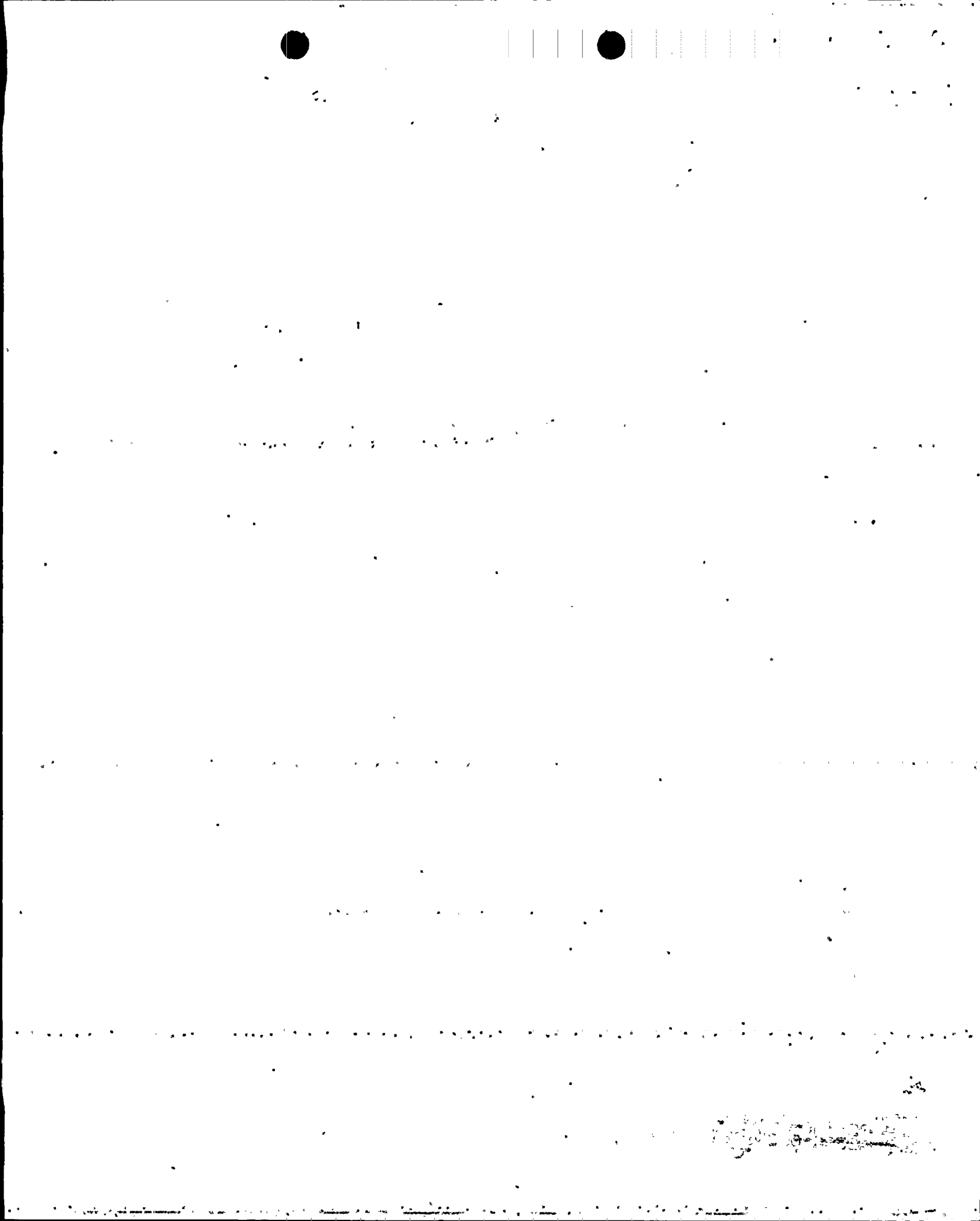


CHANGE 18 TO THE YANKEE EMERGENCY PLAN - IMPLEMENTING PROCEDURES.

