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1057
Revision 4
12/27/82

THREE MILE ISLAND NUCLEAR STATION
UNIT NO. 2 ADMINISTRATIVE PROCEDURE 1057
EMERGENCY EQUIPMENT READINESS

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FOR INFORMATION ONLY

Unit 2 Staff Recommends Approval

Approval *[Signature]* Date 12/15/82
Cognizant Dept. Head

Unit 2 PORC Recommends Approval

[Signature] Date 12/15/82
Chairman of PORC

Unit 2 Superintendent Approval

[Signature] Date 12/27/82

Mgr QA Approval

[Signature] Date 12/27/82
for J.C. Fornaxia

NRC Approval

NA Date _____

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THREE MILE ISLAND NUCLEAR STATION
UNIT NO. 2 ADMINISTRATIVE PROCEDURE 1057
EMERGENCY EQUIPMENT READINESS

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1.0 GENERAL

1.1 Purpose

This procedure delineates the requirements to maintain availability and reliability of Emergency Equipment.

1.2 Scope

This procedure applies to the emergency equipment designated for use in implementing the Emergency Plan.

NOTE: Fire fighting emergency equipment used in implementing the Emergency Plan is listed in Procedure No. 2104-6.1, "Fire Protection System." Inventories and operational testing of this equipment is performed under the Operations Surveillance, Technical Specification, and Preventive Maintenance Programs and is beyond the scope of this procedure.

NOTE: Emergency Plan and Implementing Procedure binders issued by Document Controls are not listed in this procedure as they are maintained by the Document Controls Group in accordance with Administrative Procedure 1001.

1.3 References

- 1.3.1 TMI Unit 2 Emergency Plan.
- 1.3.2 Radiological Controls Procedure 1742, Operation and Calibration of Eberline RM-14 Beta-Gamma Survey Meter.
- 1.3.3 Radiological Controls Procedure 1758, Operation and Calibration of Portable Air Samplers.
- 1.3.4 Radiological Controls Procedure 1762, Operation and Calibration of the RO-2.

- 1.3.5 Radiological Controls Procedure 1772, Dosimeter Calibration and Leak Test.
- 1.3.6 Radiological Controls Procedure 4052, Selection, Prescription and use of Respiratory Protective Equipment.
- 1.3.7 Procedure 2104-6.1, Fire Protection System.
- 1.3.8 Administrative Procedure 1001, Document Control.
- 1.3.9 Radiological Controls Procedure 4053, Inspection, Maintenance, and Repair of Respiratory Protective Equipment.

2.0 RESPONSIBILITIES

- 2.1 The Director - Radiological Controls has the ultimate responsibility for all radiological controls emergency equipment and its availability and reliability.
- 2.2 The Manager - Radiological Controls Field Operations, or his designee, shall assign personnel to perform inventory and calibration checks on the emergency kits and lockers under his jurisdiction.
- 2.3 The Radiological Controls Field Operations Foreman shall ensure that the following items are performed during an inventory:
 - 2.3.1 Complete all inventory checklists for that kit/locker.
 - 2.3.2 Replace all missing items.
 - 2.3.3 Ensure all individual procedures contained in kits/lockers are controlled copies.
 - 2.3.4 Verify calibrations, perform operational checks, note discrepancies on inventory checklist, and notify the Radiological Controls Field Operations Manager or Foreman of these discrepancies and/or broken locks or seals.

- 2.3.5 Emergency instrumentation removed from lockers/kits shall be replaced prior to end of working shift except during actual emergencies.
- 2.4 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:
1. Replace any equipment which is missing or requires maintenance.
 2. Inspect each item per the requirements of Radiological Controls Procedure 4053.
 3. Place an Emergency Respiratory Equipment Inspection tag with each piece of equipment found acceptable.
 4. Complete the Inventory Checklist for Full Face Respirators with Canisters (Enclosure XII), the Inspection of Emergency Respiratory Equipment for SCBA's (Enclosure X), and the Inspection of Emergency Respiratory Equipment for SCBA Cylinders (Enclosure XI). 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.
- 2.5 The Radiological Controls Field Operations Foreman shall be notified of all emergency equipment usage at the end of its usage.

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 respiratory protection equipment which shall be checked

after each use and once each calendar month. Portable radiation monitoring, air sampling and other designated equipment shall be operationally checked per Enclosure VIII monthly.

