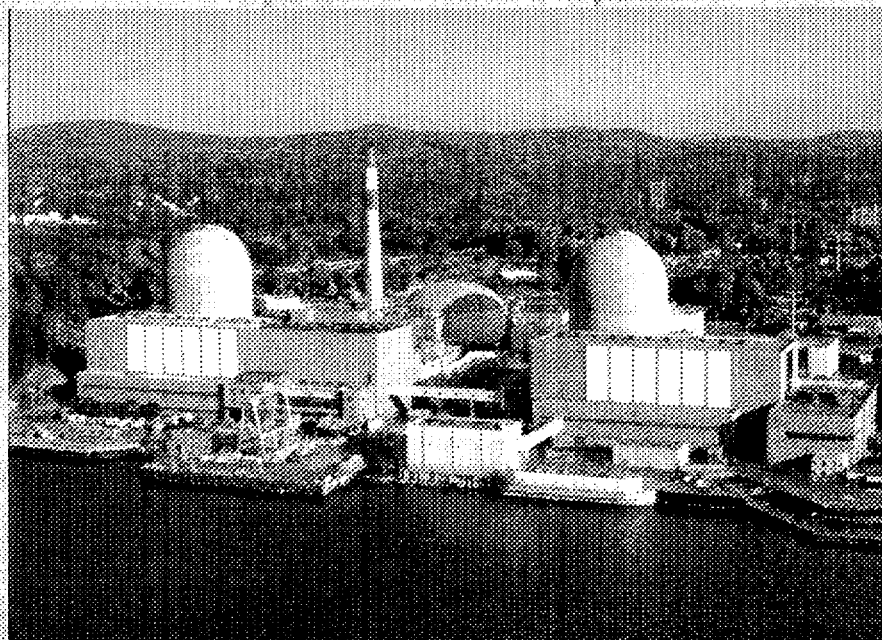


**Con
Edison**

Indian Point Nuclear Power Station

Unit 2



Emergency Plan Implementing Procedures

Controlled Copy No.: 14

Emergency Plan Implementing Procedures

Table of Contents

Document #	Procedure Title	Rev. No.	Effective Date
IP-1001	Mobilization of Onsite Emergency Organization	10	3/28/00
IP-1002	Emergency Notification and Communication	19	3/28/00
IP-1003	Planned Discharge of Containment Atmosphere During Accident Conditions	6	9/1/99
IP-1004	Post Accident Offsite Environmental Surveys, Sampling and Counting	5	9/1/99
IP-1005	MS-2 / SPA-3 to Determine Thyroid Burdens	6	9/1/99
IP-1006	Site Perimeter Survey	6	9/1/99
IP-1007	Dose Assessment	10	9/1/99
IP-1008	Personnel Radiological Check and Decontamination	6	9/1/99
IP-1009	Radiological Check and Decontamination of Vehicles	7	9/1/99
IP-1012	Onsite Medical Emergency	9	4/30/98
IP-1013	Protective Action Recommendations	7	9/1/99
IP-1014	Radiological Check of Equipment Before It Leaves the Site	6	9/1/99
IP-1015	Mobilization and Operational Procedure for Offsite Monitoring Teams	7	9/13/99
IP-1016	Obtaining Meteorological Data	12	9/1/99
IP-1017	Issuance and Use of Radiological Equipment Stored in the Command Guard House	9	9/1/99
IP-1018	Media relations Mobilizing During Emergencies	6	9/1/99
IP-1019	Corporate Response Center	8	9/1/99
IP-1020	Airborne Activity Determination	7	9/1/99
IP-1021	Manual Update, Readout and Printout of Proteus Plant Parameter Data	5	9/1/99
IP-1022	Obtaining Meteorological, Radiological and Dose Assessment Data from MIDAS	5	9/1/99
IP-1023	Operations Support Center (OSC)	13	3/28/00
IP-1024	Emergency Classification	7	9/1/99
IP-1025	Handling Fire Department Personnel Fighting Fires in the Controlled Area	7	9/1/99
IP-1027	Personnel Accountability and Evacuation	10	3/28/00
IP-1028	Onsite (Out of Plant) Surveys	7	9/1/99
IP-1030	Emergency Operations Facility (EOF)	0	3/28/00
IP-1031	Air Raid Alert	7	9/1/99
IP-1032	Tornado Emergency	5	9/1/99

Emergency Plan Implementing Procedures

Table of Contents

Document #	Procedure Title	Rev. No.	Effective Date
IP-1035	Technical Support Center (TSC)	15	3/28/00
IP-1036	Estimation of Population dose Within the 10 Mile Emergency Planning Zone	6	9/1/99
IP-1037	Obtaining Offsite Reuter-Stokes Monitor Data	8	9/1/99
IP-1039	Offsite Contamination Checks	8	9/1/99
IP-1040	Relocation of Personnel Dosimetry Facilities	6	9/1/99
IP-1041	Use of the Triton for Monitoring Radiogas	5	9/1/99
IP-1042	In-Plant Radiological Surveys and Sampling	6	9/1/99
IP-1044	Radiation Protection Program During Emergencies	6	9/1/99
IP-1045	Activation of Alternate Emergency Operations Facility	8	9/1/99
IP-1046	Responsibilities of Con Edison Personnel During Emergencies at Unit No. 3	7	9/1/99
IP-1047	Obtaining Offsite Exposure Rates From Midas Using a Data Terminal	7	9/1/99
IP-1048	Closeout/De-escalation of Emergency and Initiation of Recovery	7	9/1/99
IP-1049	Recovery	1	9/1/99
IAP-10	Shift Manager	14	3/28/00
IAP-12	Watch Health Physics Technician (WHPT)	8	9/1/99
IAP-14	Recover Manager	0	7/10/97

Mobilization of Onsite Emergency Organization

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Reviewer:	_____ Print Name	_____ Signature	_____ Date
SNSC Review:	<u>2706</u> Meeting Number	<u>[Signature]</u> Signature Secretary	<u>3/16/00</u> Date
Approval:	<u>Frank Inzirillo</u> Print Name	<u>[Signature]</u> Signature	<u>3/18/00</u> Date

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Extensively Revised

_____	Biennial Review _____
Reviewer/Date	Reviewer/Date

CONTROLLED

**Reference
Use**

MOBILIZATION OF ONSITE EMERGENCY ORGANIZATION**1.0 PURPOSE**

To describe the methods used to mobilize the additional staff required for Alert, Site Area and General Emergencies.

2.0 DISCUSSION

2.1 The onsite emergency organization consists of three levels of staffing each of which functions at a different time during an emergency.

2.1.1 Staffing Level I

Staffing level I consists of the Watch Force which is available 24 hours a day. During an emergency there are a number of positions OR areas of expertise that must be handled by the Watch Force for the first 60 minutes of the emergency, UNTIL they are augmented by non-shift personnel. The positions OR areas of expertise (See Reference 6.1) AND the watch individuals who shall handle them are as indicated below:

<u>Position/Area of Expertise</u>	<u>No. on Shift</u>	<u>Watch Individual</u>
Shift Supervisor (SRO)	1	Shift Manager
Shift Foreman (SRO)	1	Control Room Supervisor
Control Room Operators	1	Reactor Operator
Other Licensed Operator	1	As Designated
Auxiliary Operators	2	Unit 2 Conv. & Nuc. NPOs
Emergency Director	1**	Shift Manager
Communicator	1***	Support Facility NPO
H.P. Tech.	1	Health Physics
Chem. Tech.	1	Chem. Tech.
Shift Technical Advisor	1	Watch Engineer
Mech. Maint.	1**	Unit 2 Rover NPO
Elect. Maint./I&C	1**	Unit 2 Rover NPO
Health Physics	2**	Field Supp. Supv. & NYPA HP
Rescue and First Aid	2**	NPOs

** Maybe provided by Shift personnel assigned other function.

*** If the NPO is summoned to the fire brigade a qualified communicator from the Security Force shall assume the CCR Communicator position.

2.1.2 Staffing Level II

Staffing level II for NUES (discretion of SM), ALERTS, SITE AREA and GENERAL Emergencies, consists of the Watch Force and those non-watch personnel who are called in to augment them. On-call ERO managers report directly to their assigned facilities when notified. Facility managers assign additional personnel, as required from Con Edison Staff AND where appropriate from the NYPA Watch Force. See the Emergency Telephone Directory for a listing of personnel listed by ERO job function. Facility procedures provide forms that shall be used to document each position as it is filled.

Level II Staffing Positions include:

Emergency Plant Mgr.	(1)	Health Physics	(4)
Offsite Rad. Assmt. Dir.	(1)	Chemistry	(1)
Offsite Surveys	(4)	TSC(Core,Elec,Mech)	(3)
On-Site Surveys	(2)	I&C	(1)
In-Plant Surveys	(2)	Comm (EOF & TSC)	(2)
OSC Manager	(1)	Mech/Elect. Maint.	(4)
Info Liaison*	(1)		

*Position not required under minimum staffing.

Personnel are contacted during off-hours by means of radio pagers ("beeper") and telephone. The Shift Manager initiates the call-in through the Con Edison on-site security force. When the need arises for assistance of New York Power Authority personnel, the Shift Manager contacts the Unit No. 3 Shift Manager.

ALL personnel contacted shall report to their assigned emergency facilities. TSC and OSC positions report to the TSC OSC Complex. Personnel assigned as I&C Technicians, Maintenance (Mechanics & Electricians), Chemistry Technicians, Health Physics Technicians AND all off-shift Operations Staff shall perform their duties under the direction of the OSC Manager AND work out of the Operations Support Center. Personnel assigned to the EOF shall report to the EOF and work under the direction of the EOF Manager.

