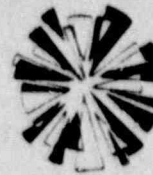


Radiation Technology, Inc.

CORPORATE OFFICE
51 GIBRALTAR DRIVE, SUITE 3B, MORRIS PLAINS, N.J. 07950
(201) 898-0042



April 10, 1987

Docket No. 030-07022
License No. 29-13613-02

RECEIVED

Mr. Thomas T. Martin, Director
Division of Radiation Safety and Safeguards
United States Nuclear Regulatory Commission
531 Park Avenue
King Of Prussia, PA 19406

'87 APR 20

Dear Mr. Martin:

RE: Procedure Revisions for Provisional License

Enclosed, for your approval, are the following revised procedures for the Rockaway facility:

- 9.101.A IRRADIATOR SHUTDOWN NORMAL
- 9.200.A EMERGENCY SHUTDOWN
- 9.203.A FIRE IN RADIATION ROOM EMERGENCY
- 9.504.B IRRADIATOR SOURCE MOVEMENT LOG

Also, enclosed is a check for \$230 to cover the amendment fee.

Please do not hesitate to contact me at 201-625-8400, if you have any questions.

Sincerely yours,

Tass Varaklis

Tass Varaklis
Vice President Operations and Engineering

TV:jat
Enclosures

cc: Mr. Paul Shapiro - Vice President - Quality
Mr. Les Ross - Director of Training

Log	Apr 12
Remitter	
Check No.	238
Amount	\$230
Fee Category	39 3P
Type of Fee	Amendment
Date Check Paid	4/23/87
Date Computed	4/23/87
By:	J. Kimberly

"OFFICIAL RECORD COPY"

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REG1 LIC30
29-13613-02 PDR

Facility: ROCKAWAY	Department: IRRADIATOR OPERATIONS	Page 1 of 3
Subject: IRRADIATOR SHUTDOWN NORMAL		Section/Number/Revision 9.101.A
		Effective Date: March 6, 1987
Prepared By: <i>R. G. Cockrell</i> R. G. COCKRELL	Approved Technically: <i>R. G. Cockrell</i> R. COCKRELL	Approved By Quality: <i>P. O. Shapiro</i> P. O. SHAPIRO

1.0 PURPOSE

To describe the process for performing a normal shutdown on the irradiator facility.

2.0 SCOPE

Applies to irradiator operators at the Rockaway facility.

3.0 REFERENCES

NRC License #29-13613-02

4.0 DEFINITIONS

4.1 Normal Shutdown - the termination of irradiator operations not dictated by emergency or similar abnormal circumstances.

4.2 Inadvertent Shutdown - the termination of irradiator operations due to the initiation of an automatic shutdown function.

5.0 EQUIPMENT/MATERIAL REQUIREMENTS

None

6.0 SAFETY REQUIREMENTS

None

7.0 PROCEDURE

7.1 The irradiator operator shall perform the following on a normal shutdown prior to completion of a normal irradiation cycle.

7.1.1 Observe the conveyor control panel to ensure a completed shuffle has occurred (all green lights for piston positions).

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Subject: IRRADIATOR SHUTDOWN NORMAL		Section/Number/Revision 9.101.A
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7.0 PROCEDURE (CONT)

- 7.1.2 Observe the time remaining on the master timer.
- 7.1.3 Push the STOP button and observe:
- 7.1.3.1 The SOURCE UP light extinguishes.
- 7.1.3.2 The source-in-motion horn sounds.
- 7.1.3.3 The SOURCE DOWN light energizes.
- 7.1.3.4 The maze monitor radiation level decreases.

Note: If during a normal shutdown the source fails to return to the shielded position and bleeding the air supply to the source hoist assembly will not lower the source, notify the Radiation Safety Officer immediately.

- 7.1.4 Turn the machine key switch to the OFF position.
- 7.1.5 Remove the key.
- 7.1.6 Place the key in the power switch and turn to reset to clear the alarm.
- 7.1.7 Push the ALERT light on the maze monitor when the radiation level decreases below 8 times background.
- 7.1.8 Turn the power key switch to the ON position.