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 1.3.5.

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.

NOTE: Lock/seal integrity shall be checked prior to opening lockers/kits for operational check of portable radiation monitoring and air sampling equipment. Lockers/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 Manager - Radiological Controls Field Operations.

3.2 Details

3.2.1 Emergency equipment and/or radiac instruments shall be located in the following areas in accordance with the Unit 2 Emergency Plan, to allow protection of Emergency Personnel and availability of equipment:

- a. Control Room
- b. Radiological Controls Lab (HP-2)
- c. Onsite/Offsite Monitoring Kits
- d. Search Two Trailer
- e. Ambulance
- f. Alternate near Site Emergency Operations Facility (AEOF)
- g. Near Site Emergency Operations Facility (EOF)
- h. Unit 2 Warehouse Building 3
- i. Fire Brigade Vehicle
- j. Environmental Controls Office (44 Luke Dr., Middletown, PA)

NOTE: The AEOF and the EOF are inventoried by Unit 1. The Environmental Controls Office is inventoried by the Environmental Controls Group. Checklists for these inventories are located in Unit 1 Administrative Procedure 1053.

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.

3.2.3 All emergency kits and lockers shall have seals or locks, as appropriate.

3.2.4 Key control for all emergency kits/lockers shall be maintained by the Radiological Controls Department 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/Support Services Supervisor, 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).

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 or Support Services Supervisor, 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 I
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Control Room 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
Protective Clothing (Booties and Gloves)	25 Sets		N/A	N/A	N/A
REMP Map	1		N/A	N/A	N/A
Site Map	1		N/A	N/A	N/A
Isopleth Overlays (B, D, and F Stability)	1 each		N/A	N/A	N/A
Directions to Monitoring Stations	1 Book		N/A	N/A	N/A
Procedures - EPIP 1054.7, 1054.10, 1004.7	1 each		N/A		N/A
Tablets, Pens, Pencils, Wax Pencils	4 each		N/A	N/A	N/A
Flashlight with Spare Bulb and Batteries	1		N/A	N/A	
Scissors	1 pair		N/A	N/A	N/A
Tweezers	1 pair		N/A	N/A	N/A
Cotton Swabs	1 bag		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:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE I (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Control Room 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
Smear/Air Sample Envelopes	1 box		N/A	N/A	N/A
Iodine Cartridges (Silver Zeolite)	5 Min/25 Max		N/A	N/A	N/A
Air Sampler (H 809 V or Equiv.)	1				
Dose Rate Meter (RO-2 or Equiv.)	1				
RM-14/HP-210 w/Sample Holder	1				
Planchets	5		N/A	N/A	N/A
Self Reading Dosimeters (Low Range)	5		N/A		N/A
Self Reading Dosimeters(High Range)	5		N/A		N/A
Dosimeter Charger	1			N/A	
Line Printer Paper	1 box		N/A	N/A	N/A
TRS-80 Video Display	1			N/A	*
TRS-80 Key Board	1			N/A	*
TRS-80 Expansion Interface	1			N/A	*
Power Line Filter	1		N/A	N/A	*

REMARKS: * Quarterly operational check consists of running a set of dose projections, as per ENCLOSURE X. (This should be done by a RAC qualified person.)

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE I (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Control Room 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
TRS-80 Tape Recorder w/Cable	1			N/A	*
TRS-80 Line Printer w/Cable	1			N/A	*
Dose Projection Cassette	1		N/A	N/A	*
Rad. Warning Signs and Ribbon	5/50'		N/A	N/A	N/A
Radiological Tape	2 Rolls		N/A	N/A	N/A
Masking Tape	5 Rolls		N/A	N/A	N/A
Inventory Checklist (Blank)	As Required		N/A		N/A

REMARKS: * Quarterly operational check consists of running a set of dose projections, as per ENCLOSURE X. (This should be done by a RAC qualified person.)