2.1.3 Staffing Level III

Staffing level III (Site Area AND General Emergencies), which is the full activation of ALL emergency response functions, consists of staffing level II PLUS the addition of other site AND corporate personnel.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

5.1 Normal Work Hours Mobilization of Emergency Facilities

5.1.1 The Reactor Operator (RO) / Control Room Communicator sounds the emergency assembly alarm AND makes the following announcement

- a. Attention ALL personnel.
- b. An _____ Emergency has been declared.
- c. ALL Essential Personnel report to your assigned emergency facility.
- d. ALL other personnel report to the Energy Education Center.

5.1.2 The Shift Manager assigns the Support Facility NPO OR other qualified individual as the Control Room Communicator.

5.1.3 Sounding of the site emergency assembly alarm by the RO / Control Room Communicator results in:

- a. The following personnel report to the Central Control Room for accountability:
 1. Emergency Plant Manager
 2. On-shift Nuclear Plant Operators
 3. On-shift Watch Health Physics Technicians
 4. On-shift Watch Chemistry Technician
 5. On-shift Watch Engineer
- b. The following Emergency Response Organization Team members report to their assigned emergency response facility for accountability:
 1. Emergency Director (ED) – EOF
 2. Emergency Operations Facility Manager – EOF
 3. Offsite Radiological Assessment Director (ORADs) – EOF
 4. Dose Assessment Health Physicist – EOF
 5. EOF Communicator #1 – EOF
 6. EOF Communicator #2 – EOF
 7. Information Liaison – EOF
 8. Technical Advisor (TA) – EOF
 9. Technical Support Center (TSC) Manager – TSC
 10. Technical Assessment Coordinator – TSC
 11. Operations Advisor – TSC

12. Radiological Advisor
 13. Core Physics Engineer – TSC
 14. Electrical/I & C Engineer – TSC
 15. Mechanical Engineer – TSC
 16. Operations Support Center (OSC) Manager – OSC
 17. I&C Coordinator – OSC
 18. Radiation Protection Coordinator – OSC
 19. Maintenance Coordinator – OSC
 20. Team Coordinator - OSC
- c. All other essential personnel with Emergency Response Organization responsibilities report to their assigned facility (TSC/OSC, EOF or JNC).
 - d. Personnel assigned as I&C Technicians, Maintenance (Mechanics & Electricians), Chemistry Technicians, Health Physics Technicians AND all off-shift Operations Staff shall report to the OSC and perform their duties under the direction of the OSC Manager.
 - e. All non-essential personnel (contractors, visitors and other personnel not assigned an emergency function) shall egress the Protected Area and proceed to assemble in the Energy Information Center in accordance with IP-1027, Site Personnel Accountability and Evacuation.
 - f. Offsite Environmental Monitoring Team Members assemble at the EOF with their vehicles.
- 5.1.4 The OSC Manager will immediately proceed to the OSC and assist in the conduct of accountability as follows:
- a. Obtain the names of all emergency response personnel in the Technical Support Center (TSC), Operations Support Center (OSC) and Central Control Room (CCR).
 - b. Review security LO-2 access report and determine if search and rescue is required to locate persons identified on the LO-2 access report that are not on the accountability lists.
- 5.1.5 The ORAD shall call the Radiation Protection Coordinator to obtain the following personnel after arriving at the EOF.
- a. On-Site H.P. Monitors (2)

NOTE:

CALL IN OF PERSONNEL ON NUES IS AT THE DISCRETION OF THE SHIFT MANAGER.

- 5.1.6 The Communicator calls Security, identifies himself/herself AND instructs Security to initiate the call-in of personnel in accordance with IP-1002, Emergency Notification and Communication using Form IP-1002-4.
- 5.1.7 The EOF Manager, TSC Manager and OSC Manager shall proceed to complete the staffing level III complement for their respective facility.
- 5.1.8 The Communicator should request a supplemental offsite team from Unit No. 3 Control Room.
- 5.1.9 The Emergency Plant Manager shall designate two individuals (CRSs/ROs) to act as the Data Logger and TSC Communicator at the CCR.

5.2 Off Hours Mobilization of Emergency Facilities

- 5.2.1 The Reactor Operator (RO) / Control Room Communicator sounds the emergency assembly alarm AND makes the following announcement
 - a. Attention ALL personnel.
 - b. An _____ Emergency has been declared.
 - c. ALL Essential Personnel report to your assigned emergency facility.
 - d. ALL other personnel report to the Energy Education Center.
- 5.2.3 The Shift Manager assigns the Support Facility NPO OR other qualified individual as the Control Room Communicator.
- 5.2.4 Sounding of the site emergency assembly alarm by the RO / Control Room Communicator results in:
 - a. The following personnel shall report to the Central Control Room for accountability:
 - 1. On-shift Nuclear Plant Operators
 - 2. On-shift Watch Health Physics Technicians
 - 3. On-shift Watch Chemistry Technician
 - 4. On-shift Watch Engineer
 - b. Security personnel shall remain on post and report their accountability to the Central Alarm Station. Security shall notify the Central Control Room when the security force accountability is completed.
 - c. All personnel not associated with the emergency response shall egress the protected area and proceed to assemble at the Energy Information Center in accordance with IP-1027, Site Personnel Accountability and Evacuation.
- 5.2.5 All on-call Emergency Response Organization Team members shall report to their assigned emergency response facility for accountability.

- 5.2.6 Any other essential personnel that are on-site at the time of event classification shall also report to their assigned emergency response facility for accountability.
- 5.2.7 All other essential personnel reporting from off-site report to the Emergency Operations Facility (EOF) for assignment.
- 5.2.8 The Emergency Operations Facility Manager or designee shall, as requested by the TSC and OSC managers, assign emergency responders to ensure minimum staffing requirements at each facility are met, and assign additional responders to augment the facilities as necessary.
- 5.2.9 The Operations Support Center Manager shall proceed to the Operations Support Center and perform the following:
 - a. Obtain the names of all emergency response personnel in the Technical Support Center (TSC), Operations Support Center (OSC) and Central Control Room (CCR).
 - b. Review security LO-2 access report and determine if search and rescue is required to locate persons identified on the LO-2 access report that are not on the accountability lists.
- 5.2.10 The EOF Manager, TSC Manager AND OSC Manager shall proceed to complete the staffing level III complement for their respective facility.

NOTE:

CALL IN OF PERSONNEL ON NUES IS AT THE DISCRETION OF THE SHIFT MANAGER.

- 5.2.9 The Communicator calls Security, identifies himself/herself AND instructs Security to initiate the call-in of personnel in accordance with IP-1002, Emergency Notification and Communication using Form IP-1002-4.
- 5.2.10 On an AS NEEDED basis, as determined by the Shift Manager, the Communicator calls the Unit No. 3 Control Room, identifies himself/herself, specifies the emergency classification AND requests the assistance of watch personnel in the following functional areas.
 - a. Health Physics
 - b. Chemistry
- 5.2.11 UPON arrival at their assigned facilities the on-call facility managers shall assign individuals to fill the required MINIMUM job functions indicated in facility procedures.

6.0 REFERENCES

- 6.1 NUREG-0654

6.2 IP-1027, "Site Personnel Accountability and Evacuation"

6.3 IP-1002, "Emergency Notification and Communication"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

Emergency Notification and Communication

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Reviewer:	_____ Print Name	_____ Signature	_____ Date
SNSC Review:	<u>2706</u> Meeting Number	<u>[Signature]</u> Signature Secretary	<u>3/16/00</u> Date
Approval:	<u>Frank Intirillo</u> Print Name	<u>[Signature]</u> Signature	<u>3/22/00</u> Date

Effective Date: 3/28/00

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**Reference
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EMERGENCY NOTIFICATION AND COMMUNICATION**1.0 PURPOSE**

To prescribe the responsibilities and methods for initial notification and periodic updates made from the Central Control Room (CCR) and Central Information Group (CIG) in the event of a declared emergency at Indian Point Unit Nos. 1 & 2. Provides checklists for the performance of notifications and activation of the Emergency Response Organization. Notifications are required when any one of the emergency classifications are declared as well as the continuing lines of communication during the emergency.

2.0 DISCUSSION

- 2.1 Following initial declaration of an emergency, the Shift Manager (SM) should assign the Support Facility Nuclear Plant Operator (NPO) to be the CCR Communicator. If the Fire Brigade has been or is subsequently summoned, the Support Facility NPO shall report with the Fire Brigade and a qualified communicator from the Station Security Force shall be assigned to the CCR Communicator position by the SM. When a non-Watch Control Room Supervisor (CRS), Reactor Operator (RO) or NPO becomes available the Communicator from Security may then be replaced at the SM's discretion.
- 2.2 The CCR Communicator shall perform his duties in the Control Room under the SM's direction. These duties shall entail implementing the notification checklists and use of RECS, radio, and other telephones (Section 4.0) to notify on-site personnel as well as the off-site authorities of the accident conditions and to pass along directions and recommendations as appropriate from the SM. The Communicator shall also maintain himself ready to supply updates to the offsite authorities.
- 2.3 Notifications made from the EOF are described in IP-1030, Emergency Operations Facility.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Initial and Upgrade notifications to the State and counties shall be initiated within 15 minutes of the emergency classification declaration.
- 3.2 Periodic Update Notifications should be performed approximately every 30 minutes or more frequent when conditions change.

4.0 EQUIPMENT AND MATERIALS

- 4.1 Central Radio (System Operations) - see Addendum 1 for call letters.
- 4.2 Area Radio (Monitoring Teams) - see Addendum 1 for call letters.

