

THREE MILE ISLAND NUCLEAR STATION  
UNIT NO. 1 ADMINISTRATIVE PROCEDURE 1053  
EMERGENCY EQUIPMENT READINESSTable of Contents

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- 1.3.6 Radiological Controls Procedure 1772, Dosimeter Calibration and Leak Test.
- 1.3.7 Radiological Controls Procedure 1616.1, Selection and Use of Respiratory Protective Devices.
- 1.3.8 Procedures 1104-45A through L, Fire Protection.
- 1.3.9 Administrative Procedure 1001, Document Control.
- 1.3.10 RPSP 1616.3, Respirator Cleaning and Testing Facility.

## 2.0 RESPONSIBILITIES

- 2.1 The Manager, Radiological Controls has the ultimate responsibility for all radiological control emergency equipment and its availability and reliability with the exception of equipment stored at the environmental controls office.
- 2.2 The Manager, Environmental Controls, <sup>TMI</sup> has the ultimate responsibility for all radiological monitoring equipment located at the environmental controls office. He is responsible for its availability and reliability.
- 2.3 The Radiological Controls Field Operations Manager, <sup>/Manager, Environmental Controls, TMI</sup> or their designees shall assign <sup>appropriate</sup> personnel to perform inventory and calibration checks on the emergency kits and lockers under their jurisdiction.
- 2.4 The Radiological Controls Field Operations Foreman, <sup>/Manager, Environmental Controls, TMI</sup> shall ensure that the following items are performed during an inventory:
  - 2.4.1 Complete all inventory checklists for that kit/locker.
  - 2.4.2 Replace all missing items.
  - 2.4.3 Ensure all individual procedures contained in kits/lockers are controlled copies.
  - 2.4.4 Verify calibrations, perform operational checks, note discrepancies on inventory checklist, and notify the Radiological Controls Field Operations Manager/Foreman or <sup>Manager, Environmental Controls, TMI, as appropriate,</sup> of these discrepancies and/or broken locks or seals.

or his designee, as appropriate.

- 2.4.5 Emergency instrumentation removed from lockers/kits shall be replaced prior to end of working shift except during actual emergencies.
- 2.5 The Support Services Supervisor, or his designee, shall conduct the required inspections for all respiratory protective equipment. This will be accomplished by ensuring completion of the following:
- 2.5.1 Replace any equipment which is missing or requires maintenance.
- 2.5.2 Inspect each item per the requirements of Radiological Controls Procedure 1616.1 and RPSP 1616.3.
- 2.5.3 Place an Emergency Respiratory Equipment Inspection tag with each piece of equipment found acceptable.
- 2.5.4 Complete the Inventory Checklist for Full Face Respirators w/ Canisters (Enclosure XIV), the Inspection of Emergency Respiratory Equipment for SCBA's (Enclosure XII), and the Inspection of Emergency Respiratory Equipment for SCBA Cylinders (Enclosure XIII). Retain the originals for review and filing by the Support Services Supervisor, with copies to the Site Emergency Preparedness Manager and the Supervisor Respiratory Protection. */Manager Environmental Controls, TMI,*
- 2.6 The Radiological Controls Field Operations Foreman shall be notified of all emergency equipment usage at the end of its usage.
- 2.6 appropriate*

### 3.0 REQUIREMENTS

#### 3.1 Inspections and Calibrations

- 3.1.1 Emergency kits/lockers shall have inventory and calibration checks performed quarterly, with the exception of items listed on Enclosure IV and respiratory protection equipment which shall be checked after each use and once each calendar month.
- 3.1.2 Prior to removing an instrument for repair/calibration from any emergency equipment storage location, an alternate equivalent instrument shall be provided.
- 3.1.3 Calibrations of emergency instrumentation shall be performed in accordance with references 1.3.2 through 1.3.6.
- 3.1.4 Emergency lockers/kits shall be visually inspected for lock/seal integrity monthly. Lockers or kits with suspect integrity shall be inventoried. Emergency lockers/kits shall be inventoried after each use including use for training.

:	<u>NOTE:</u>	Lock/seal integrity shall be checked prior to	:
:		opening lockers/kits for operational check of	:
:		portable radiation monitoring and air sampling	:
:		equipment. Locker/kits may be resealed immediately	:
:		after operational checks are complete and equipment	:
:		returned.	:

- 3.1.5 Perform an inventory/inspection or calibration at any time as directed by the Radiological Controls Field Operations Manager/ *Manager Environmental Controls, TM*.