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE II
INVENTORY CHECKLIST - EMERGENCY EQUIPMENTKit Location: Unit 2 HP Lab 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
Protective Clothing (Full Set)*	10		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
Smear/Air Sample Envelopes	2 boxes		N/A	N/A	N/A
Tweezers	1 pair		N/A	N/A	N/A
Iodine Cartridges (Silver Zeolite)	5 Min/25 Max		N/A	N/A	N/A
Dose Rate Meter (RD-2 or Equiv.)	2				
RM-14/HP-210	1				
Teletector	1				
Self Reading Dosimeters (Low Range)	10		N/A		N/A
Self Reading Dosimeters(High Range)	10		N/A		N/A
Dosimeter Charger	1			N/A	
Flash Light With Spare Bulb and Batteries	1		N/A	N/A	

REMARKS: * Full set consists of cloth coveralls, hood, cotton gloves, rubber gloves, plastic booties and rubber over shoes.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE II (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Unit 2 HP Lab 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
Tape (Masking or Duct)	5 Rolls		N/A	N/A	N/A
Site Map	1		N/A	N/A	N/A
Dose Projection Cassette	1		N/A	N/A	*
Air Sampler	1				
Inventory Checklist (Blank)	As Required		N/A		N/A

REMARKS: * Quarterly operational check consists of running a set of dose projections.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE III
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Onsite/Offsite Type: Emerg. Inst. Emerg.
Monitoring Kits Kit Kit Locker

Inventory Date: _____

Inventory Performed By: _____ Reviewed: _____ Date: _____

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
Dose Rate Meter (RO-2 or Equiv.)	1/Kit				
RM-14/HP-210 With Sample Holder	1/Kit				
Portable Air Sampler (H 809 V or Equiv.)	1 Kit				
Teletector	1 (Onsite Kit Only)				
Self Reading Dosimeters (Low Range)	5/Kit		N/A		N/A
Self Reading Dosimeters(High Range)	5 (Onsite Kit Only)		N/A		N/A
Dosimeter Charger	1/Kit			N/A	
Inventory Checklists (Blank)	As Required		N/A		N/A

REMARKS: Two (2) Kits, each containing the equipment listed, will be maintained. One kit will be stored in a tool box in the bed of the Radiological Controls Dept. pick-up truck. The other will be stored in the Radiological Controls Dept. van. These kits may be temporarily stored in other vehicles while Rad Con vehicles are being serviced.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE III (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Onsite/Offsite Type: Emerg. Inst. Emerg.
Monitoring Kits Kit Kit Locker Inventory Date: _____

Inventory Performed By: _____ Reviewed: _____ Date: _____

ITEM	NUMBER REQUIRED	NUMBER PRESENT	S/N	CAL DATE/ REV. NO.	OPERATIONAL CHECK
REMP Map	1 (Offsite Kit Only)		N/A	N/A	N/A
Site Map	1 (Onsite Kit Only)		N/A	N/A	N/A
Directions to Monitoring Locations	1 Book/Kit		N/A	N/A	N/A
Procedures EPIP 1054.10, 1054.12, RCP 4101, and 4104	1 Each/Kit		N/A		N/A
Tablets, Pens, Pencils, Wax Pencils	4 Each/Kit		N/A	N/A	N/A
Air Sample Filters	2 Boxes/Kit		N/A	N/A	N/A
Disc Smears	2 Boxes/Kit		N/A	N/A	N/A
Smear/Air Sample Envelopes	100/Kit		N/A	N/A	N/A
Planchets	5/Kit		N/A	N/A	N/A
Iodine Cartridges (Silver Zeolite)	5 Min/25 Max/ Kit		N/A	N/A	N/A
Radiological Warning Signs and Ribbon	5/50' (Onsite Kit Only)		N/A	N/A	N/A
Surgeon's Gloves	1 Box/Kit		N/A	N/A	N/A
Tape (Masking or Duct)	2 Rolls/Kit		N/A	N/A	N/A

REMARKS:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE (Cont'd)
 INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

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Kit Location: Onsite/Offsite
Monitoring Kits

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
Cotton Swabs	2 Bags/Kit		N/A	N/A	N/A
Absorbant Towels	1 Bundle/Kit		N/A	N/A	N/A
Scissors	1 Pair/Kit		N/A	N/A	N/A
Tweezers	1 Pair/Kit		N/A	N/A	N/A
Water Sample Bottles	5/Kit		N/A	N/A	N/A
Gasoline Siphon Kit	1/Kit		N/A	N/A	N/A
Portable Gasoline Powered Generators *	3 Total			N/A	
1054.10 Att. I	10/Kit		N/A		N/A
Flashlight With Spare Bulb and Batteries	1/Kit		N/A	N/A	
Inventory Checklists (Blank)	As Required		N/A		N/A

REMARKS: *Stored in cabinet on the porch of the old TLD building near the south Vehicle gate. Two (2) Kits, each containing the equipment listed will be maintained. One kit will be stored in a tool box in the bed of the Radiological Controls Dept. pick-up truck. The other will be stored in the Radiological Controls Dept. van. These kits may be temporarily stored in other vehicles while Rad Con vehicles are being serviced.