- 4.3 Local Government Radio (LGR) - see Addendum 1 for call letters. For backup notifications IF RECS is out of service.
- 4.4 "Contingency" Phone - see Emergency Telephone Directory for unlisted number to be used only for receiving incoming calls from New York State AND the four counties.
- 4.5 Radiological Emergency Communications System (RECS) - party line phone for initial notification AND updates to NYS AND counties.
- 4.6 ENS Phone - dial-up telephone circuits used to contact NRC headquarters for initial notification of emergency AND continuing updates. (See Emergency Telephone Directory for listed numbers).
- 4.7 CR-EOF - direct line, with bell annunciation by means of push button.
- 4.8 CR-TSC direct line, automatic ringing phone.
- 4.9 Peekskill Police - direct line, automatic ringing phone.
- 4.10 NYS Police - direct line, automatic ringing phone.
- 4.11 Phone – Peekskill (914) 737 Exchange (see Emergency Telephone Directory).
- 4.12 Phone - Indian Point (914) 734 Exchange (see Emergency Telephone Directory).
- 4.13 Microwave (see Emergency Telephone Directory) - provides connection to the 212 exchange in NYC via microwave to the Empire State Building.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS NOT PROVIDED WITHIN THIS PROCEDURE CAN BE FOUND IN THE EMERGENCY TELEPHONE DIRECTORY.

5.1 NUE Initial Notification - CCR Communicator

- 5.1.1 Obtain the completed and approved Radiological Emergency Data Form PART I from the Shift Manager. Review form for completeness. Determine if the Shift Manager wants full ERO activation at the NUE level (not normally required). ALWAYS refer to the form as Radiological Emergency Data Form PART I when talking to the State AND County authorities.
- 5.1.2 Start the initial notification roll call to state and counties within 15 minutes of the declaration of an Unusual Event.

5.1.3 Use a CCR NUE Notification Checklist (Form IP-1002-1) to make and document the initial notifications.

5.1.4 Once the CCR NUE Notification Checklist is complete, **IF** the SM requests additional staffing level **THEN** perform the following:

- a. Contact the on-call Emergency Director (ED) (refer to the Emergency Response Team On-call Schedule for duty ED.)
- b. Request the activation of desired portions of the Emergency Response Organization On-Call Team to provide plant support.

5.2 NUE Update Notifications - CCR Communicator

5.2.1 Make periodic updates approximately every 30 minutes throughout the event.

5.2.2 Obtain the completed and approved Radiological Emergency Data Form PART I from the Shift Manager. Review form for completeness. **ALWAYS** refer to the form as Radiological Emergency Data Form PART I when talking to the State and County authorities.

5.2.3 Use a CCR NUE Notification Checklist (Form IP-1002-1) and perform **ONLY the circled items**, to make the periodic Update Notifications.

NOTE:

THE CCR ALERT/ SAE/GE INITIAL NOTIFICATION CHECKLIST (FORM IP-1002-2) IS USED ONLY ONCE. AFTER NOTIFICATIONS ARE COMPLETED USING THIS FORM, ALL SUBSEQUENT UPGRADE AND UPDATE NOTIFICATIONS SHALL BE MADE USING THE ALERT/SAE/GE UPGRADE/UPDATE NOTIFICATION CHECKLIST (FORM IP-1003-3)

5.3 Alert, Site Area AND General Emergency Initial Notification – CCR Communicator

5.3.1 Use a CCR Alert/SAE/GE Initial Notification Checklist (Form IP-1002-2) to make and document the initial notifications.

5.3.2 Obtain the completed and approved Radiological Emergency Data Form PART I from the Shift Manager. Review form for completeness. **ALWAYS** refer to the form as Radiological Emergency Data Form PART I when talking to the State **AND** the county authorities.

5.3.3 Start the initial notification roll call to State and counties within 15 minutes of the declaration of an Alert, Site Area Emergency (SAE) or General Emergency (GE).

5.4 Alert / SAE / GE Upgrade/Update Notifications – CCR/EOF Communicator

- 5.4.1 Upgrade/Update notifications are made for EAL upgrades and for periodic updates during an Alert, Site Area Emergency (SAE) or General Emergency (GE).
- 5.4.2 Use a(n) Alert/SAE/GE Upgrade/Update Notification Checklist (Form IP-1002-3) to make and document the emergency classification upgrade or update notifications.
- 5.4.3 Obtain the completed Radiological Emergency Data Form Part I (and Part II, if provided) from the Shift Manager/Emergency Director AND notify NY State and counties within 15 minutes of any emergency classification change or approximately every 30 minutes otherwise.

5.5 Shift Security Supervisor

- 5.5.1 When notified and directed by the Shift Manager or CCR Communicator, activate the Emergency Response Organization using Form IP-1002-4, Emergency Response Organization Activation Checklist.
- 5.5.2 Inform the Shift Manager or CCR Communicator of when the checklist is complete and of any problems encountered.

5.6 NUE - Central Information Group (CIG)

- 5.6.1 Obtain the following information from the Indian Point emergency personnel:
 - a. Classification
 - b. Time of declaration
 - c. Brief event description
- 5.6.2 Notify Media Relations as follows:
 - a. During normal working hours call the Director, Media Relations (phone numbers are listed in Emergency Telephone Directory).
 - b. During off-hours call the Media Relations Duty Officer (phone numbers are listed in Emergency Telephone Directory), who then notifies the Director, Media Relations.
- 5.6.3 Continue with SOP-CG-7-1 notifications.

5.7 Alert, Site Area AND General Emergency - Central Information Group (CIG)

- 5.7.1 Obtain the following information from the Indian Point emergency personnel:
- a. Classification
 - b. Time of declaration
 - c. Radioactive release
- 5.7.2. Notify Media Relations as follows:
- a. During normal working hours call the Director, Media Relations (phone numbers are listed in Emergency Telephone Directory)
 - b. During off-hours call the Media Relations Duty Officer (phone numbers are listed in Emergency Telephone Directory), who then notifies the Director, Media Relations.
- 5.7.3 Notify the Con Edison President.
- 5.7.4 Notify one Administration Logistics Manager (see the Emergency Telephone Directory for list of individuals). This notification is only required once.
- 5.7.5 Notify Security at Irving Place Building (see Emergency Telephone Directory) of the emergency classification at Indian Point. Give Security the name of the Administration Logistics Manager (ALM) you have contacted with instructions to give the ALM the keys to the Corporate Response Center (Room 1425) upon his arrival.
- 5.7.6 During off-hours, notify Westinghouse (see the Emergency Telephone Directory). Call one of the representatives listed AND provide the following information. This notification is only required once:
- a. Location (Indian Point 2) AND emergency classification
 - b. Technical Support Center phone numbers (see the Emergency Telephone Directory).
- 5.7.7 Notify the Institute of Nuclear Power Operation (INPO) (see the Emergency Telephone Directory). Provide them the following information. This notification is only required once:
- a. Location (Indian Point 2) AND emergency classification
 - b. Technical Support Center phone numbers (see the Emergency Telephone Directory).

5.7.9 Notify the American Nuclear Insurers (see the Emergency Telephone Directory) AND Provide them the following information.

- a. Location (Indian Point 2) AND emergency classification.
- b. Inform them that subsequent notification AND further information shall be given by the Con Edison Risk Management Organization.

5.7.10 Continue with SOP-CG-7-1.

5.8 Recovery Phase - Central Information Group (CIG)

5.8.1 Upon notification from the EOF of the recovery phase, notify any of the organizations notified in Section 5.6.

6.0 REFERENCES

6.1 SOP-CG-7-1, "Notification During Nuclear Emergency Involving IP No. 2"

6.2 SAO-804, "Emergency Response Organization"

7.0 ATTACHMENTS

7.1 NONE

8.0 ADDENDUM

8.1 Addendum 1, Indian Point Emergency Radio Systems

8.2 Addendum 2, CCR NUE Notification Checklist (Form IP-1002-1)

8.3 Addendum 3, CCR Alert/SAE/GE Initial Notification Checklist (Form IP-1002-2)

8.4 Addendum 4, CCR Alert/SAE/GE Upgrade/Update Notification Checklist (Form IP-1002-3)

8.5 Addendum 5, Emergency Response Organization Activation Checklist (Form IP-1002-4)

[Proprietary Information]

Addendum 1

INDIAN POINT EMERGENCY RADIO SYSTEMS

Sheet 1 of 1

Area Radio [Freq. 1 = 456.100 /Freq. 2 = 451.100/MHZ]

<u>Base Station Location</u>	<u>Call Letters Freq. 1</u>	<u>Call Letters Freq. 1</u>
CR 1-2	[WAY-744]	[WAY-744]
CR 3	[WAE-280]	[KGS-757]
EOF	[KYA-424]	[KYA-424]
AEOF	[KYA-615]	[KYA-615]
CGH	[WDA-498]	[KMF-617]
<u>Mobile Station</u>	<u>Call Letters Freq. 1</u>	<u>Call Letters Freq. 1</u>
Mobile 1	[KU-3575]	[KU-3575]
Mobile 2	[KU-3575]	[KU-3575]
Mobile 3	[KU-3575]	[KU-3575]

Central Radio [456.050 MHZ]

<u>Base Station Location</u>	<u>Call Letters</u>
CR 1-2	[WAE-277]
EOF	[WAE-277]
AEOF	[WGQ-993]
CIG	[WGR-59]

LOCAL GOVERNMENT RADIO [45.16 MHZ]