1. Following the tab TABLE OF CONTENTS remove existing table of contents and insert attached table of contents Rev. 17 dated 10.25.82.
2. Following the tab EMERGENCY EQUIPMENT READINESS CHECK remove existing procedure and insert attached procedure Rev. 2 dated 10/82.

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YANKEE NUCLEAR POWER STATION
IMPLEMENTING PROCEDURES TO THE EMERGENCY PLAN
TABLE OF CONTENTS

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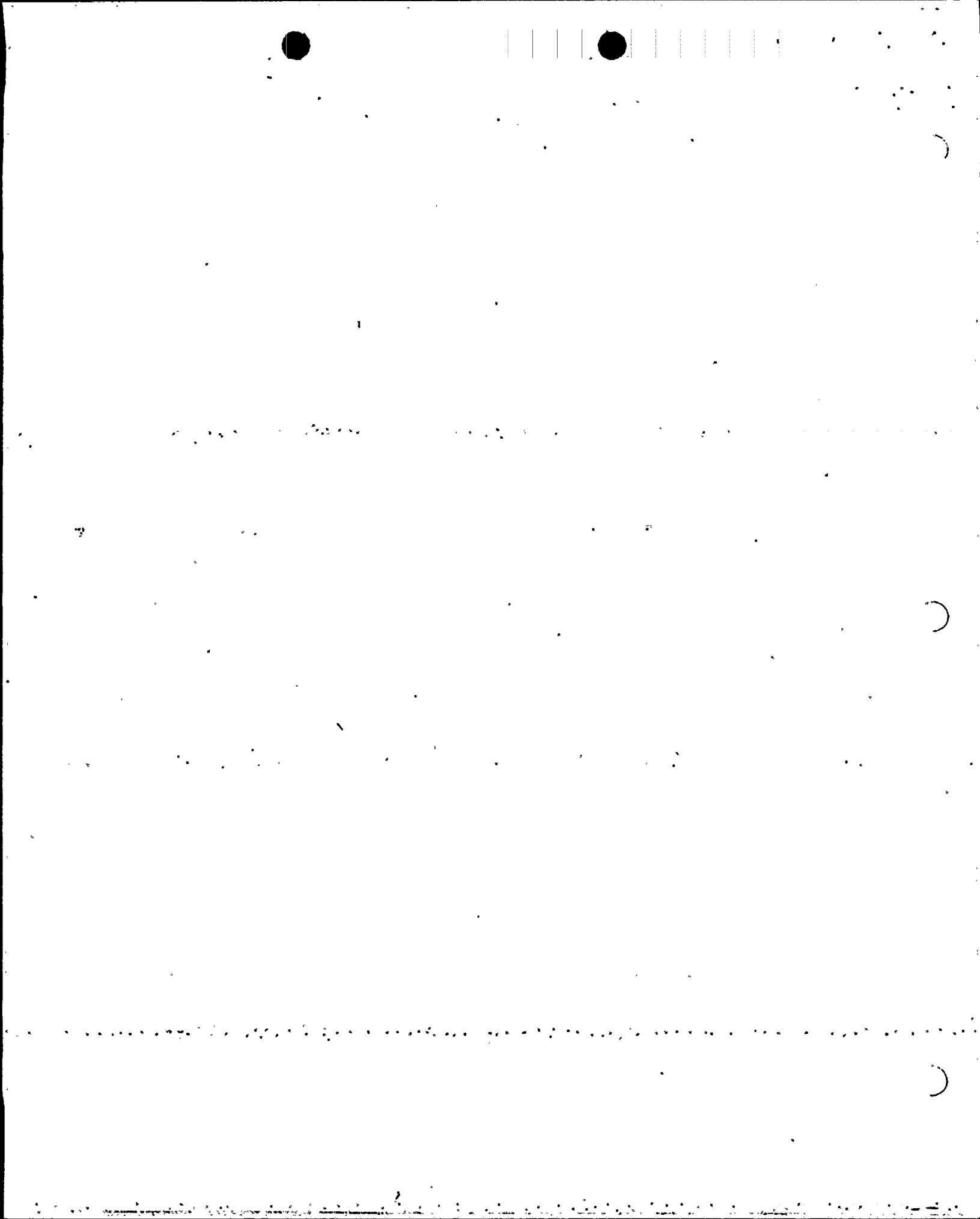
CONTACT LIST	Rev. 2
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IMPLEMENTING PROCEDURES