Note: To restart the irradiator use RTI Procedure 9.100.

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Subject: IRRADIATOR SHUTDOWN NORMAL		Section/Number/Revision 9.101.A
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7.0 PROCEDURE (CONT)

7.2 The irradiator operator shall perform the following on a normal shutdown which completes the run cycle.

7.2.1 Perform steps 7.1.8

7.3 If the irradiator is

7.3.1 Turn the power key switch to OFF.

7.3.2 Stand in the storage area and

7.4 IN ADVERTENT SHUTDOWNS:

7.4.1 Determine the cause of the shutdown.

7.4.2 Turn the power key switch to the reset position to clear all alarms.

NOTE: If the alarms will not clear or the cause can not be determined contact the RSO, or his alternate as designated in the license before proceeding.

7.4.3 Perform a normal start up per Procedure No. 9.100

8.0 EXHIBITS
None

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Subject: EMERGENCY SHUTDOWN		Section/Number/Revision 9.200.A
		Effective Date: March 6, 1987
Prepared By: <i>Robert G. Cockrell</i> R. G. COCKRELL	Approved Technically: <i>Robert G. Cockrell</i> R. COCKRELL	Approved By Quality: <i>P. O. Shapiro</i> P. O. SHAPIRO

1.0 Purpose

To provide a guideline for the actions to be taken if a manual emergency shutdown of the irradiator is required.

2.0 Scope

Applies to all qualified operators of the RTI 2102 irradiator.

3.0 References

NRC License #29-13613-02

4.0 DEFINITIONS

None

5.0 EQUIPMENT/MATERIAL REQUIREMENTS

None

6.0 SAFETY REQUIREMENTS

None

7.0 PROCEDURE

7.1 There are two emergency shutdown switches associated with the RTI Model 2102 irradiator.

7.1.1 A cable actuated switch is located inside the radiation room. This switch can be pulled to immediately shut down the irradiator in case of an emergency.

7.1.2 A "STOP" button is located on the control panel outside the radiation room. Push the "STOP" button to immediately shut down the irradiator.

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7.0 PROCEDURE (cont)

7.2 Another method to perform an emergency shutdown is to disconnect the air feed line located in front of the access gate. This will cause a loss of air supply to the plaque hoist assembly and lower the source to the shielded position.

NOTE: Location of shutdown switches and air line is shown in Exhibit A.

7.3 After clearing up the emergency situation, the irradiator may be restarted by conducting a normal startup per procedure 9.100.

7.4 If during shutdown the source fails to return to the shielded position and bleeding the air supply to the source hoist assembly will not lower the source, notify the RSO or RSS immediately.