### 3.2 Details

3.2.1 Emergency equipment and/or radiac instruments shall be located in the following areas in accordance with the TMI Unit 1 Emergency Plan to allow protection of Emergency Personnel <sup>Environmental Monitoring</sup> and availability of equipment:

- a. Unit 1 Processing Center
- b. Unit 1 Service Building Auditorium
- c. Unit 1 Reactor Building Access Control Point/Unit 1 Radiological Controls Laboratory
- d. Unit 1 Control Room/Shift Supervisors Office (SSO)
- e. Unit 1 Warehouse
- f. Near site Emergency Operations Facility (EOF) (TMI Observation Center)
- g. Alternate Emergency Operation Facility (AEOF)(Crawford Station, Middletown, Pa.)
- h. Technical Support Center (TSC)
- i. ~~Environmental Controls Office~~ (44 Luke Drive, Middletown, Pa.)
- j. ~~Ambulance~~
- k. ~~Fire Brigade Vehicle~~

:	<b>NOTE:</b>	The Ambulance and the Fire Brigade Vehicle are	:
:		inventoried by Unit II. Checklists for these	:
:		inventories are located in Administrative Procedure	:
:		1057.	:

- 3.2.2 Inventories shall only be considered complete when all required items are returned to the kit/locker, all instruments in the kit/locker are within calibration and all operational checks on equipment/instruments are complete.
- a. Operational checks shall consists of battery check, response check and visual inspection for obvious damage.
- (See Enclosure XI for operational check of emergency equipment).
- 3.2.3 All emergency kits and lockers shall have seals or padlocks, as appropriate.
- 3.2.4 Key control for all emergency kits/lockers shall be maintained by the Radiological Controls Department/<sup>or Environmental Controls</sup> with duplicates maintained in the Emergency Control Center (Control Room/Shift Supervisors Office).
- 3.2.5 All completed inventory checklists shall be returned to the Radiological Controls Field Operations Foreman/<sup>Manager Environmental Controls, TMI</sup> Support Services Supervisor~~s~~ as appropriate, for review and filing. A copy of the inventories shall be sent to the Site Emergency Preparedness Manager and Supervisor - Respiratory Protection (Respiratory Checklists Only).
- Supervisors  
Respiratory Protection

### 3.3 FINAL CONDITIONS

- 3.3.1 All equipment/instruments have been inventoried, and inventory checklists have been reviewed by the Radiological Controls ~~Field Operations Foreman~~ <sup>Support</sup> ~~Services Supervisor~~ <sup>Manager Environmental Controls, TMI</sup> as appropriate, and copies forwarded to the Site Emergency Preparedness Manager and the Supervisor - Respiratory Protection (Respiratory Checklists Only).
- 3.3.2 Used kits/lockers are reinventoried, resupplied and locked/sealed.



ENCLOSURE 1

Minimum Requirements for Kits/Lockers

LOCATION UNIT-1

KITS/LOCKERS REQUIRED

1. Processing Center	4 Kits ( 2 instruments, 2 emergency)
2. Service Building Auditorium	1 Locker (Protective Clothing Only)
3. Rad Con Lab/Control Point	1 Locker (Protective Clothing, Respirators, Instruments) 1 Ambulance Kit
4. Control Room/Shift Supervisor's Office	1 locker (Respirators, instrs)
5. Warehouse (Unit I)	1 Emergency Locker 1 Personnel Monitoring Kit
6. Alternate Near Site Emergency Operations Facility	1 Locker (Protective Clothing, Respirators, Instruments Kit, Decontamination Materials)
7. Near Site Emergency Operations Facility	1 Locker (Protective Clothing, Respirators, Instrument Kits)
8. Technical Support Center	1 Locker (Protective Clothing, Respirators)
9. Environmental Controls Office	4 kits (2 instruments, 2 emergency)

ENCLOSURE II  
INVENTORY CHECKLIST - EMERGENCY EQUIPMENTKit Location: Processing Center U-1 Type: Emerg. Kit ☒ Inst. Kit ☐ Emerg. Locker ☐ Inventory Date: \_\_\_\_\_

Inventory Performed By: \_\_\_\_\_ Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
REMP Map	1		N/A	N/A	N/A
Site Map	1		N/A	N/A	N/A
Directions to Monitoring Stations	1		N/A	N/A	N/A
Procedures EPIP 1004.10, 1004.12, 1004.31	1 ea.		N/A		N/A
Attachments - 1004.10 Att I	10 ea.		N/A		N/A
Flashlight with spare bulb and batteries	1		N/A	N/A	
Tablets, Pens, Pencils, Wax Pencils	4 ea.		N/A	N/A	N/A
Polyethylene Sheeting (8' x 16' min)	2		N/A	N/A	N/A
Polyethylene Sheeting (4' x 8' min)	2		N/A	N/A	N/A
Smear/Air Sample Envelopes	100		N/A	N/A	N/A
Air Sample Filters	2 boxes		N/A	N/A	N/A
Disc Smears	2 boxes		N/A	N/A	N/A

REMARKS: Two (2) kits, each containing the material  
listed, are stored in the Processing Center.