Emergency Kit Locked or Sealed:

 Signature

ENCLOSURE IV
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Search Two Trailer 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
Two Way Radio With Magnetic Antennas	3			N/A	
Telephone Beepers	3			N/A	
Emergency TLD's/E.R. Badges (In Gray Boxes)	50		N/A	N/A	N/A
TLD Issuance Forms (1054.19 Att.I)	10		N/A		N/A
Fire and Ambulance Crew Roster	1		N/A	N/A	N/A
Inventory Checklist (Blank)	As Required		N/A		N/A

REMARKS: Ensure radios are connected to battery chargers and on "trickle" charge.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE V
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Ambulance Kits * 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
Polyethylene Sheeting (4' x 8')	2/Kit		N/A	N/A	N/A
Polyethylene Bags (asst. sizes)	10/Kit		N/A	N/A	N/A
Rad Warning Signs/Ribbon	5/50'/Kit		N/A	N/A	N/A
Pens/Pencils/Note Pads	2 ea./Kit		N/A	N/A	N/A
Disc Smears	2 Boxes/Kit		N/A	N/A	N/A
Paper Coveralls	5 sets/Kit		N/A	N/A	N/A
Surgeon's Gloves w/cotton liners	20 pairs/Kit		N/A	N/A	N/A
Disposable Booties	10 pairs/Kit		N/A	N/A	N/A
Blanket	1/Kit		N/A	N/A	N/A
Masking Tape	2 Rools/Kit		N/A	N/A	N/A
Inventory Checklist (Blank)	as required		N/A	N/A	N/A

REMARKS: * One Ambulance kit is stored in the Unit II H.P. Lab and One Ambulance Kit is stored in the Site Ambulance.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VI
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Unit 2 Warehouse-Bldg. 3 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
Procedures EPIP 1054.20, 1054.36	1 each		N/A		N/A
Tablets, Pens, Pencils, Wax Pencils:	4 each		N/A	N/A	N/A
Polyethylene Sheeting (8' x 16' min)	2		N/A	N/A	N/A
Disc Smears	2 Boxes		N/A	N/A	N/A
Smear Envelopes	1 Box		N/A	N/A	N/A
RM-14/HP-210	1				
E-520 or Equiv.	1				
Masking Tape	5 Rolls		N/A	N/A	N/A
Radiological Warning Signs	5		N/A	N/A	N/A
Absorbant Towels	2 Bundles		N/A	N/A	N/A
Flashlight With Spare Bulb and Batteries	1		N/A	N/A	

REMARKS:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VI (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Unit 2 Warehouse-Bldg. 3 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
Megaphones	2			N/A	
1054.36 ATTACHMENT I	150		N/A		N/A
1054.36 ATTACHMENT III	500		N/A		N/A
Emergency Notification Maps	3		N/A	N/A	N/A
1054.5 ATTACHMENT II					
1054.20 ATTACHMENTS II AND III	50 ea.		N/A		N/A
Substation Key	1		N/A	N/A	N/A
Inventory Checklists (Blank)	as required		N/A		N/A

REMARKS:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VII
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Fire Brigade Vehicle 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
Dose Rate Meter (RO-2 or Equiv.)	1				
RM-14/HP-210	1				
Portable Air Sampler - 12 VDC	1				
Teletector	1				
Dosimeters (Low Range)	5		N/A		N/A
Dosimeters (High Range)	5		N/A		N/A
Dosimeter Charger	1			N/A	
Inventory Checklists (Blank)	As Required		N/A		N/A