<u>Base Station Location</u>	<u>Call Letters</u>
CR, EOF, AEOF	[KNFM-394]
So. Dist. Office	[WZM-947]
Westchester W.P.	[WRU-873]
Orange W.P.	[WQH-720]
Rockland W.P.	[KRH-269]
Putnam W.P.	[KFC-781]
Peekskill W.P.	(NONE)

Addendum 2
CCR NUE Notification Checklist (Form IP-1002-1)
Sheet 1 of 2

CCR NUE Notification Checklist

(Formally 45a)

Note: Perform only circled items for NUE periodic Update Notifications

Notify State and Counties:

- ① Pick up the console handset and depress the "RECS" button. After you hear 3 beeps press the number "7" button.
When you hear the message "You have initiated a conference." wait 5 to 10 seconds and then state:
- ② "This is to report an incident at Indian Point 2. Standby for roll call"
- ③ IF you did not hear the above message within 5 seconds of pressing the number "7" button THEN:
 - A. Press "Clear", hang up and repeat steps 1 and 2.
 - B. IF unable to contact any station via RECS THEN use Local Government Radio (LGR) (instructions on back)
 - C. IF both RECS and LGR fail THEN contact listed locations one at a time via telephone, attempting to contact the Warning Point first (phone numbers on back).
- ④ Enter time you are starting the initial roll call in the space provided below.
- ⑤ Initiate roll call by asking "(location title) are you on the line?" for each of the following stations, stopping after each name is read to allow station to identify itself. Check off "Initial Roll Call" for each location as they answer the roll call:

Location	Initial Roll Call	Final Roll Call	Time Initial Roll Call Started
Westchester County	<input type="checkbox"/>	<input type="checkbox"/>	
Peekskill City	<input type="checkbox"/>	<input type="checkbox"/>	
Rockland County	<input type="checkbox"/>	<input type="checkbox"/>	
Orange County	<input type="checkbox"/>	<input type="checkbox"/>	
Putnam County	<input type="checkbox"/>	<input type="checkbox"/>	
New York State	<input type="checkbox"/>	<input type="checkbox"/>	
			Time Final Roll Call Completed

- ⑥ **SLOWLY** read all of the information from the completed and approved Radiological Emergency Data Form Part I. After reading the form say "Stay on line for final roll call."
- ⑦ Perform a final roll call by asking "(location title) did you copy?" for each location. Check off "Final Roll Call" for each location as they answer the roll call. IF any location did not copy the message THEN instruct them to call the State for clarification or, if requested, repeat the form information.
- ⑧ End notification by saying "Indian Point No. 2 out at (time)". Enter the time in the space provided above when final roll call is completed.
- ⑨ IF any location did not answer the initial roll call THEN contact the missing location via telephone and direct them to either call the State to obtain the notification information or read them the information over the telephone. Record the location and time of this notification in the comment section of this form.

Notify Emergency Response Organization and Media Relations:

Time

10. Call the Command Guard House at 734-5024 (5330, 5331) and read the following message:
 "This is Indian Point Unit No. 2 Control Room, an Unusual Event was declared at _____ hours"
IF the Shift Manager directs call out of the full ERO THEN also state the following:
 "Initiate call in of Emergency Response Organization Personnel per Form IP-1002-4, ERO Activation Checklist"
11. Notify the ConEd Information - Manager Media Relations at 734-5136 OR the Director Media Relations at 212-460-4111, OR Public Information Duty Officer at 212-460-6981 and provide them with Date/Time of NUE classification, EAL # and brief description of event.
 Obtain and enter name of individual contacted: _____

Go to page 2 (back)

Proprietary Information

Page 1 of 2

Form IP-1002-1 Rev 0

Addendum 2
CCR NUE Notification Checklist (Form IP-1002-1)
Sheet 2 of 2

CCR NUE Notification Checklist

(Formally 45a)

Notify Unit 3 and CIG:**Time**

12. Contact the Unit No. 3 Control Room (speed dial button on V-band console) and provide them with Date/Time of NUE classification, EAL # and brief description of event.

Obtain and enter name of individual contacted: _____

13. Contact ConEd CIG at 212-580-8689 and provide them with Date/Time of NUE classification, EAL # and brief description of event.

IF classification was due to exceeding Tech Spec 2.1 or 2.2 limits THEN request CIG notify the NFSC Chairman.

Obtain and enter name of individual contacted: _____

Notify NRC:**Time**

14. IF it is during normal working hours THEN notify the NRC Senior Resident Inspector at 914-739-9361 or x5347

IF during off-hours THEN call or page the NRC Senior Resident Inspector using phone numbers provided in the Emergency Telephone Directory

Provide the Inspector with Date/Time of NUE classification, EAL # and brief description of event.

15. Contact NRC via the ENS. (refer to Emergency Telephone Directory for back-up numbers)
Inform the NRC Communicator that this is a 50.72 notification and provide them with Date/Time of NUE classification, EAL # and brief description of event

16. Record any Comments: _____

17. Date and sign this form

Date:

Signature:

18. Inform the Shift Manager that you have completed NUE notifications.

19. Fax copies of the NYS Radiological Emergency Data Form, Part I to State, counties, TSC and EOF and provide originals to the Shift Manager.

Use of Local Government Radio

- A. Depress the "LGR" button on the communications console.
- B. Pickup the handset and depress the handset button.
- C. Announce "This is KNFM394 to report an incident at Indian Point No. 2 - Standby for Roll Call"
- D. Return to step 4 on page 1 of this checklist.

Warning Point and EOC phone numbers

Location	Warning Point Phone #	EOC Phone #
Westchester County	914-741-4258	914-285-3026 or 285-3027
Peekskill City	914-737-8000	914-737-8000
Rockland County	914-364-8600	914-364-8800 or 364-8900
Orange County	914-294-3303	914-291-3199
Putnam County	914-225-4300	914-225-3896 or 225-9376
New York State	518-457-2200 or 457-6811	518-457-9900

Proprietary Information

Page 1 of 2

Form IP-1002-1 Rev 0

Addendum 3
CCR Alert/SAE/GE Initial Notification Checklist (Form IP-1002-2)
Sheet 1 of 2

CCR Alert/SAE/GE Initial Notification Checklist (Formally 45b)

Notify Protected Area Personnel and Emergency Response Organization:	Time
1. Sound the Site Emergency Assembly Alarm for 30 seconds	
2. Announce the following message over the P.A. System three (3) times: "Attention all personnel, a (Alert / Site Area Emergency / General Emergency) has been declared" "All Essential Personnel report to your assigned emergency facility" "All other personnel report to the Energy Education Center"	
3. Call the Command Guard House (phone 734-5024, 5330 or 5331) and read the following: "This is the Indian Point Unit No. 2 Control Room" "A (Alert / Site Area Emergency / General Emergency) has been declared. Initiate call-in of Emergency Response Organization personnel per Form IP-1002-4, ERO Activation Checklist"	

Notify State and Counties:

4. Pick up the console handset and depress the "RECS" button. After you hear 3 beeps press the number "7" button.
5. When you hear the message "You have initiated a conference." wait 5 to 10 seconds and then state:
"This is to report an incident at Indian Point 2. Standby for roll call"
6. **IF** you did not hear the above message within 5 seconds of pressing the number "7" button **THEN**:
 - A. Press "Clear", hang up and repeat steps 4 and 5.
 - B. **IF** unable to contact any station via RECS **THEN** use Local Government Radio (LGR) (instructions on back)
 - C. **IF** both RECS and LGR fail **THEN** contact listed locations one at a time via telephone, attempting to contact the Warning Point first (phone numbers on back).
7. Enter time you are starting the initial roll call in the space provided below.
8. Initiate roll call by asking "**(location title)** are you on the line?" for each of the following stations, stopping after each name is read to allow station to identify itself. Check off "Initial Roll Call" for each location as they answer the roll call:

Location	Initial Roll Call	Final Roll Call	Time Initial Roll Call Started
Westchester County	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Peekskill City	<input type="checkbox"/>	<input type="checkbox"/>	
Rockland County	<input type="checkbox"/>	<input type="checkbox"/>	
Orange County	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
Putnam County	<input type="checkbox"/>	<input type="checkbox"/>	<div style="border: 1px solid black; height: 20px; width: 100%;"></div>
New York State	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

9. **SLOWLY** read all of the information from the completed and approved Radiological Emergency Data Form Part I. After reading form say "Stay on line for final roll call."
10. Perform a final roll call by asking "**(location title)** did you copy?" for each location. Check off "Final Roll Call" for each location as they answer the roll call. **IF** any location did not copy the message **THEN** instruct them to call the State for clarification or, if requested, repeat the information.
11. End notification by saying "Indian Point No. 2 out at (time)". Enter the time in the space provided above when final roll call is completed.
12. **IF** any location did not answer the initial roll call **THEN** contact the missing location via telephone and direct them to either call the State to obtain the notification information or read form information over the telephone. Record the location and time of this notification in the comment section of this form.