Emergency Kit Locked or Sealed:

\_\_\_\_\_  
Signature

ENCLOSURE II  
INVENTORY CHECKLIST - EMERGENCY EQUIPMENTKit Location: Processing Center U-1 Type: Emerg. ☐ Inst. ☒ Emerg. ☐  
Kit Kit Locker

Inventory Date: \_\_\_\_\_

Inventory Performed By: \_\_\_\_\_ Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
Air Sampler (H809V/equiv)	1*				
Dose Rate Meter (RO-2/equiv)	1				
Stabilized Assay Meter (SAM-II)	1				
Stopwatch	1		N/A	N/A	
12 Volt AC/DC Inverter	1*		N/A	N/A	
Two Way Radio (w/beeper and magnetic antenna)	1*		N/A	N/A	
Inventory Checklists (Blank)	As Required		N/A		N/A

REMARKS: \* May be kept in locker  
Two (2) kits each containing the above material,  
are stored in the Processing Center.

Emergency Kit Locked or Sealed:

\_\_\_\_\_  
Signature

ENCLOSURE X  
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT*Environmental Controls Office*Kit Location: \_\_\_\_\_ Type: Emerg. ☒ Kit Inst. ☐ Kit Emerg. ☐ Locker ☐ Inventory Date: \_\_\_\_\_

Inventory Performed By: \_\_\_\_\_ Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
REMP Map	1		N/A	N/A	N/A
<del>Site Map</del>	<del>1</del>		<del>N/A</del>	<del>N/A</del>	<del>N/A</del>
Directions to Monitoring Stations	1		N/A	N/A	N/A
Procedures EPIP 1004.10, 1004.12, 1004.31 1054.10, 1054.12, RCPs 4101, 4104, 1605, 1607	1 ea.		N/A		N/A
Attachments - 1004.10 Att I, 1054.10 Att I	10 ea.		N/A		N/A
Flashlight with spare bulb and batteries	1		N/A	N/A	
Tablets, Pens, Pencils, Wax Pencils	4 ea.		N/A	N/A	N/A
Absorbent Towels	2 bundles		N/A	N/A	N/A
Polyethylene Sheeting (4' x 8' min)	2		N/A	N/A	N/A
Smear/Air Sample Envelopes	100		N/A	N/A	N/A
Air Sample Filters	2 boxes		N/A	N/A	N/A
Disc Smears	2 boxes		N/A	N/A	N/A

REMARKS: *Two 2*  
~~Four (4)~~ kits, each containing the material  
listed, are stored in the *Environmental**controls Office at 44 Luke Drive, Middletown, Pa.*

Emergency Kit Locked or Sealed:

\_\_\_\_\_  
Signature

ENCLOSURE *X*  
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: \_\_\_\_\_

Type: Emerg.  
Kit ☒Inst.  
Kit ☐Emerg.  
Locker ☐

Inventory Date: \_\_\_\_\_

Inventory Performed By: \_\_\_\_\_

Reviewed: \_\_\_\_\_

Date: \_\_\_\_\_

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
Iodine Cartridges (Silver Zeolite)	5 Min/25 Max		N/A	N/A	N/A
Rad. Warning Signs/Ribbon	5/50'		N/A	N/A	N/A
Water Sample Bottles	5		N/A	N/A	N/A
First Aid Kit	1		N/A	N/A	N/A
Masking Tape	2 Rolls		N/A	N/A	N/A
RCP 1605, and 1607	1 each		N/A		N/A
Emergency TLD's w/issue forms	50 *		N/A		N/A
Pocket Dosimeters	low 5 range		N/A		N/A
Dosimeter Charger	1			N/A	
Scissors	1 pair		N/A	N/A	N/A
Surgeons Gloves	12 pair		N/A	N/A	N/A
Inventory Checklists (Blank)	as required		N/A		N/A

REMARKS:

Emergency Kit Locked or Sealed:

\_\_\_\_\_  
Signature

ENCLOSURE X

## INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

*Environmental Controls Office*

Kit Location: \_\_\_\_\_

Type: Emerg.  
Kit ☐Inst.  
Kit ☒Emerg.  
Locker ☐

Inventory Date: \_\_\_\_\_

Inventory Performed By: \_\_\_\_\_

Reviewed: \_\_\_\_\_

Date: \_\_\_\_\_

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
Air Sampler (H809V/equiv)	1*				
Dose Rate Meter (RO-2/equiv)	1				
Stabilized Assay Meter (SAM-II)	1				
<i>Cont Rate Meter (RM-14) with HP-210 Probe</i>	<i>1</i>				
Stopwatch	1		N/A	N/A	
12 Volt AC/DC Inverter	1*		N/A	N/A	
Two Way Radio (w/beeper and magnetic antenna)	1*		N/A	N/A	
Inventory Checklists ( <i>Blank</i> )	As Required		N/A		N/A