Classification of Emergencies	OP-3300	Rev. 2
Unusual Event	OP-3301	Rev. 4
Alert	OP-3302	Rev. 4
Site Area Emergency	OP-3303	Rev. 5
General Emergency	OP-3304	Rev. 5
Evaluation of Radiological Data	OP-3310	Rev. 2
Emergency Off-Site Radiation Monitoring	OP-3311	Rev. 1
Emergency Deescalation Procedure	OP-3321	Rev. 0
Emergency Radiation Exposure Control	OP-3330	Rev. 1
Emergency Medical Procedure	OP-3305	Rev. 1
Security Force Actions Under Emergency Conditions	OP-3344	Rev. 1
Release of Public Information Under Emergency Conditions	OP-3343	Rev. 0
Coordination and Communications During an Emergency	OP-3345	Rev. 1
Vital Computer System Operation Under Emergency Conditions	OP-3346	Rev. 0

SUPPLEMENTAL PROCEDURES

Emergency Plan Training	OP-3340	Rev. 0
Emergency Preparedness Exercises & Drills	OP-3341	Rev. 0
Emergency Equipment Readiness Check	OP-3325	Rev. 2



EMERGENCY EQUIPMENT READINESS CHECK

SCOPE

To insure that radiological emergency equipment is periodically inventoried and maintained in an operable condition.

ENCLOSURES

OP-3325 - Pgs. 1-6 - Rev. 2
Attachment A - Pgs. 1-3 - Rev. 2
Attachment B - Pgs. 1-3 - Rev. 2
Attachment C - Pg. 1 - Rev. 2
Attachment D - Pg. 1 - Rev. 2

DISCUSSION

The emergency equipment maintained in the Control Room, Technical Support Center, Operational Support Center, Emergency Van and the Emergency Operations Facility (EOF) are listed on Attachment A, which is a complete inventory, categorized by kit function, location or both. Each kit contains the necessary emergency equipment to support specific actions.

Attachment B is a quarterly check list of all emergency equipment except TLD's and a visual inspection of the batteries of all battery powered equipment. These two items are on Attachment C.

Attachment D is a blank form for discrepancies or observations noted and corrective measures taken.

Each kit is sealed with an easily broken-off closure that provides a method of verifying that the kit has or has not been opened since the last inventory. Provided that the seal remains unbroken any of those items requiring frequent checks need only be inventoried and checked quarterly (e.g., portable survey meters, portable radios, flashlights). Other equipment items (e.g., protective clothing, expendable supplies) need only be routinely inventoried annually.

All equipment in any kit, which is found to have its seal broken, or one which has just been used, will be checked and inventoried.

The calibration cycles of emergency instruments are extended beyond the normal calibration cycles required by applicable calibration procedures. The change to annual calibration cycle reflects the fact that these instruments are not in regular use, but in storage, ready for use. The quarterly inventory check includes a visual inspection of the batteries as well as a battery and source check.

A Health Physics representative will be assigned to complete Attachments "B" and "C" each calendar quarter. A status report of the emergency equipment will be made to the Plant Health Physicist by completing and submitting Attachment "B", "C" or "D", as applicable.

PRECAUTIONS

The lack of proper, operable equipment can lead to delay in regaining control of an emergency situation, possibly compounding the adverse affects of an emergency.

Only personnel trained in accordance with OP-8001, "HP Department Training and Qualifications", shall perform this procedure.