Go to page 2 (back)

Addendum 3
CCR Alert/SAE/GE Initial Notification Checklist (Form IP-1002-2)
Sheet 2 of 2

CCR Alert/SAE/GE Initial Notification Checklist (Formally 45b)

Notify Unit 3, Media Relations and CIG:	Time		
13. Contact the Unit No. 3 Control Room (speed dial button on V-band console) and provide them with Date/Time of emergency classification, EAL # and brief description of event. Obtain and enter name of individual contacted: _____			
14. Notify the ConEd Information – Manager Media Relations at 734-5136 <u>OR</u> the Director Media Relations at 212-460-4111, <u>OR</u> Public Information Duty Officer at 212-460-6981 and provide them with Date/Time of emergency classification, EAL # and brief description of event. Obtain and enter name of individual contacted: _____			
15. Contact ConEd CIG at 212-580-8689 and provide them with Date/Time of emergency classification, EAL # and brief description of event. Obtain and enter name of individual contacted: _____			
Notify NRC:	Time		
16. IF it is during normal working hours THEN notify the NRC Senior Resident Inspector at 914-739-9361 or x5347 IF during off-hours THEN call or page the NRC Senior Resident Inspector using phone numbers provided in the Emergency Telephone Directory Provide the Inspector with Date/Time of emergency classification, EAL # and brief description of event.			
17. Contact NRC via the ENS. (refer to Emergency Telephone Directory for back-up numbers) Inform them that this is a 50.72 notification and provide them with Date/Time of emergency classification, EAL # and brief description of event.			
18. Record any Comments: _____ _____ _____			
19. Date and sign this form	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">Date:</td> <td style="width: 50%; padding: 5px;">Signature:</td> </tr> </table>	Date:	Signature:
Date:	Signature:		
20. Inform the Shift Manager that you have completed emergency notifications.			
21. Fax copies of the NYS Radiological Data Form, Part I to State, counties, TSC and EOF and provide originals to the Shift Manager.			

Use of Local Government Radio

- A. Depress the "LGR" button on the communications console.
- B. Pickup the handset and depress the handset button.
- C. Announce "This is KNFM394 to report an incident at Indian Point No. 2 - Standby for Roll Call"
- D. Return to step 7 on page 1 of this checklist.

Warning Point and EOC phone numbers

Location	Warning Point Phone #	EOC Phone #
Westchester County	914-741-4258	914-285-3026 or 285-3027
Peekskill City	914-737-8000	914-737-8000
Rockland County	914-364-8600	914-364-8800 or 364-8900
Orange County	914-294-3303	914-291-3199
Putnam County	914-225-4300	914-225-3896 or 225-9376
New York State	518-457-2200 or 457-6811	518-457-9900

Addendum 4

Alert/SAE/GE Upgrade/Update Notification Checklist (Form 1002-3)

Sheet 1 of 2

Alert/SAE/GE Upgrade/Update Notification Checklist (Formally 45c)

Note: Upgrade notifications shall be made within 15 minutes of classification change. Periodic Update Notifications should be done approximately every 30 minutes or more frequent when conditions change.

Notify Protected Area Personnel and Emergency Response Organization

1. **IF** the emergency classification changes **THEN** perform the following:
 - A. Announce (or have the CCR announce) the applicable message over the P.A. System three (3) times:
 "Attention all personnel, a (*Site Area Emergency / General Emergency*) has been declared"
OR if emergency classification is terminated **THEN** announce:
 "Attention all personnel, the emergency has been terminated"
 - B. Call the Command Guard House (phone 734-5024, 5330, 5331) and inform them of the new classification.

Notify State and Counties:

2. Pick up the console handset and depress the "RECS" button. After you hear 3 beeps press the number "7" button.
3. When you hear the message "You have initiated a conference." wait 5 to 10 seconds and then state:
 "This is to report an incident at Indian Point 2. Standby for roll call"
4. **IF** you did not hear the above message within 5 seconds of pressing the number "7" button **THEN**:
 - A. Press "Clear", hang up and repeat steps 4 and 5.
 - B. **IF** unable to contact any station via RECS **THEN** use Local Government Radio (LGR) (instructions on back)
 - C. **IF** both RECS and LGR fail **THEN** contact listed locations one at a time via telephone, (phone numbers on back).
5. Enter time you are starting the initial roll call in the space provided below.
6. Initiate roll call by asking "(*location title*) are you on the line?" for each of the following stations, stopping after each name is read to allow station to identify itself. Check off "Initial Roll Call" for each location as they answer the roll call:

Location	Initial Roll Call	Final Roll Call	
Westchester County	<input type="checkbox"/>	<input type="checkbox"/>	Time Initial Roll Call Started
Peekskill City	<input type="checkbox"/>	<input type="checkbox"/>	
Rockland County	<input type="checkbox"/>	<input type="checkbox"/>	
Orange County	<input type="checkbox"/>	<input type="checkbox"/>	Time Final Roll Call Completed
Putnam County	<input type="checkbox"/>	<input type="checkbox"/>	
New York State	<input type="checkbox"/>	<input type="checkbox"/>	

7. **SLOWLY** read all of the information from the completed and approved Radiological Emergency Data Form Part I (and Part II if required). After reading form say "Stay on line for final roll call."
8. Perform a final roll call by asking "(*location title*) did you copy?" for each location. Check off "Final Roll Call" for each location as they answer the roll call. **IF** any location did not copy the message **THEN** instruct them to call the State for clarification or, if requested, repeat the form information.
9. End notification by saying "Indian Point No. 2 out at (*time*)". Enter the time in the space provided above when final roll call is completed.
10. **IF** any location did not answer the initial roll call **THEN** contact the missing location via telephone and direct them to either call the State to obtain the notification information or read them the form information over the telephone. Record the location and time of this notification in the comment section of this form.

Go to page 2 (back)

Proprietary Information

Page 1 of 2

Form IP-1002-3 Rev 0

Addendum 4

Alert/SAE/GE Upgrade/Update Notification Checklist (Form IP-1002-3)

Sheet 2 of 2

Alert/SAE/GE Upgrade/Update Notification Checklist (Formally 45c)

Note: Use the CCR Alert/SAE/GE Initial Notification Checklist for upgrade from NUE to Alert.

Notify Unit 3, Outside ConEd Personnel and Local Facilities:

Time

11. **IF** the emergency classification changed **THEN** perform the following:
- A. Contact the Unit No. 3 Control Room (speed dial button on V-band console) and provide them with Date/Time of classification, EAL # and brief description of event.
Obtain and enter name of individual contacted: _____
- B. Contact ConEd CIG at 212-580-8689 and provide them with Date/Time of classification, EAL # and brief description of event.
Obtain and enter name of individual contacted: _____

12. **IF** the emergency is classified as a Site Area or General Emergency **THEN** notify the plant manager of Lafarge Gypsum (Georgia Pacific) via telephone. (numbers in Emergency Telephone Directory)

13. **EOF only** -- **IF** the emergency classification changes **THEN** notify the Corporate Response Center of the change, providing them with Date/Time of classification, EAL # and brief description of event. (numbers in Emergency Telephone Directory)

Notify NRC:

Time

14. Contact NRC via the ENS. (refer to Emergency Telephone Directory for back-up numbers)
Inform them that this is a 50.72 notification and provide them with Date/Time of classification, EAL # and brief description of event

15. Record any Comments: _____

16. Date and sign this form

Date:

Signature:

17. Inform the Shift Manager that you have completed emergency notifications.

18. Fax copies of the form 30a and 30b (if completed) to State, counties, TSC and EOF and provide originals to the Shift Manager (or EOF Manger).

Use of Local Government Radio

- A. Depress the "LGR" button on the communications console.
- B. Pickup the handset and depress the handset button.
- C. Announce "This is KNFM394 to report an Incident at Indian Point No. 2 - Standby for Roll Call"
- D. Return to step 5 on page 1 of this checklist.

Warning Point and EOC phone numbers

Location	Warning Point Phone #	EOC Phone #
Westchester County	914-741-4258	914-285-3026 or 285-3027
Peekskill City	914-737-8000	914-737-8000
Rockland County	914-364-8600	914-364-8800 or 364-8900
Orange County	914-294-3303	914-291-3199
Putnam County	914-225-4300	914-225-3896 or 225-9376
New York State	518-457-2200 or 457-6811	518-457-9900

Proprietary Information

Page 2 of 2

Form IP-1002-3 Rev 0

Addendum 5

Emergency Response Organization Activation Checklist (Form IP-1002-4)
Sheet 1 of 1

Emergency Response Organization Activation Checklist

A. Pager Notification System (PNS) Activation:

1. Call: **1-201-816-0569** OR **1-201-816-8998**
2. Upon hearing one (1) beep, enter the Group Access Code number: [REDACTED]
3. Upon hearing one (1) ring and three (3) short beeps, enter the appropriate code for the message to be sent as follows:
 - 00#** - This is NOT a Drill. ERO personnel report to their assigned emergency facility
 - 11#** - This IS a Drill. ERO personnel report to their assigned emergency facility
 - 22#** - This IS a Drill. Beeper test with call back required
 - 33#** - This IS a Drill. Beeper test with NO call back required

Ensure you follow the two digit code with the # symbol.
4. Upon entering the code you will hear a series of short, rapid beeps which are followed by a busy signal, indicating that the message has been sent. Proceed to activate CNS in accordance with Section B of this checklist concurrent with the remaining steps of this Section.
5. Verify that the correct message was sent by confirming the beeper message received on the control beeper.
6. If an incorrect message was sent, repeat steps 1 through 5. At step 3, the following code **MUST** be sent:
55*55*55# - Disregard last message (* is entered for dashes)
This notifies members of the group to disregard the previous message. Once this code has been sent, repeat steps 1 through 5 with the correct message.
7. If there is a problem with pager activation, call **1-800-225-0256**. The operator will ask for the pager ID#. Provide the operator with the following PIN: [REDACTED] along with the message code to be sent (as determined above).
8. If you continue to have a problem, contact Metromedia at **1-201-296-5678** and leave a voice message with a return telephone #. Metromedia will respond in 5 minutes. Request a Technician activate the page.