REMARKS: \* May be kept in the vicinity of the kit.  
 Two (2) kits each containing the above material,  
 are stored in the *Environmental*  
*Controls Office at 44 Luke Drive, Middletown, Pa.*

Emergency Kit Locked or Sealed:

\_\_\_\_\_  
Signature



ENCLOSURE XI

Monthly Operational Check of Emergency Equipment

-----  
: NOTE: Initial each step as operational check of emergency :  
: equipment is performed. :  
: -----

Monthly (Initial as each instrument is checked Sat.)

Battery Check and Source Check  
of Portable Instrumentation

Location and Instrument Type	Serial No.	Battery	Source Check	Initial
PC Kit No. 1 RO-2 or Equiv.				
SAM II		N/A		
PC Kit No. 2 RO-2 or Equiv.				
SAM II		N/A		
<del>Kit No. 3 RO-2 or Equiv.</del>				
<del>SAM II</del>		<del>N/A</del>		
<del>Kit No. 4 RO-2 or Equiv.</del>				
<del>SAM II</del>		<del>N/A</del>		
H. P. LAB/ Control Point RO-2 or Equiv.				
RO-2 or Equiv.				
Teletector				
Teletector				
Teletector				
Teletector				
Teletector				
Teletector				
RM-14 or Equiv.				

## ENCLOSURE XI

## Monthly Operational Check of Emergency Equipment

Location and Instrument Type	Serial No.	Battery	Source Check	Initial
Alternate				
NEOF	RO-2 or Equiv.			
	RO-2 or Equiv.			
	RM-14 or Equiv.			
	RM-14 or Equiv.			
Unit I				
Warehouse	RO-2 or Equiv.			
	RO-2 or Equiv.			
	E520 or Equiv.			
	RM-14 or Equiv.			
Control Room				
Area	RO-2 or Equiv.			
	RO-2 or Equiv.			
	RM-14 or Equiv.			
	SAM II	N/A		
EOF	RO-2 or Equiv.			
	RO-2 or Equiv.			
	RM-14 or Equiv.			
TSC	SAM II	N/A		
Env. Cont. Kit # 1	RO-2 or Equiv.			
	SAM II	N/A		
	RM-14 or Equiv.			
Env. Cont. Kit # 2	RO-2 or Equiv.			
	SAM II	N/A		
	RM-14 or Equiv.			

Date Completed \_\_\_\_\_ Reviewed By \_\_\_\_\_



ENCLOSURE XII

Quarterly Radio and Inverter Surveillance

Quarterly 12 V. DC/115 V. AC Inverter Check

-----  
: NOTE: Electrical Department Personnel shall assist :  
: Radiological Control Personnel to perform Steps 1 :  
/Environmental: through 8 for each inverter. :  
-----

1. Hook-up inverter to 12V power supply.
2. Turn inverter on and allow to operate for one (1) minute.
3. Load inverter by plugging in air sampler unit and turn Air Sampler unit on.
4. With volt-ohm meter check output of second female plug. Voltage should be 115 V. AC  $\pm$  10 Volts.  
Remarks \_\_\_\_\_
5. Turn off Air Sampler and measure output voltage of female plug. Voltage should be 140 V. AC  $\pm$  10 V.  
Remarks \_\_\_\_\_
6. Remove Air Sampler Unit plug from inverter. Remove volt-ohm unit from inverter.
7. Turn off inverter and disconnect from 12V. power supply.
8. Return 12 V. AC/DC 115V. Power inverter to cabinet.

: Inverter	: Checked Sat.
: Serial Number	: Initials
: _____	: _____
: _____	: _____
: _____	: _____
: _____	: _____
: _____	: _____
: _____	: _____
: _____	: _____
: _____	: _____

Date Completed \_\_\_\_\_ Reviewed By \_\_\_\_\_

ENCLOSURE XV

Inventory Checklist  
Full Face Respirators W/ Canisters

Month \_\_\_\_\_  
Year \_\_\_\_\_

Location	Number Required	Number Present		Quantity	Date/Signature
		Model Facepiece	Type Canister		
HP Lab/ Control Pt	25				
Control Rm SSO	25				
U-1 Warehouse	25				
Alternate EOF	25				
EOF	25				
TSC (may be stored at HP Lab/ Control Pt	25				
U-1 PC KITS	4				
Env. Cont. Kits*	4				

\* Note: These kits are located at the Environmental Controls Office  
at 44 Luke Drive, Middletown, Pa.

Comments:

Reviewed By \_\_\_\_\_