7.5 Log into the supervisors log book all details of the emergency shutdown and related corrective actions.

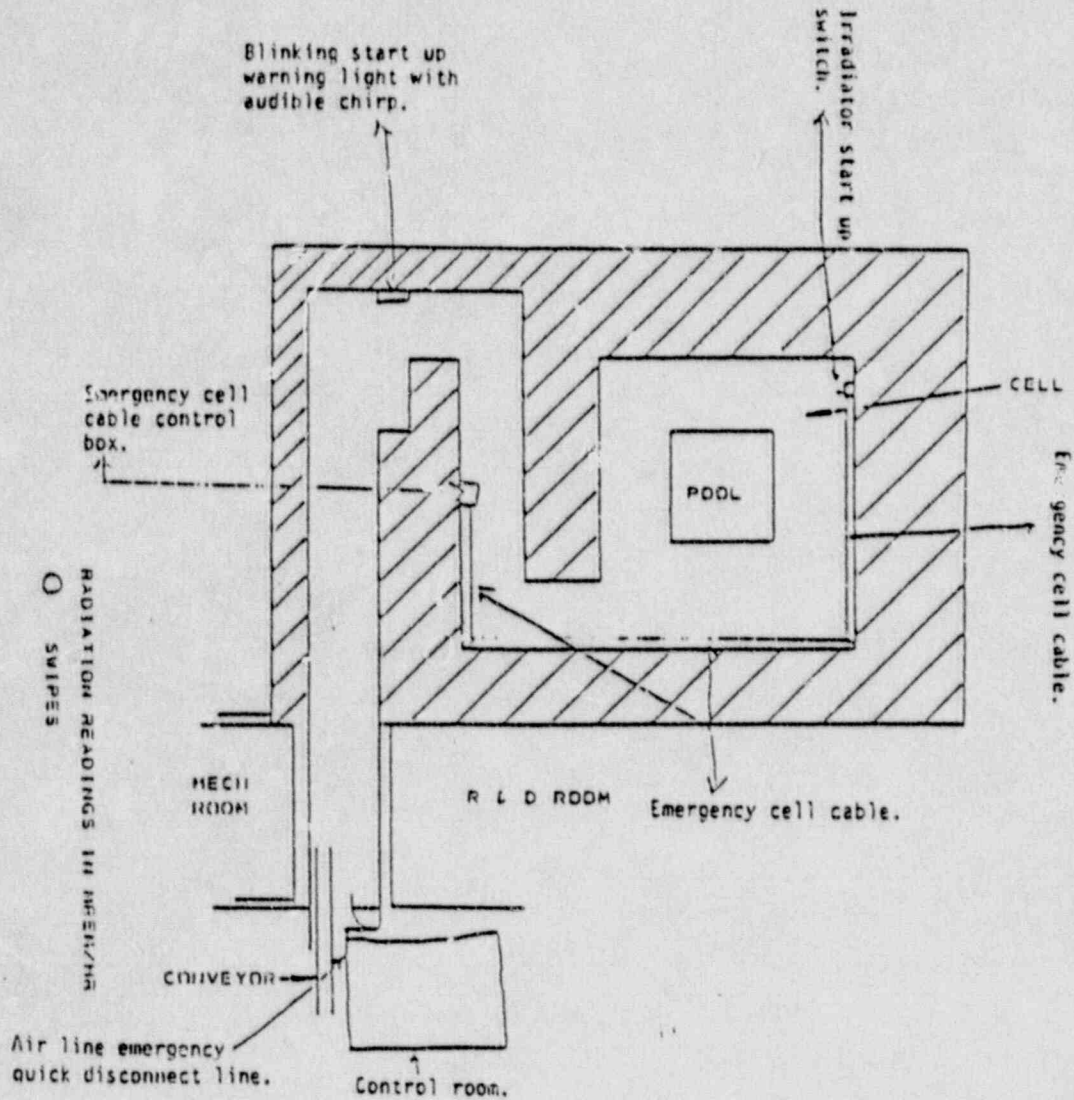
7.6 Notify the RSO of all unusual events.

8.0 EXHIBITS

A - Shutdown Switch and Air Line Location Maps

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		Effective Date: March 6, 1987