REMARKS:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VII (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Fire Brigade Vehicle 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
Site Map	1		N/A	N/A	N/A
Procedures RCP 4101, 4104	1 each		N/A		N/A
Tablets, Pens, Pencils, Wax Pencils	4 each		N/A	N/A	N/A
Flashlight With Spare Bulb and Batteries	1		N/A	N/A	
Polyethylene Sheeting (8' x 16' min.)	2		N/A	N/A	N/A
Disc Smears	2 Boxes		N/A	N/A	N/A
Air Sample Filters	2 Boxes		N/A	N/A	N/A
Smear/Air Sample Envelopes	1 Box		N/A	N/A	N/A
Planchets	5		N/A	N/A	N/A
Tweezers	1 pair		N/A	N/A	N/A
Iodine Cartridges (Silver Zeolite)	5 min./25 max		N/A	N/A	N/A
Radiological Warning Signs/Ribbon	5/50'		N/A	N/A	N/A
Tape (Masking or Duct)	5 Rolls		N/A	N/A	N/A

REMARKS:

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VII (Cont'd)
INVENTORY CHECKLIST - EMERGENCY EQUIPMENT

Kit Location: Fire Brigade Vehicle 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
Radiological Tape	2 Rolls		N/A	N/A	N/A
Ziplock Bags	20		N/A	N/A	N/A
Water Sample Bottles	5		N/A	N/A	N/A
Absorbant Towels	2 Bundles		N/A	N/A	N/A
Protective Clothing - Full Set*	8		N/A	N/A	N/A
Plastic Booties	25 pair		N/A	N/A	N/A
Surgeon's Gloves	1 Box		N/A	N/A	N/A
Rubber Gloves	1 Box		N/A	N/A	N/A
Inventory Checklists (Blank)	As Required		N/A		N/A

REMARKS: * Full Set consists of cloth coveralls, hood, cotton gloves, rubber gloves, plastic booties and rubber overshoes.

Emergency Kit Locked or Sealed:

Signature

ENCLOSURE VIII

Operational Check of Emergency Equipment

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	Initials
CONTROL ROOM	RO-2 or Equiv.			
	RM-14			
UNIT 2 HP LAB	RO-2 or Equiv.			
	RO-2 or Equiv.			
	RM-14			
	Teletector			
ONSITE MONITORING KIT	RO-2 or Equiv.			
	RM-14			
	Teletector			
OFFSITE MONITORING KIT	RO-2 or Equiv.			
	RM-14			
UNIT 2 WAREHOUSE	RM-14			
	E-520 or Equiv.			
FIRE BRIGADE VEHICLE	RO-2 or Equiv.			
	RM-14			
	Teletector			

DATE COMPLETED: _____

REVIEWED BY: _____

ENCLOSURE VIII (Cont'd)
Air Sampling Equipment Check

Monthly:

1. Load Air Sampler with a cartridge and filter paper.
2. Turn Air Sampler on and verify flow.
3. Unload Air Sampler and return it to locker/kit.

Location of Air Sampler	Serial No.	Op Check	Initial
Control Room			
Unit 2 HP Lab			
Onsite Monitoring Kit			
Offsite Monitoring Kit			
Fire Brigade Vehicle			

Date Completed: _____ Reviewed By: _____

Radio Surveillance

Monthly

Radio Checks: Check operability by establishing communication with Control Room. Upon completion, reconnect the radios to the battery chargers and place on "trickle" charge as applicable.

Serial No.	Communication	Initials

Date Completed: _____ Reviewed By: _____

ENCLOSURE VIII (Cont'd)

Other Equipment

Monthly

For other battery powered equipment such as flashlights, megaphones, and dosimeter chargers; insert batteries, energize, and check for normal operation.

NOTE: When an Operational Check is satisfactorily performed, enter "Sat" in the appropriate block of the inventory checklist. If a check is not satisfactory, enter "Unsat" in the appropriate block and enter any explanatory notes in the remarks section.

Radio Surveillance

Quarterly

Every quarter, remove batteries from radios and exchange with security. (Insure radios are plugged in to chargers and on "trickle" charge upon returning to locker). Check beepers by switching the units on individually and listening for the short intermittent beeping sound.