PREREQUISITES

1. Select a small ($\approx 1 \mu\text{Ci}$ 60 Co or $\approx 10 \mu\text{Ci}$ 137 Cs) source to be brought to North Adams Regional Hospital for source check the survey instruments in that kit.

2. Obtain replacement TLD for the various centers as follows:

	<u>CENTER</u>	<u># FOR USE</u>	<u># CONTROLS</u>	<u>TOTAL</u>
a.	Control Room	50	10	60
b.	N.A. Hospital	15	3	18
c.	Gatehouse	25	1	26
d.	E.O.F.	15	3	18
e.	Emergency Van (in various kits)	58	--	58
				<u>180</u>
f.	N.A. Hospital (Annealed Fingerrings)	10		10

3. Take a spare charcoal filter and several paper filters (for air samples) with you.

PROCEDURE

1. If any of the dosimetry will expire prior to the next monthly check, obtain replacements and take them with you to the appropriate location(s).
2. Quarterly Emergency Equipment Check:
 - 2.1 Proceed to Maintenance Department office. Check vehicle check list for date of last inspection of emergency van. Enter date on Attachment "B", Section 2.1.
 - 2.2 Proceed to the Gatehouse and get key for emergency van. Proceed to emergency van and complete Sections 2.2-2.4 of Attachment "B".
 - 2.2.1 Check seals on off-site monitoring (3) and Emergency Operations Facility kits and record condition in Section 2.2.1 on Attachment "B".

- 2.2.2 Check portable survey instruments for operability by completing battery and source checks.

NOTE: When checking RM-14's, these checks shall be performed with the AC power cord unplugged. Record data in appropriate spaces. Perform check of test mode (switch on rear of units) with AC power cord plugged in. Check instruments for calibration due dates and record in Section 2.2.2. Check alarm feature of RM-14's and record.

- 2.2.3 Insert spare charcoal filter and a filter paper in the sampling head of the air samplers. Attach each battery powered air sampler to the van's battery and check the flow rate. Flow rates should be approximately 30 liters per minute.

Perform this evaluation for all air samplers using the same charcoal cartridge and use different particulate filter paper if deemed necessary. Document flow rates obtained in Section 2.2.3.

- 2.2.4 Check dosimetry in each kit and document calibration due dates and record for each kit in Section 2.2.4.

- 2.2.5 Check dosimeter chargers in EOF kit by inserting a pen into the charger-dosimeter contact and verify its operability when the light is seen. If this fails, replace battery and recheck. Document in space for EOF kits, Section 2.2.5.

- 2.2.6 Contact Gatehouse with portable radios and request a radio check. Document their operability status in Section 2.2.6.

- 2.2.7 Check EOF and off-site monitoring team kits for proper procedures and record revision number and date of revision in Section 2.2.7 of Attachment "B".

- 2.2.8 Check operability status of Eberline SAM-II in Section 2.2.8 of Attachment "B".

- 2.2.9 Reseal kits and record this in Section 2.2.9.

- 2.3 Road Barrier Team Kits shall be checked by initially verifying that the seal is intact and subsequently checking the operation of flashlights and hazard flashers for operability and checking the dosimetry for calibration due dates.

- 2.3.1 The batteries are to be inserted into the flashlights to check its operation and then removed. If any of the batteries are found to be leaking, damaged or corroded, or if any doubt exists as to their condition, replace them. Document this in Section 2.3.1.