Time

B. Community Alert Network (CAN) Activation:

1. Call: **1-518-382-8030**
2. Identify yourself as from "Con Edison Indian Point"
3. Request the appropriate message # be initiated (read message):
 - #1** "This is the Indian Point notification system. This is NOT a Drill. An emergency has been declared. Report to your emergency response facility. This is NOT a Drill. An emergency has been declared. Report to your emergency response facility. This is NOT a Drill"
 - #2** "This is the Indian Point notification system. This IS a Drill. Report to your emergency response facility. This IS a Drill. Report to your emergency response facility. This IS a Drill."
 - #3** "This is the Indian Point notification system. This IS a Drill. This is a test of the notification system, please call CIG at 1-212-875-2499 (Touch Tone) or 2764 (Rotary). This IS a Drill."
4. Provide the password #: [REDACTED]
5. If the answering machine picks up, leave the appropriate message from step 3 on the machine. Read the entire message with your return phone number. IF you do not receive a call back from CNS within 10 minutes, THEN call: **1-800-992-2331**.

Time

Date and sign this form when complete:

Date:

Signature:

Inform the Shift Manager that you have completed ERO activation.

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1003
Rev. 6

PLANNED DISCHARGE OF CONTAINMENT
ATMOSPHERE DURING ACCIDENT CONDITIONS

Prepared by: BB Burns 8/11/98 Technical Reviewer: Tommy Korman 8/19/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: # 2627 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Tommy Korman / Acting EP mgr 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

PLANNED DISCHARGE OF CONTAINMENT ATMOSPHERE DURING ACCIDENT CONDITIONS

1.0 PURPOSE

- 1.1 To describe the method to be used to estimate the potential whole body (TEDE) and thyroid (TODE) exposure resulting from a planned atmospheric release from containment during accident conditions.

2.0 DISCUSSION

- 2.1 BEFORE a discharge to the atmosphere of radioactive material is authorized, the Shift Manager/Emergency Director must evaluate the necessity for the release AND the potential exposure to the population. The planned discharge is THEN discussed with the Vice President Nuclear Power AND the NRC highlighting the expected benefits to plant safety to be derived from the release AND the expected problems that could arise IF the release were NOT allowed. Following the receipt of NRC AND Corporate concurrence, the Shift Manager/ Emergency Director shall notify the State AND Local Authorities allowing them time to talk to the NRC IF they so desire. The actual population exposure due to the discharge is determined using the TLDs in the affected area.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 Have the Chemistry Technician obtain a containment air sample to determine the radioactive concentrations of isotopes present (noble gas, particulates AND iodines). Record on FORM 1a.

- 5.2 Obtain the current wind speed, wind direction AND Pasquill category (A through G). Record on FORM 1a.
- 5.3 If Severe Accident Management Guidelines are being implemented refer to CA-7 to determine the minimum pressure that containment may be reduced to without de-inerting containment atmosphere.
- 5.4 Determine the estimated release time in hours to accomplish the desired effect e.g. reduce pressure to a predetermined level. Record on FORM 1a.
- 5.5 Estimate the vent flow rate AND vent activity. Record on FORM 1a.
- 5.6 Determine the Ci/sec release rates AND the plume center line exposure at the Site Boundary, 2, 5 AND 10 miles for the duration of the release. See Reference 6.1. Record on FORM 1a.
- 5.7 Determine the significance of the proposed exposure to any exposure previously received during the emergency.
- 5.8 Obtain latest weather forecast. Determine IF more favorable weather is expected. Record on FORM 1a.
- 5.9 Evaluate the plant safety related need for the release AND obtain Corporate concurrence. Record on FORM 1a.
- 5.10 Discuss the planned release with the NRC Resident Inspector at the Site OR the Region I Office using the Emergency Notification System (ENS) hotline AND obtain their concurrence. Record on FORM 1a.
- 5.11 Notify the NYS Emergency Management Office AND the four County Directors Emergency Management of the planned release, exposure to the population AND the plant safety related need for the release. Record on FORM 1a.
- 5.12 Direct the Chemistry Technician to set up AND take a plant vent grab AND composite sample during the discharge to determine noble gas radioiodine AND particulate activity. Record on FORM 1b.

NOTE:

IF THERE HAS BEEN NO SIGNIFICANT RELEASE (CAUSING A 5 MREM TLD READING) BEFORE THE PLANNED ONE, THERE IS NO NEED TO CHANGE TLDs AND AIR FILTER BEFORE COMMENCING THE PLANNED RELEASE.

- 5.13 BEFORE the release starts, direct the Offsite Monitoring Teams to change AND read the TLDs as well as change AND count the filters at permanent air sampling stations in the affected area. Record on FORMS 3 AND 21 respectively.

- 5.14 Direct the Offsite Monitoring Teams to set up for air sampling AND field surveys during the release at two locations along the projected plume center line at APPROXIMATELY two AND five miles from the center of the ten mile EPZ.
- 5.15 Initiate discharge of containment atmosphere.
- 5.16 Monitor plant vent radioactive release rate and adjust containment discharge rate as required to establish desired release rate.
- 5.17 Terminate discharge of containment atmosphere when predetermined containment pressure is reached or as necessary, based on off-site dose rates.
- 5.18 Direct the Offsite Monitoring Team to pick up the TLDs in the affected areas AFTER the release is terminated. Record on FORM 3.
- 5.19 ALL completed FORMs are to be turned in to the Offsite Radiological Assessment Director.

6.0 REFERENCES

- 6.1 IP-1007, "Dose Assessment"
- 6.2 IP-1036 "Estimation of Population Dose Within the 10 Mile Emergency Planning Zone"
- 6.3 IPC-E-002 "VC Gas Post Accident Sampling and Analysis of the Vapro Containment Atmosphere"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

POST ACCIDENT OFFSITE ENVIRONMENTAL SURVEYS,
SAMPLING AND COUNTING

Prepared by: ABurn 8/18/98 Date 8/18/98 Technical Reviewer: W. J. Fennell Date 8/18/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: # 2627 Donna J. Yarn 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____

Approval: W. J. Fennell / Acting ED by 8/18/99 9/1/99
Signature/Title _____ Date _____ /Effective Date _____

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

REFERENCE USE

**POST ACCIDENT OFFSITE ENVIRONMENTAL SURVEYS,
SAMPLING AND COUNTING**

1.0 PURPOSE

- 1.1 To describe the environmental surveys, sampling and counting that may be requested after an emergency.

2.0 DISCUSSION

- 2.1 It is the responsibility of the Offsite Radiological Assessment Director (ORAD) in consultation with the Nuclear Environmental Monitoring (NEM) Engineer or Supervisor to request environmental surveys, sampling and counting to be performed. The nature and frequency of the survey and sampling will depend on the following:

2.1.1 Incident conditions (i.e. whether there has been a radioactive release from the plant, magnitude of the release IF any, etc.)

2.1.2 Environmental conditions (i.e. seasonal considerations affecting sample availability, weather, etc.)

2.1.3 Data collected (i.e. IF sampling indicates significantly different values from historical data, etc.)

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Offsite Radiological Assessment Director (ORAD)

5.1.1 Determine the monitoring program requirements as follows:

- a. For a NUE, the release potential of radioactive material requiring offsite response OR monitoring is considered to be MINIMAL. Therefore, NO additional environmental monitoring is required beyond the normal NEM monitoring program as given in Reference 6.1.
- b. For an ALERT, small releases of radioactivity may occur BUT DO NOT have offsite consequences. NO additional offsite environmental monitoring is required beyond the normal NEM program as given in Reference 6.1.
- c. For SAE AND GE, there may be substantial releases of radioactive material to the environment. IF this occurs, the following two programs shall be instituted WITHIN 24 hours AFTER the termination of the release.
 1. Offsite Contamination Check (Reference 6.2).
 2. NEM Environmental Program as outlined in Reference 6.1.
- d. IF the results indicated by sampling AND counting are statistically significant, as qualified in Reference 6.1, THEN further samples shall be taken AND counted as soon as practical for verification.
 1. Subsequent sampling AND counting shall occur WITHIN a week of the initial sampling.
 2. IF the data shows NO statistically significant activity, as qualified in Reference 6.1, THEN the emergency sampling AND counting may be terminated.
 3. IF the results show otherwise, THEN a weekly program as outlined in Reference 6.1 shall be continued for one month.
 4. IF TWO consecutive sample counts show NO statistically significant activity, as qualified in Reference 6.1 THEN, the normal NEM program shall be put into effect.

5.1.2 Direct the NEM Engineer OR Supervisor to initiate the applicable program.

- 5.1.3 Notify the State Emergency Management Office AND the County Offices of Disaster and Emergency Services that the sampling AND counting program is to start AND that the results shall be forwarded to them.
- 5.1.4 Analyze the results WHEN they become available AND confer with the NEM Engineer OR Supervisor to determine WHETHER sampling AND counting may be terminated.
- 5.1.5 Forward ALL results to the State/County officials AND the NRC AFTER obtaining approval from the Recovery Manager.

5.2 NEM Section

- 5.2.1 Perform offsite contamination checks as per Reference 6.2.

NOTE:

IN THE INSTANCE WHERE SNOW OR ICE SAMPLING IS INDICATED, UTILIZE REFERENCE 6.3. THIS PROCEDURE IS NOT PART OF THE NORMAL ENVIRONMENTAL PROGRAM OUTLINED IN REFERENCE 6.1. THE FREQUENCY OF SAMPLING SHOULD FOLLOW THE OTHER SAMPLES.

- 5.2.2 Perform surveys of area where samples are to be collected AND collect samples as indicated in Reference 6.1.
- 5.2.3 Process samples as per appropriate NEM procedure. Perform contamination survey of outside of container OR package.
- 5.2.4 Transport samples to Analytical Contractor the day following collection.
- 5.2.5 Analyze the data AND report findings to the ORAD.
- 5.2.6 Discuss continuation of program with the ORAD.
- 5.2.7 File ALL data for samples at the Environmental Laboratory.