Radio	Battery	Beeper	
Serial Number	Exchanged	Checked	Initials

Date Completed: _____ Reviewed By: _____

Portable Gasoline Powered Generator Surveillance

 : NOTE: Electrical personnel shall accompany Radiological :
 : Control Personnel for operational check of Portable :
 : Gasoline Powered Generators. :

Quarterly

1. Start generator and warm up per instructions listed on the machine.
2. Load generator by plugging in air sampler unit and turn air sampler unit on.

ENCLOSURE VIII (Cont'd)

3. With volt-ohm meter check output of second female plug. Voltage should be 120 V. AC \pm 10 V.
4. Turn off Air Sampler and measure output voltage of female plug. Voltage should be 120 V. AC \pm 10 V.
5. Remove Air Sampler Unit plug from generator. Remove volt-ohm unit from generator.
6. Shut down the generator as per instructions listed on the machine.
7. Return Portable Gasoline Powered Generator to cabinet.

: Generator Serial : Voltage While : Voltage While : Initials :
: Number : Loaded : Unloaded :
: : : : :
: : : : :
: : : : :
: : : : :
: : : : :
: : : : :
: : : : :

Date Completed: _____ Reviewed By: _____

ENCLOSURE IX

Functional Test of the TRS-80 Computer System

- 1.0 Remove cover from the TRS-80 Enclosure/desk carefully by lifting upwards and clearing the CRT (device that resembles a television).
- 2.0 Ensure that the system is connected as per EPIP 1054.7 Appendix A.
- 3.0 Plugging in of the AC, "OPERATION" step 6 of Appendix A, using the TRS-80 Line filter should be in the configuration as follows.
 - 3.1 The 2-AC cords from the back of the Expansion Interface should be plugged into sockets marked "CPU" and "EI".
 - 3.2 The CRT AC cord should be plugged into the sockets marked MON.
 - 3.3 The remaining AC cords should be plugged into the sockets marked "PERIPHERAL" starting from 1.
 - 3.4 The AC cord from the TRS-80 Line feeder should be plugged into a properly grounded socket and put the "POWER" switch into the "ON" position.
 - 3.5 Proceed with the remaining steps of Appendix A.
- 4.0 When the program is RUN (executed) the following should occur (note computer questions are in quotes your response is in capital letters remember to press the Enter key after your response):

"IS RECORDER WDS-1A IN SERVICE AND ON SCALE?" Y

"ENTER WIND DIRECTION FROM WDS-1A:?" 180

"ENTER WIND SPEED FROM WDS-1A:?" 5

"IS RECORDER TR-1928 IN SERVICE AND ON SCALE?" Y

"ENTER DELTA - TEMPERATURE FROM TR-1928:?" -1

When display asks you to "SELECT RELEASE PATHWAY FROM MENU" enter 1

"ENTER TODAY'S DATE:" today's date (demo used 12/31/81)

"ENTER CURRENT TIME (24 HOUR CLOCK):" current time (1453)

"IS HP-R-219 IN SERVICE AND ON SCALE?" Y

"IS STATION VENT FLOW RECORDER (HP-P-219 (R-8)) IN SERVICE?" Y

"ENTER STATION VENT FLOW IN FT/MIN:?" 2000

"ENTER HP-R-219 NOBLE GAS READING IN CPM:?" 1000

"ENTER THE CURRENT HP-R-219 PARTICULATE CHANNEL READING IN CPM:?" 1000

"ENTER THE PARTICULATE CHANNEL READING FROM 10 MINUTES EARLIER IN CPM:?" 10

The display will return to the MENU Enter CHOICE 8

"ENTER THE ESTIMATED DURATION OF THE RELEASE IN HOURS. IF UNABLE TO ESTIMATE ENTER <2> :?" 2

The display will give data concerning isotopic ratios and:

"ENTER PERCENT CESIUM:?" 50

"ENTER PERCENT STRONTIUM:?" 50

The display then shows some of the results. Press <SPACE BAR>. More results; press <SPACE BAR>. The DOSES are now displayed press <SPACE BAR>.

"OUTPUT TO LINE PRINTER?" Y

Printout will now be produced

"USE SAME METEOROLOGICAL DATA?"

- 5.0 The test is now complete. If you could not reach this point because of system malfunction check all wire connection. If this is not the problem then contact either Emergency Planning or Radiological Technical Support - Dose and Effluent Assessment.
- 6.0 Compare the printout obtained with sample attached. Except for the date and time, they should be identical and the test was satisfactory. If not, hit the BREAK button and repeat process from step 4.0.
- 7.0 If the printout still is different contact either Emergency Planning or Radiological Technical Support - Dose and Effluent Assessment.
- 8.0 Return the system to the condition and position it was found in.