- 2.3.2 Check the hazard flashers by inserting the pin attached into the hole, observe operation and repeat the pin insertion to terminate operation. If flasher fails, replace battery, bulb or both as appropriate and check the space indicating satisfactory performance.
- 2.3.3 Check dosimetry for calibration due date and record in Section 2.3.3.
- 2.3.4 Reseal kits and initial (2.3.4)
- 2.4 Visually determine the integrity of the re-entry team kits by checking the security of their seal. If seal is found broken, a complete inventory is required by comparing their contents to those listed in Attachment "A". Record the status of the re-entry team kits in the appropriate sections of Attachment "B".
- 2.5 Record discrepancies found and corrective measures taken on Attachment "D".
- 2.6 Return keys for emergency van to the Gatehouse.
- 2.7 Proceed to Control Room and complete Section 2.7 of Attachment "B".
 - 2.7.1 Check emergency equipment locker for seal. Record data on condition as found in Section 2.7.1.
 - 2.7.2 Check portable survey instruments by performing battery and source checks. The RM-14 should be unplugged from its AC power cord to perform this evaluation. RM-14 test mode check is performed with the AC power cord attached. Check calibration due dates and record this date in the appropriate section. Check alarm and record in Section 2.7.2.
 - 2.7.3 Check dosimetry for calibration due date and record in Section 2.7.3.
 - 2.7.4 Check dosimeter charger by depressing contact and ensuring its light is lit. (Section 2.7.4)
 - 2.7.5 Check AC operated air sampler for operability by inserting the charcoal cartridge and particulate filter into sampling head. Plug into AC socket and note the flow rate. Record this data in Section 2.7.5.
 - 2.7.6 Reseal cabinet and record in Section 2.7.6.
 - 2.7.7 Check station log for plant evacuation alarm check. Enter date of check and results in 2.7.7.
 - 2.7.8 Record any discrepancies found and corrective measure taken on Attachment "D".

- 2.7.9 Check operation of VT Civil Defense phone in Operations Office.
- 2.8 Proceed to Technical Support Center (adjacent to the Control Room) and complete Section 2.8 of Attachment "B".
- 2.9 Proceed to Operational Support Center and complete 2.9 of Attachment "B". (OSC emergency cabinet is in the Control Room West Foyer)
- 2.10 Proceed to Gatehouse and complete Section 2.10 of Attachment "B". Obtain key to EOF and record its availability status.
- 2.11 Proceed to Security Trailer and complete Section 2.11 of Attachment "B". Check Daily Activity Security Log for Nuclear Alert Radio Check. Enter date of latest check and results in Section 2.11.
- 2.12. Proceed to EOF and complete Section 2.12 of Attachment "B".
- 2.12.1 Check seals on extra supplies container and record condition
- 2.12.2 Check operation of VT Civil Defense phone.
- 2.13 Return keys to Gatehouse.
- 2.14 Select a small source ($\approx 1 \mu\text{Ci}$ ^{60}Co or $\approx 10 \mu\text{Ci}$ ^{137}Cs) and take newly cleaned and annealed TLD rings (12) for preparation for North Adams Regional Hospital.

NOTE: Take necessary precautions to minimize your exposure to the source as well as exposure received by the TLD's.

- 2.14.1 On arrival at NARH, obtain the key to the emergency locker from Nurses' Station in the Emergency Room. Determine the name of the person from whom you receive the key and enter their name in the appropriate space on Section 2.14.1 to Attachment "B".
- 2.14.2 Go to closet and check seal. Record condition of the seal in Section 2.14.2.
- 2.14.3. Perform source and battery checks on the RM-14 (with the AC cord removed) and record. Reattach AC cord and evaluate test mode (switch in rear). Check calibration due date and alarm check, and enter this data in Section 2.14.3.
- 2.14.4. Perform source check on survey instrument with window open and window closed. Record this data, and calibration due date in spaces provided. Enter data on source used, activity and isotope in Section 2.14.4.
- 2.14.5 Ensure that all instruments are turned off.

- 2.14.6. Reseal the cabinet and enter pertinent data in Section 2.14.7.
- 2.15 If any discrepancies are noted, enter these with corrective measures taken on Attachment "D".
- 2.15.1 Check telephone communications with National Weather Service.
- 2.16 Complete Attachment "B" and submit to Plant Health Physicist who will review it, have appropriate action taken on any exceptions noted and have it filed in the appropriate file.

