Inspectors

(Removed and
attached to
7801 Field Notes)

c. Are they intentionally bypassed or deleted. Yes No

(1) Procedure if yes

either can be opened by V they if necessary (spec)

d. In accordance with license?

e. Adequate?

5. Routine maintenance of Hot cell equipment adequate. Yes No

D. Instrumentation

1. Adequate type and number: Yes No

2. Calibration as required: Yes No

E. Evaluation of Effluent

1. Liquid

2. Airborne

F. Training

1. Std. Procedures

2. Emergency Procedures

3. NRC Regulations

G. Signs/Posting

1. CRM

2. CHRA

3. 19.11

CHRA

etc

According to Kendra:-

Instruction by Kendra RSO

New prospective operators

remains a trainee for 6 months

Primarily O.T.D., plus

instruction by RSO

Then check whether qualified

by 1 1/2 hr. oral quiz by

Kendra

H. Evaluation of Incoming Packages (20.205)

Normally, only ~~Ethicon~~ ^{or sister companies} products are irradiated.

I. Disposal

Any unwanted ^{sources} i.e. leaking, or etc. —
would be returned to A ECL

J. Evaluation of Outgoing Shipments - (DOT)

n/a

K. Unusual Occurrences or Events

none ✓

L. Independent Measurements (Van, Inspector) ✓

(a) 5 cc ¹⁴⁰ml sample of ~~hot~~ water taken from pool.
Results of analyses at I:E:I → $< 10^{-7}$ μ Ci/ml

(b) ¹⁴⁰snipes at maze entrance; within maze;
and in ~~area~~ area outside of maze entrance.
Results of analyses at I:E:I → negative

(c) ~~Sw~~ Duit reading survey in control room with sources
exposed, and in facility with sources down.

H. Evaluation of Incoming Packages (20.205)

Normally, only ~~Ethanol~~ ^{or sister companies} products are included.

I. Disposal

Any unwanted ^{sources} — i.e. leaking, or etc. —
would be returned to A E C L

J. Evaluation of Outgoing Shipments - (DOT)

none

K. Unusual Occurrences or Events

none ✓

L. Independent Measurements (Van, Inspector) ✓

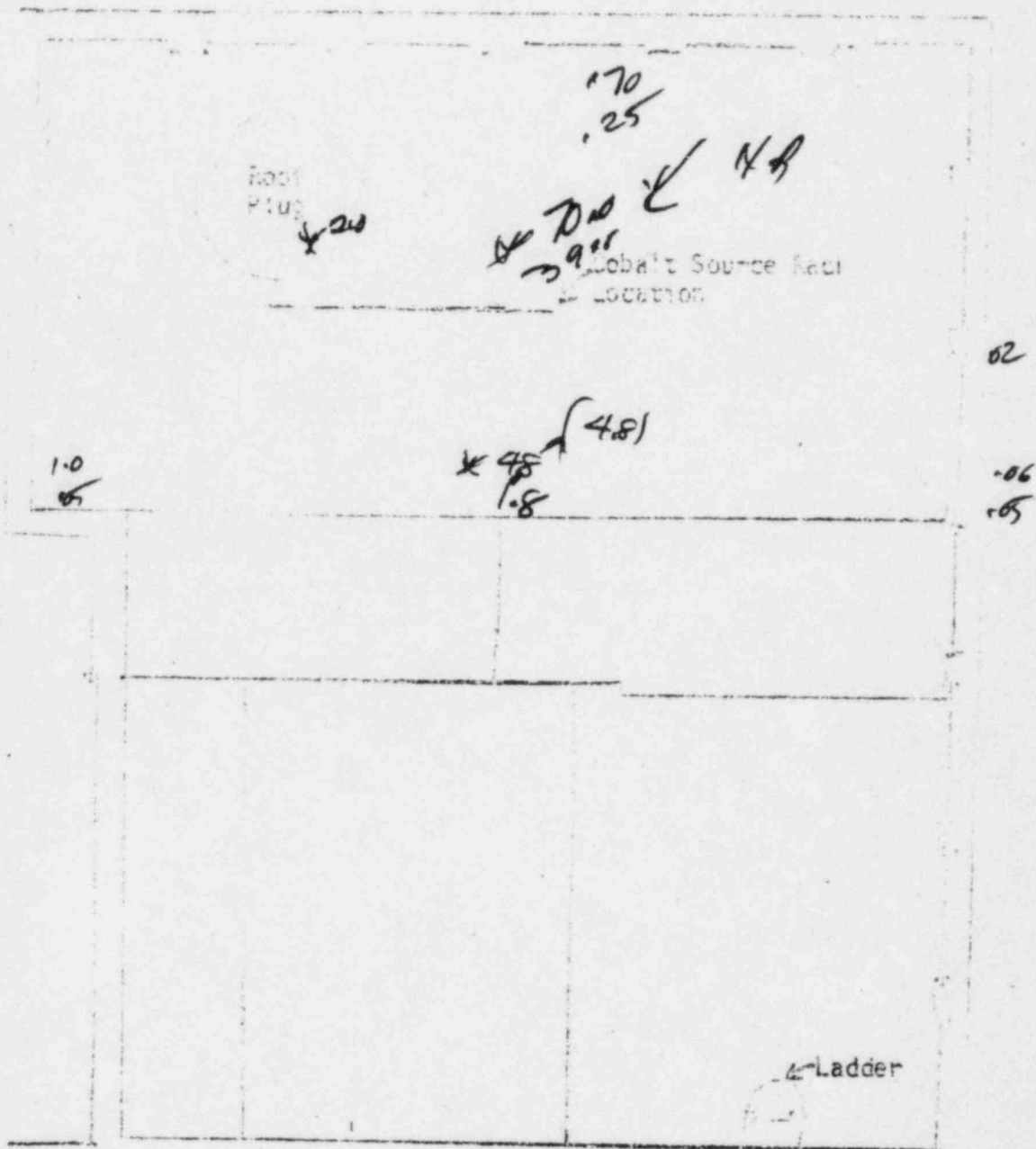
(a) 500 ml sample of ~~pool~~ water taken from pool,
Results of analysis at I: E: I → ~~< 10⁻⁷ g/ml~~

(b) ^{H₂O} swipes at maze entrance; within maze;
and in ~~area~~ area outside of maze entrance.
Results of analysis at I: E: I → negative

(c) ~~Sw~~ Dust reading survey in control room with sources
exposed, and in facility with sources down.

RADIATION SURVEY OF THE ENHICON, INC., SOMERVILLE, N.J., COBALT 60 UNIT
(Source in Operating Position Except Where Noted)

A. Background mr/hr.
B. Exterior - Ground Level mr/hr.
Height Level see diagram mr/hr.



C. Interior - Maze Barrier 0.28 mr/hr.
Source Cable Ports 0.20 mr/hr.
Guide Cable Ports 0.30 mr/hr.
Viewing Window 0.03 mr/hr.
Wall Plug 0.01 mr/hr.
Cell (Source Down) 0.01 mr/hr.

Total Inventory of Cobalt 60 on date of Survey 1,365.291 Curies
Date of Survey 9/28/77
Survey Meter " " Serial Number
Survey Meter " " Serial Number
Survey Made By [Signature] [Signature] [Signature]

Summary: Signed [Signature]
Radiation Safety Officer