Exhibit A
1 of 2



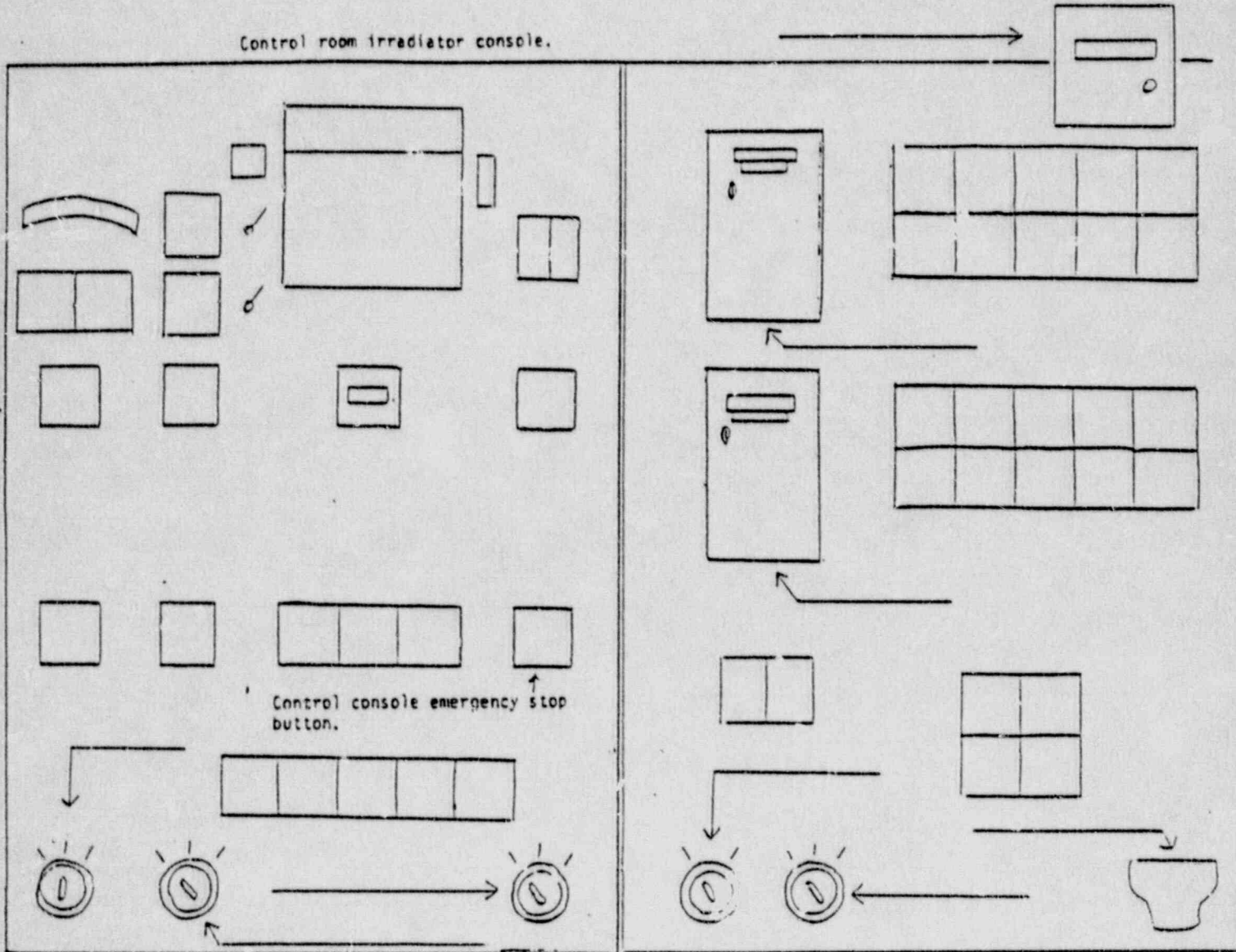
Subject: EMERGENCY SHUTDOWN

Section/Number/Revision
9.200.A

Effective Date:
March 6, 1987

Exhibit A
2 of 2

Control room irradiator console.



Facility: ROCKAWAY	Department: IRRADIATOR OPERATIONS	Page 1 of 3
Subject: FIRE IN RADIATION ROOM EMERGENCY		Section/Number/Revision 9.203.A
		Effective Date: March 6, 1987
Prepared By: <i>R. G. Cockrell</i> R. G. COCKRELL	Approved Technically: <i>R. G. Cockrell</i> R. COCKRELL	Approved By Quality: <i>P. O. Shapiro</i> P. O. SHAPIRO

1.0 PURPOSE

To describe the procedure for responding to a fire in the radiation room.

2.0 SCOPE

Applies to irradiator operators and materials handlers at the Rockaway facility.

3.0 REFERENCE

None

4.0 DEFINITIONS

None

5.0 EQUIPMENT/MATERIAL REQUIREMENTS

5.1 Calibrated radiation survey instrument

5.2 Portable fire extinguisher

6.0 SAFETY REQUIREMENTS

6.1 Do not enter the radiation room until the smoke has cleared enough to read a radiation survey instrument.

7.0 PROCEDURE

7.1 In the event of smoke or any other indication of fire coming from the maze, the operator shall perform the following functions:

7.1.1 Push the STOP button to lower the source.

NOTE: The source should have automatically lowered due to the high temperature indication in the radiation room.