6.0 REFERENCES

- 6.1 NEM-5.101, "Nuclear Environmental Monitoring Sample and Analysis Schedule"
- 6.2 IP-1039, "Offsite Contamination Checks"
- 6.3 NEM-5.120, "Snow and Ice Sampling"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

USE OF MS-2/SPA-3 TO DETERMINE THYROID RADIOIODINE UPTAKE

Prepared by: JSB 4/19/99 Technical Reviewer: Terry Kewen 9/1/99
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
SNSC Review: #2627 Donna L. Yarn 8/19/99 Reviewer: _____
Meeting No./Date QA
Approval: Terry Kewen / ASST EP Mgr 9/1/99 9/1/99
Signature/Title Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

USE OF MS-2/SPA-3 TO DETERMINE THYROID BURDENS

1.0 PURPOSE

- 1.1 To describe the use of the MS-2/SPA-3 scintillation counter to screen individuals for thyroid Iodine-131 uptake.

2.0 DISCUSSION

- 2.1 In the event of a significant radioactive release to the atmosphere it may become necessary to determine thyroid Iodine-131 uptake of individuals who had been within the plume.

2.1.1 Thyroid counting should be performed BETWEEN 12 AND 72 hours after the inhalation. This is the period WHEN peak concentration occurs in the gland.

2.1.2 A large number of people to be thyroid counted may tax the existing facilities. Therefore, it may be necessary to screen candidates before sending them to these facilities.

2.1.3 Individuals become candidates for thyroid counting when their thyroid uptake measured WITH the MS-2/SPA-3 is GREATER THAN 1.2 uCi. This represents 10% of the annual limit on intake (ALI) OR 5 Rem CDE AND equates to APPROXIMATELY 28000 cpm ABOVE background on the MS-2/SPA-3.

- 2.2 The screening is accomplished by the HPTechnician, OR the Offsite Monitor as directed by EITHER the Emergency Director OR the Offsite Radiological Assessment Director. Each scan takes about three minutes. Data is kept on ALL screened individuals to compare thyroid uptake seen by the MS-2 to those measured at the facilities, to determine a factor which is applied to the screening data for those who were not at a facility.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

- 4.1 Eberline Mini Scaler-2 (MS-2) WITH Eberline Detector SPA-3 OR equivalent.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 Set the controls on the MS-2/SPA-2 as per See Reference 6.1 EXCEPT allow for one hour warmup.
- 5.2 AFTER the threshold dial is set (See Reference 6.1) the instrument is ready to be used as a thyroid counter.

NOTE:

BACKGROUND READINGS MAY BE READ FROM THE MS-2 RATE METER. RECORD ON FORM 4.

- 5.3 Using FORM 4 record the time, name AND identifying information for EACH individual counted.
- 5.4 Place the detector against the individual's neck as shown in Addendum 8.1.
- 5.5 PRESS the "start" button AND count for two minutes.
- 5.6 Record the count on FORM 4.
- 5.7 Calculate the Iodine-131 thyroid burden using the following equation:

$$\text{Thyroid Burden, uCi} = \frac{\text{Thyroid Screening, CPM} - \text{Background, CPM}}{(2.22 \times 10^6) \quad (\text{EFF}) \quad (\text{K})}$$

$$\text{Where } 2.22 \times 10^6 = \text{DPM/uCi}$$

$$\begin{array}{ll} \text{EFF} & = \text{Efficiency recorded on MS-2 calibration sticker} \\ \text{K} & = 0.26 \text{ factor to convert MS-2 for thyroid screening.} \end{array}$$

- 5.8 Calculate APPROXIMATE thyroid exposure using the relationship of 1 uCi = 3300 mrad.
- 5.9 IF the thyroid count is GREATER THAN 28000 cpm ABOVE background, notify the ED/ORAD.
- 5.10 Turn in ALL completed FORMS to the ORAD.

6.0 REFERENCES

- 6.1 IP-1020, "Airborne Radioiodine Determination"

7.0 ATTACHMENTS

NONE

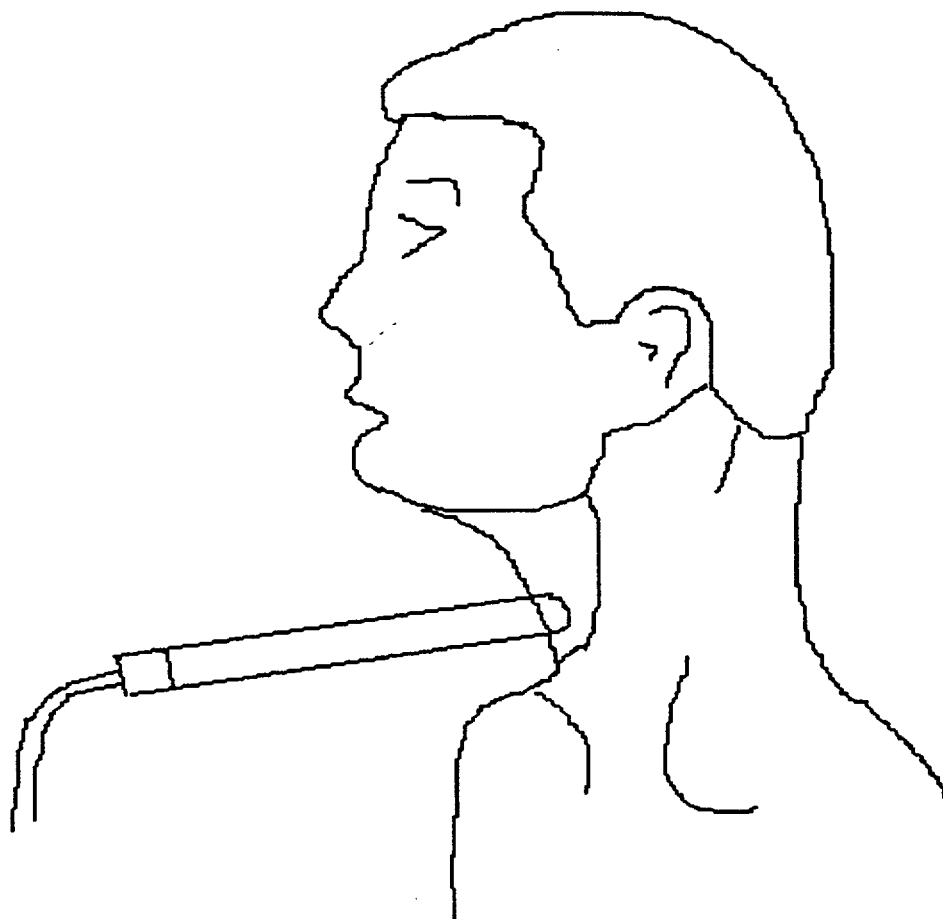
8.0 ADDENDUM

- 8.1 Head and Shoulder Drawing Showing Placement of Detector on Thyroid Gland

ADDENDUM 8.1

Page 1 of 1

**HEAD AND SHOULDER DRAWING SHOWING
PLACEMENT OF DETECTOR ON
THYROID GLAND**



SITE PERIMTER SURVEY

Prepared by: Burn 8/11/98 Date
Reviewer: _____ Date
Reviewer: _____ Date
SNSC Review: #2637 Donna Tyner 8/19/99 Date
Meeting No. _____ Date

Technical Reviewer: Perry Fenner 8/1/99 Date
Reviewer: _____ Date
Reviewer: _____ Date
Reviewer: _____ Date

Approval: Perry Fenner / Jack 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

SITE PERIMETER SURVEY

1.0 PURPOSE

- 1.1 To describe the site perimeter surveys that may be required to be performed by the Monitoring Teams during an Alert, Site Area or General Emergency.

2.0 DISCUSSION

- 2.1 Site perimeter surveys are performed to confirm whether or not an uncontrolled release of radioactive material to the atmosphere has occurred and to determine exposure rates. Site perimeter surveys indicate the MAXIMUM exposure rate, at that specific point in time, that members of the offsite population in the vicinity of the site may experience. Exposure rates generally decrease away from site due to the dispersion of radioactive material.
- 2.2 The normal responsibility for initiating the site perimeter survey AND the team performing the survey is as follows:

<u>Perimeter Sector</u>	<u>Initiation Responsibility</u>	<u>Team</u>
2 - 3	ORAD	Offsite
4 - 13	ORAD	Onsite
14,15,16,1	SM/POM	In-Plant

- 2.3 In sectors where access to the site perimeter location is difficult (Sector 2 and 3) OR is NOT consistent with the ALARA concept, readings should be taken at a point further away from the site on the plume centerline. These readings then can be used to calculate the site boundary readings.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Sectors 1, 2, 12, 13 THROUGH 16 have plume going out over the water before it touches public OR private land. Site boundary Xu/Q in IP-1007, Dose Assessment is taken to be at the land fall point at the sector center.

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

NOTE:

THE SITE PERIMETER LOCATIONS FOR SECTORS 2 AND 3 ARE NOT ACCESSIBLE TO A VEHICLE. ANNSVILLE CIRCLE AND CHARLES POINT ARE SUBSTITUTED FOR SECTORS 2 AND 3, RESPECTIVELY AND ARE ASSIGNED TO AN OFFSITE TEAM. ONSITE TEAMS ARE KEPT ONSITE.