3. QUARTERLY EMERGENCY EQUIPMENT READINESS CHECKS

3.1 PREREQUISITES

Obtain replacement TLD's for all kits in which TLDs are located.

3.2 Exchange previous calendar quarter TLD's for present quarter TLD's.

- 3.2.1 Perform visual inspection of batteries in all instruments using batteries for portable DC power sources. Inspect for signs of leakage, damage or corrosion and replace as appropriate. Document any battery changes on Attachment "C" in Section 3.2.1.

3.3 Complete Attachment "C" and submit with Attachment "B" to the Plant Health Physicist who will review it, take appropriate action on any exceptions noted and file it.

4. ANNUAL OR AFTER USE EMERGENCY EQUIPMENT READINESS CHECK

4.1 REQUIREMENTS

This must be performed for a kit that has been found with its seal broken, when any doubt exists regarding the kit's inventory or annually.

4.2 An inventory shall be conducted on each kit according to the criteria in 4.1 by opening the kit and checking the contents against Attachment "A".

4.3 Record discrepancies on Attachment "D".

4.4 Perform quarterly checks as in Section 2.

5. FINAL CONDITION

The completed Attachment(s) are delivered to the Health Physics Supervisor.

ATTACHMENT A
EMERGENCY EQUIPMENT INVENTORY
EMERGENCY OPERATIONS FACILITY
EOF KIT (NORMALLY IN E-VAN)

OP-3325
 Att. "A"
 Rev. 2
 Page 1

<u>ITEM</u>	<u>QUANTITY</u>
Emergency Plan Books, Revision No. _____	2
Portable Survey Instrument	1
RM-14 with HP-210 Probe	1
Air Sampling Kit (consisting of):	
1 - 12 VDC Sample Pump	
20 - Glass Fiber Filters and Envelopes	
10 - Charcoal Cartridges	
2 - Pencils	
1 - Tweezers	
2-Way Radio (may be outside kit, in van)	1
120 V AC - 12 V DC Charger	1
Copies of Forms and Procedures	1 set
Clipboard	2
Paper (Pads)	2
High Range Dosimeters	10
Dosimeter Chargers	2
Emergency Light (installed in Furlon House)	1
SAM-II (in EOF)	1
Met Data Terminal (in van)	1
TLD Dosimeters	100
Computer Terminal (in Furlon House)	1

ROAD BARRIER TEAM KITS (4 Kits)

<u>ITEMS IN EACH KIT</u>	<u>QUANTITY</u>
Hazard Flasher & Battery	1
Flashlight & Battery	1
Sign & Rope	1
Cotton Gloves	4 pair
Rubber Gloves	2 pair
Rubber Shoe Covers	2 pair
Plastic Shoe Covers	2 pair
Paper Coveralls	2 pair
Head Cover - Cloth	2
Head Cover - Paper	2
High Range Dosimeter	2
Respirator - Full Face	2
TLD Dosimeters	2

RE-ENTRY TEAM KITS (4 Kits)

<u>ITEMS IN EACH KIT</u>	<u>QUANTITY</u>
Heavy Plastic Suit	1
Cotton Gloves	2 pair
Rubber Gloves	1 pair
Rubber Shoe Covers	1 pair
Plastic Shoe Covers	1 pair
Paper Coveralls	1 pair
Cloth Head Cover	1
Paper Head Cover	1
Respirator	1
TLD Dosimeters	1

OFF-SITE RADIATION MONITORING TEAM KITS (3 Kits)

<u>ITEMS IN EACH KIT</u>	<u>QUANTITY</u>
Portable Survey Meter	1
RM-14 with HP-210 Probe	1
Portable 2-way Radio	1
120 VAC-12 VDC Charger (Radio)	1
Air Sampling Kit:	
12 VDC Sampler Pump	
20 Particulate Filters & Envelopes	
10 Charcoal Cartridges	
2 Pencils	
3 Copies of OP-3311, Revision No. _____	
1 Tweezer	
Plastic Bag (approximately 30" x 30")	1
High Range Dosimeters	2
Protective Clothing Bags:	2
Cotton Gloves - 2 pair	
Rubber Gloves - 1 pair	
Rubber Shoe Covers - 1 pair	
Plastic Shoe Covers - 1 pair	
Paper Coveralls - 1 pair	
Paper Headcover - 1	
Cloth Headcover - 1	
Respirator - 1	
Survey Map	1
TLD Dosimeters	2