Date Completed _____

Reviewed by _____

THREE MILE ISLAND UNIT II PROJECTED DOSE CALCULATIONS

DATE: 12/31/81

TIME: 1453

PLUME TOWARDS: 0 Degrees

SECTOR: N

WIND SPEED: 5 MPH

STABILITY CLASS: B

HP-R-219 STATION VENT SOURCE TERMS

STATION VENT FLOW: 141760CFM = $6.69E + 07$ CC/SEC

NOBLE GAS: $8.56E-04$ CI/SEC

PARTICULATES: $1.81E-07$ CI/SEC

TOTAL SOURCE TERMS FOR UNIT II (INCLUDING EPICOR II)

NOBLE GAS: $8.56E-04$ CI/SEC

PARTICULATES: $1.81E-07$ CI/SEC

CALCULATED OFF-SITE DOSES FOR 2 HOUR ESTIMATED RELEASE

WHOLE BODY DOSE (NOBLE GAS)

EA	LPZ	5 MILE EPZ	10 MILE EPZ
$6.93E-05$	$1.39E-06$	$4.66E-07$	$2.96E-07$
MREM	MREM	MREM	MREM

BETA SKIN DOSE (NOBLE GAS)

$5.77E-03$	$1.15E-04$	$3.88E-05$	$2.46E-05$
MREM	MREM	MREM	MREM

BONE DOSE: ADOLESCENT (ASSUMING 50 PERCENT CS-137 AND 50 PERCENT SR-90)

$4.92E-02$	$9.85E-04$	$3.31E-04$	$2.10E-04$
MREM	MREM	MREM	MREM

ESTIMATED TIME OF ARRIVAL OF PLUME

5	24	60	120
MINUTES	MINUTES	MINUTES	MINUTES

ESTIMATED TIME TO EXCEED PAG'S = $4.06E + 04$ HOURS BASED ON BONE DOSE RATE.

ENCLOSURE X

INSPECTION OF EMERGENCY RESPIRATORY EQUIPMENT
SELF CONTAINED BREATHING APPARATUS

Month _____
Year _____
Reviewed by: _____

KIT NUMBER:	LOCATION	CYLINDER		REGULATOR		FACE-PIECE	COMMENTS	UNIT INSPECTION	
		No.	DATE	NUMBER	DATE			DATE	SIGNATURE
32	Unit No. 2 Control Room								
33	Unit No. 2 Control Room								
34	Unit No. 2 Control Room								
35	Unit No. 2 Control Room								
36	Unit No. 2 Control Room								
37	Unit No. 2 Control Bldg., 331' elev. (adjacent Turb. Bldg. entrance)								
38	Unit No. 2 Control Bldg., 331' elev. (adjacent Turb. Bldg. entrance)								
39	Unit No. 2 Control Bldg., 305' elev. (adjacent Turb. Bldg. entrance)								
40	Unit No. 2 Control Bldg., 305' elev. (adjacent Turb. Bldg. entrance)								
41	Unit No. 2 Turbine Bldg., 305' elev. (near elevator)								
42	Unit No. 2 Turbine Bldg., 305' elev. (near elevator)								
43	Unit No. 2 Control Bldg., 281' elev. (base of east stairway)								
44	Unit No. 2 Control Bldg., 281' elev. (base of east stairway)								
45	Unit No. 2 Control Bldg., 305' elev. (outside relay room)								
46	Unit No. 2 Control Bldg., 305' elev. (outside relay room)								

ENCLOSURE X (Cont'd)