7.1.2 Shut down the conveyor system.

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7.0 PROCEDURE (CONT)

- 7.1.3 Shut off the ventilation fan to the radiation room.
- 7.1.4 Notify the local fire department.
- 7.1.5 Notify the RSO or the alternate RSO designated in the license.
- 7.1.6 Proceed to the radiation room fire control area and perform the following:
 - 7.1.6.1 *Open the isolation valve (round handle).
 - 7.1.6.2 *Observe pressure indication on the meter.
 - 7.1.6.3 *Open the ball valve by moving the lever until parallel with piping, which will send water to the sprinkler heads mounted on the wall inside the radiation room.
- NOTE: *The controls and piping are painted red.
- 7.1.7 Check the maze monitor to determine if a source in a tote initiated the fire.
- 7.1.8 After the smoke clears, perform the following:
 - 7.1.8.1 Close the isolation valve and ball valve for the sprinkler system.
 - 7.1.8.2 Enter the maze and radiation room with the fire department while closely monitoring the radiation level.
- NOTE: If the radiation level exceeds 8 times background or if the meter is not visible due to smoke, exit immediately.

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Subject: FIRE IN RADIATION ROOM EMERGENCY		Section/Number/Revision 9.203.A
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7.0 PROCEDURE (CONT)

- 7.1.8.3 Ensure any smoldering items are contained.
- 7.1.8.4 Remove debris and clean the maze and radiation room.
- NOTE: Maintain the pool cover to prevent debris from entering the pool.
- 7.1.9 Notify NRC Region I.
- 7.1.10 Prepare an incident report and identify the cause of the problem.

7.2 Source Hangup Incident

If the source will not lower when the STOP button is pushed:

- 7.2.1 Disconnect the air line interlock to vent the compressed air from the system.
- 7.2.2 Notify the RSO and Operations Manager,
- 7.2.3 If the source remains stuck, establish a plan for lowering the source plague.

8.0 EXHIBITS

None

Facility: CORPORATE	Department: IRRADIATOR OPERATION	Page 1 of 4
Subject: IRRADIATOR SOURCE MOVEMENT LOG		Section/Number/Revision 9.504.B
Effective Date: March 6, 1987		
Prepared By: <i>LES ROSS</i> LES ROSS	Approved Technically: <i>R. COCKRELL</i> R. COCKRELL	Approved By Quality: <i>P. O. SHAPIRO</i> P. O. SHAPIRO

1.0 PURPOSE

To describe how to fill out the source movement log, which records source status and describes any malfunctions that may have caused source shutdown.

2.0 SCOPE

Applies directly to irradiator operations.

3.0 REFERENCES

None

4.0 DEFINITIONS

4.1 Time up - the clock time that the source was in a raised (unshielded) position.

4.2 Time down - the clock time that the source was in a lowered (shielded) position.

4.3 Malfunction - a brief description of why the source dropped, e.g., systems malfunction of conveyor, interlock violation, etc.

4.4 Operational Mode - a brief description of mode, e.g., static, automatic or manual.

5.0 EQUIPMENT/MATERIAL REQUIREMENTS

5.1 Irradiator Source Movement Log.

6.0 SAFETY REQUIREMENTS

None

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7.0 PROCEDURE

7.1 Irradiator Source Movement Log

7.1.1 Provides the dates and times of irradiator operation, i.e., up and down time records as well as a brief description of the malfunctions encountered with the raising and lowering of the source.

Note: Accuracy in malfunction recording will better facilitate the operations department in providing an adequate maintenance schedule with regard to recurring cell/conveyor/source malfunctions.

7.2 Overall, in normal operations, the Irradiator Source Movement Log provides the Operations Department immediate visual information regarding shift down time.

8.0 EXHIBITS

- A. - Irradiator Source Movement Log
- B. - Irradiation Log Sheet

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Subject: IRRADIATOR SOURCE MOVEMENT LOG		Section/Number/Revision: 9.504.B
		Effective Date: March 6, 1987

EXHIBIT B

DATE	START TIME	CUSTOMER RUN CODE	MASTER TIMER SETTING	RUN TIMER READING	SHUFFLE/FILL/COUNTER SETTING	MODE	REMARKS	INITIAL

IRRADIATION LOG SHEET