SPARE PROTECTIVE CLOTHING KITS (6 kits)

<u>ITEMS IN EACH KIT</u>	<u>QUANTITY</u>
Coveralls	1 pair
Cloth Gloves	2 pair
Rubber Gloves	1 pair
Head Cover	1
Rubber Shoe Covers	1 pair
Plastic Shoe Covers	1 pair
Respirator	1

CONTROL ROOM KIT

<u>ITEMS IN KIT</u>	<u>QUANTITY</u>
Portable Survey Meter	1
RM-14 with HP-210 Probe	1
120 VAC Air Sample Pump	1
Protective Clothing Kits:	15
Coveralls - 2 pair	
Respirator - 1	
Headcover - 1	
Plastic Shoe Covers - 1 pair	
Rubber Shoe Covers - 1 pair	
Cloth Gloves - 2 pair	
Rubber Gloves - 1 pair	
High Range Dosimeters	15
Thyroid Blocking Agent Kit	15
TLD Dosimeters	15

HOSPITAL KIT

(See Brigham and Womens - "Procedures for Radioactively Contaminated Patients")

Replace TLD rings annually

TECHNICAL SUPPORT CENTER

Area Radiation Monitor	1
Continuous Airborne Radiation Monitor	1
High Range Dosimeters	25
Thyroid Blocking Agent Kit	25
Respirators	25

ON-SITE OPERATIONS SUPPORT CENTER*

High Range Dosimeters	10
Protective Clothing Kits (same as Control Room itemized)	10
Thyroid Blocking Agent Kit	10
Survey Meter	1

BOILER FEED PUMP ROOM

Survey Instrument	1
Thyroid Blocking Agent Kit	100
High Range Dosimeters	25

NOTE: A SAM II Dual Channel Analyzer is located at the Health Physics Control Point.

* OSC emergency supply cabinet is located in the foyer at the West end of the Control Room.

ATTACHMENT "B"
QUARTERLY EMERGENCY EQUIPMENT READINESS CHECK

OP-3325
 Att. "B"
 Rev. 2
 Page 1

The emergency equipment contained in these checklists will be checked for calibration due dates, operability or document check as applicable. Out of date equipment and documents and inoperable equipment will be replaced. The kits will be kept sealed. Those items not specifically requiring calibration, document or operability check need not be inventoried if the seal is intact. If the seal is broken, a complete inventory of the equipment and supplies must be taken.

A. EMERGENCY VAN, EMERGENCY COORDINATION CENTER and OFF-SITE MONITORING KITS

REFERENCES

2.1	Emergency Van Vehicle Check List performed (Maintenance)				
2.2.1	Kit Seals: BLACK	WHITE	RED	PURPLE	
2.2.2	Survey Meter BLACK #	WHITE #	RED #	PURPLE #	
	Battery Check				
	Source Check				
	Cal Due Date				
	RM-14: #	#	#	#	
	Cal. Due Date				
	Battery Check				
	Source Check				
	Test Mode Check				
	Alarm Check				
	OP-3311, Rev. No.				
	Radios: On Trickle Charge*				

REFERENCE	Kit:	BLACK	WHITE	RED	PURPLE
2.2.3	DC Air Samplers				
	Flow Rate:				
2.2.4	Dosimetry Cal. Due Date:				
2.2.5	Dosimeter Chargers (SAT/UNSAT)		N/A	N/A	N/A
2.2.6	Radio Check				
2.2.7	Document Check (Rev.#/Date)				
2.2.8	SAM-II Check		N/A	N/A	N/A
2.2.9	Kits Resealed				
2.3	ROAD BARRIER TEAM KITS: KIT: #1	#2	#3	#4	
2.3	Sealed				
2.3.1	Flashlight				
2.3.2	Flasher				
2.3.3	Dosimeter Cal.Due				
2.3.4	Resealed				

* If light on charger is out, batteries will not charge.
 Replace bulb with Sylvania #49 or equivalent.