INSPECTION OF EMERGENCY RESPIRATORY EQUIPMENT

SELF CONTAINED BREATHING APPARATUS

Month _____
Year _____
Reviewed by: _____

KIT NUMBER:	LOCATION	CYLINDER		REGULATOR		EQUIP-:CALI-:FACE-:		UNIT INSPECTION	
		No.	:DATE :PRESSURE:	NUMBER:DATE	MENT :BRATION:PIECE	NUMBER:	COMMENTS	DATE:	SIGNATURE
47	: Unit No. 2 Control Bldg. area, 305' : elev. (personnel access hatch area)	:	:	:	:	:	:	:	:
48	: Unit No. 2 Control Bldg. area, 305' : elev. (personnel access hatch area)	:	:	:	:	:	:	:	:
49	: Unit No. 2 Control Bldg. area, 305' : elev. (equipment access hatch area)	:	:	:	:	:	:	:	:
50	: Unit No. 2 Control Bldg. area, 305' : elev. (equipment access hatch area)	:	:	:	:	:	:	:	:
51	: Unit No. 2 Auxiliary Bldg., 305' : elev. (adjacent elevator)36	:	:	:	:	:	:	:	:
52	: Unit No. 2 Auxiliary Bldg., 305' : (elev. (adjacent elevator))	:	:	:	:	:	:	:	:
53	: Unit No. 2 Auxiliary Bldg., 305' : elev. (adjacent elevator)	:	:	:	:	:	:	:	:
54	: Unit No. 2 Auxiliary Bldg., 280' : elev. (adjacent elevator)	:	:	:	:	:	:	:	:
55	: Unit No. 2 Auxiliary Bldg., 328' : elev. (adjacent elevator)	:	:	:	:	:	:	:	:
56	: Unit No. 2 Auxiliary Bldg., 328' : elev. (adjacent elevator)	:	:	:	:	:	:	:	:
57	: Unit No. 2 Service Bldg., 305' elev.: : (outside Rad Con office)	:	:	:	:	:	:	:	:
58	: Unit No. 2 Service Bldg., 305' elev.: : (outside Rad Con office)	:	:	:	:	:	:	:	:
59	: Unit No. 2 Service Bldg., 305' elev.: : (outside Rad Con office)	:	:	:	:	:	:	:	:
60	: Unit No. 2 Auxiliary Bldg., 305' : elev. (north wall)	:	:	:	:	:	:	:	:
61	: Unit No. 2 Auxiliary Bldg., 305' : elev. (north wall)	:	:	:	:	:	:	:	:

ENCLOSURE X (Cont'd)

INSPECTION OF EMERGENCY RESPIRATORY EQUIPMENT
SELF CONTAINED BREATHING APPARATUS

Month _____
Year _____
Reviewed by: _____

KIT NUMBER:	LOCATION	CYLINDER		REGULATOR		FACE- PIECE	COMMENTS	UNIT INSPECTION	
		No.	DATE	NUMBER	DATE			DATE	SIGNATURE
62	Fire Brigade Truck								
63	Fire Brigade Truck								
64	Fire Brigade Truck								
65	Fire Brigade Truck								
66	Fire Brigade Truck								
67	Fire Brigade Truck								
68	Fire Brigade Truck								
69	Fire Brigade Truck								
70	Unit No. 2 Cir. Water Chlorinator								
71	Unit No. 2 Cir. Water Chlorinator								
72	Epicor II								
73	Epicor II								
74	Decon Compound Rad Con Trlr.								
75	Decon Compound Rad Con Trlr.								

ENCLOSURE XI

Inspection of Emergency Respiratory Equipment
Self-Contained Breathing Apparatus Cylinders

Month _____
Year _____
Reviewed by: _____

NUMBER	LOCATION	No.	HYDRO DATE	PRESSURE	COMMENTS	SIGNATURE	DATE
1	Unit 2 Control Room						
2	Unit 2 Control Room						
3	Unit 2 Control Room						
4	Unit 2 Control Room						
5	Unit 2 Control Room						
6	Unit 2 Control Room						
7	Unit 2 Control Room						
8	Unit 2 Control Room						
9	Unit 2 Control Room						
0	Unit 2 Control Room						

FOR INFORMATION ONLY

ENCLOSURE XII
Inventory Checklist
Full Face Respirators With Canisters

Month _____

Year _____

LOCATION	NUMBER REQUIRED	MODEL FACEPIECE	NUMBER PRESENT		DATE/SIGNATURE
			TYPE CANISTER	QUANTITY	
Control Room	50				
Lab	25				
Onsite Monitoring Kit	4				
Offsite Monitoring Kit	4				
Fire Brigade Vehicle	8				
Ambulance	4				

FOR INFORMATION ONLY

REMARKS:

REVIEWED BY: _____