- 2.4 RE-ENTRY TEAM KITS - Seals Intact (Yes/No) _____
- 2.7 CONTROL ROOM EMERGENCY EQUIPMENT
- 2.7.1 Sealed (YES/NO) _____
- 2.7.2 Survey Meter: No: _____
Cal. Due Date _____
Battery Check _____
Source Check _____
RM-14: No: _____
Cal. Due Date _____
Battery Check _____
Source Check _____
Test Mode Check _____
Alarm Check _____
- 2.7.3 DOSIMETERY
Calibration Due Date _____
- 2.7.4 DOSIMETER CHARGERS (2)
#1 (SAT/UNSAT): _____
#2 (SAT/UNSAT): _____
- 2.7.5 AC AIR SAMPLER
Flow Rate: _____
- 2.7.6 Reseal Cabinet _____ (initials)
- 2.7.7 Station Log (Plant Evacuation Alarm)
Date: _____ Results: _____
- 2.7.8 Check State of Vermont telephone system located in the Operations Office by dialing 32. VT Civil Defense will answer if system is operable. If no answer at Civil Defense, call VT Civil Defense (802) 828-2163 and report system non-operable.
Initials: _____

REFERENCE

- 2.8 TECHNICAL SUPPORT CENTER
- 2.8.1 Operability Status of Continuous Airborne Radiation Monitor _____
- 2.8.2 Operability of Area Radiation Monitor _____
- 2.8.3 Calibration Due Date of Dosimeters _____
- 2.9 OPERATIONS SUPPORT CENTER

Calibration Due Date of Dosimeters _____

Survey Meter No. _____
Cal. Due Date _____
Battery Check _____
Source Check _____

EOF key availability (Gatehouse) (Yes/No) _____
Daily Activity Security Log: Nuclear Alert Radio Check
Security Trailer - Date: _____ Results: _____

Furlon House

Condition of seal on extra supply locker _____
Check State of Vermont telephone system located in the EOF
by dialing 32. VT Civil Defense will answer if system
is operable. If no answer at Civil Defense, call VT Civil
Defense (802) 828-2163 and report system non-operable.
Initials: _____

Keys returned to Gatehouse _____

North Adams Regional Hospital

Name of key issuer: _____
Condition of Seal _____
: _____
Due Date _____
Source Check _____
Battery Check _____
Alarm Check _____
Test Mode Check _____

Survey Meter: Model and Serial No. _____
Source Check _____ Open _____ Closed _____
Source: _____ Act. _____ Iso. _____

Cabinet Resealed _____ (initials)

Check communications with the National Weather Service as follows:

Meteorological observations and forecasts are available on a 24-hour basis from Albany NES Forecasting Station at (518) 472-6586 by asking for the Public Forecaster.

Date: _____ Initials: _____

ATTACHMENT C

ADDITIONAL QUARTERLY EMERGENCY EQUIPMENT READINESS CHECKS

- 3.2 Whole Body TLDs changed. Initials: _____
- 3.2.1 All batteries inspected for leakage, damage or corrosion:
Results:
None found damaged _____ (initials)
Exceptions:
Kit Instrument - Observation - Corrective Action

ATTACHMENT "D"

OBSERVATION/ DISCREPANCIES NOTED	ACTION		CORRECTIVE MEASURES/ RECOMMENDATIONS
	IMMEDIATE	NEXT INSPECTION	

Health Physics Representative

Reviewed by: _____
Health Physics Supervision

Action Taken on Discrepancies:

Health Physics Supervision