5.1 Onsite Team - Perimeter sectors 4 THROUGH 13.

- 5.1.1 ORAD OR designee, contacts the Security Supervisor by radio OR phone AND requests a vehicle AND driver to report to the EOF for temporary assignment to perimeter surveys.
- 5.1.2 The ORAD, using the site map (Addendum 8.1) should designate the perimeter segments which are surveyed.
- 5.1.3 The ORAD should consider issuance of KI to EACH team member IF the expected thyroid exposure is GREATER THAN 25 Rem. KI is located at the EOF and its use is authorized by the ED.
- 5.1.4 EACH team member shall have a TLD badge AND dosimeter. The Security Guard shall be issued a TLD badge AND dosimeter at the Command Guard House while the Health Physics Technician shall be issued devices at the EOF.
- 5.1.5 Anti-C clothing shall be issued ONLY WHEN conditions warrant it.
- 5.1.6 Obtain an ion chamber survey instrument from the EOF cabinet AND check its operation. A 5 uCi Cs-137 source on contact with unshielded chamber gives an APPROXIMATE 15 mR/hr indication.
- 5.1.7 Contact the EOF by radio AND report you are proceeding to perimeter sector.

NOTE:

GAMMA AND BETA FIELD READINGS WILL NORMALLY BE HIGHEST AT THE CENTER OF THE PLUME.

5.1.8 Take beta AND gamma field readings as you proceed to the specified perimeter sector. DO NOT enter areas where the gamma field reading is GREATER THAN 1R/hr without permission of the ORAD. Record on FORM 10.

- a. Beta field readings are determined by taking field readings WITH the survey instrument detection window shielded (Gamma) AND unshielded (Gamma AND Beta). Subtract the shielded reading from the unshielded reading. Multiply the difference by two for true mRad/hr.

NOTE:

IF THE RADIO FAILS REPORT BACK TO THE EOF.

5.1.9 Maintain radio contact WITH the EOF AND inform the ORAD of significant readings.

5.1.10 Take enough beta AND gamma field readings at the specified perimeter sectors to identify the APPROXIMATE width AND centerline of the plume. Record on FORM 10 AND report the readings to the ORAD via radio.

5.1.11 Turn in data form to ORAD at EOF.

5.2 Offsite Team - Perimeter sectors 2 THROUGH 13.

5.2.1 Substitute Annsville Circle and Charles Point for perimeter sectors 2 AND 3 respectively.

5.2.2 Assignment to perform surveys at the site boundary shall be at the discretion of the ORAD. The Offsite Team shall perform their duties as indicated in Reference 6.1.

5.3 In-plant Health Physics Technician (HPT) - Perimeter sectors 14, 15, 16 and 1.

5.3.1 SM/POM determines, using the site map (Addendum 8.1), that surveys shall be performed at perimeter sectors 14, 15, 16 AND 1.

- 5.3.2 SM/POM should consider authorizing use of KI by the HPT IF the expected thyroid exposure is GREATER THAN 25 Rem. KI is located in the Control Room emergency locker.
- 5.3.3 The HPT shall wear his TLD badge AND 1-2K Rem dosimeter.
- 5.3.4 The HPT shall wear an iodine filter respirator, coveralls, hat, gloves AND shoe covers IF the radiological release is due to a steam generator tube rupture.
- 5.3.5 Use an ion chamber survey instrument with a range AT LEAST to 5 R/hr AND check its operation. The instrument may be obtained from the Operational Support Center OR from the Watch Health Physics Office at the 53' el. N.S.B. entry point. A 5 uCi Cs-137 source on contract WITH unshielded chamber gives an APPROXIMATE 15 mR/hr indication.
- 5.3.6 Take beta AND gamma field readings as you proceed to the specified perimeter sector. Record on FORM 10. DO NOT enter area where the gamma field reading is GREATER THAN 1 R/hr without permission of the SM/POM.
- a. Beta field readings are determined by taking field readings WITH the survey instrument detector window shielded (Gamma) AND unshielded (Gamma AND Beta). Subtract the shielded reading from the unshielded reading AND multiply the difference by two.
 - b. Beta readings shall be taken WITH the unshielded chamber looking at the area of interest, i.e., Noble Gas cloud--facing sky, surface contamination--ground.
- 5.3.7 Turn in data form to SM/POM/Rad Protection Coordinator.

6.0 REFERENCES

- 6.1 IP-1015, "Mobilization and Operational Procedure for Offsite Monitoring Teams - Immediate Response"

7.0 ATTACHMENTS

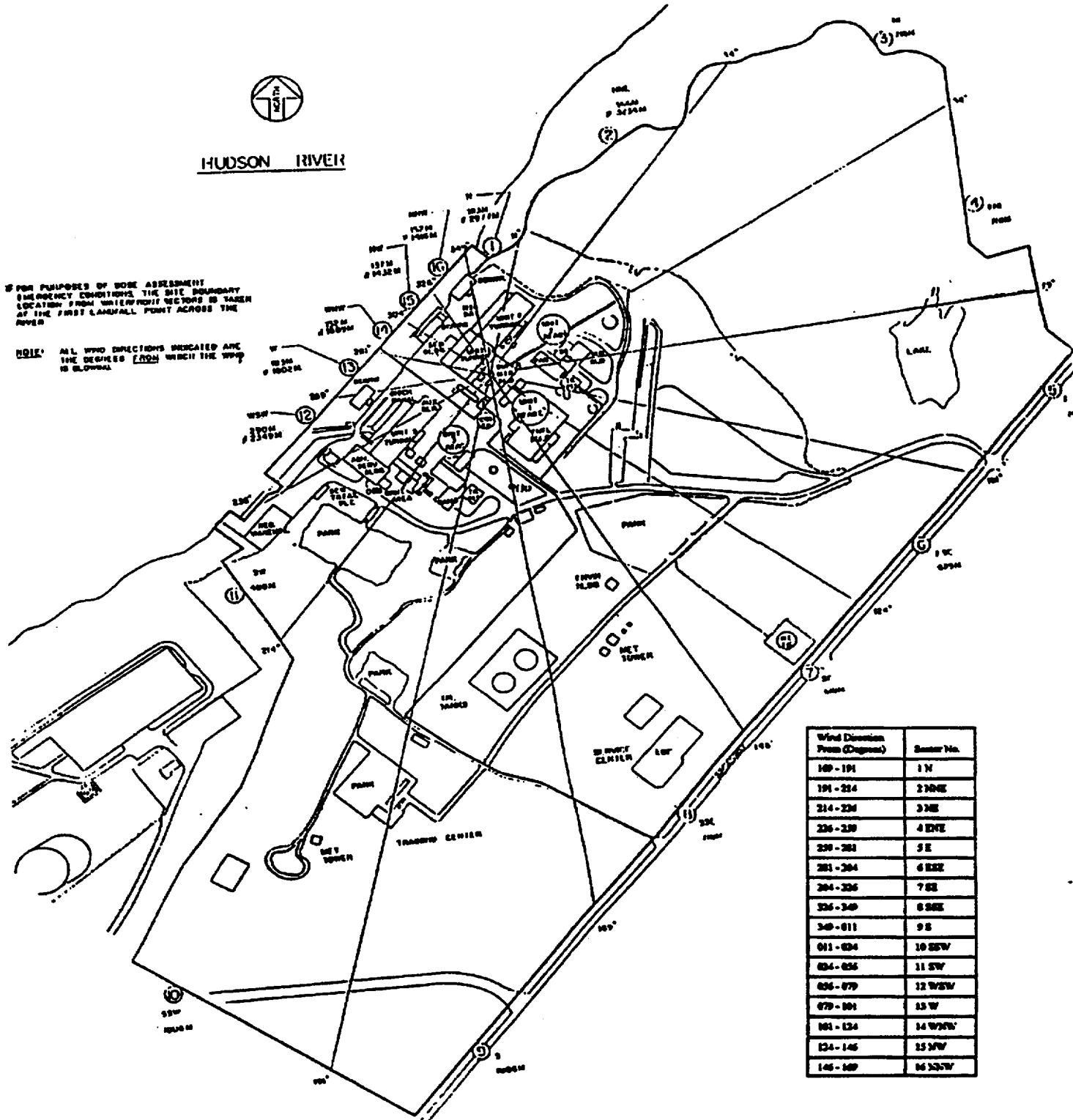
NONE

8.0 ADDENDUM

- 8.1 Site Perimeter Sector Map

ADDENDUM 8.1
Page 1 of 1

SITE PERIMETER SECTOR MAP



DOSE ASSESSMENT

Prepared by: ABurn 8/16/99 Date 8/16/99 Technical Reviewer: Donna Lynn 8/17/99 Date 8/17/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: # 2627 Donna Lynn 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____

Approval: Donna Lynn / Acting EP Mgr. 8/17/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

DOSE ASSESSMENT

1.0 PURPOSE

- 1.1 To describe the method of estimating the whole body and thyroid dose in the event of an accidental release of radioactivity to the environment.

2.0 DISCUSSION

- 2.1 The following instrumentation is used to determine the noble gas release rate. The nominal $\mu\text{Ci/cc/CPM}$ conversion factor is indicated where appropriate.

2.1.1 R-44 Plant vent monitor-low range (Direct Readout)

2.1.2 R-27 Plant vent monitor-high range (Direct Readout)

2.1.3 Plant vent survey-hand held instrument or remote readout

2.1.4 R-45 Condenser air ejector monitor (Direct Readout)

2.1.5 R-28, 29, 30, 31 Main steam line monitors

- 2.2 Containment radiation monitors R-25 AND R-26 shall be used to measure the source term WITHIN containment AND to approximate the extent of the damage to the reactor core. The postulated accident AND the associated monitor readings are as follows:

<u>Postulated Accident</u>	Source Term <u>Curies</u>	Maximum Reading-R/hr	
		<u>R-25</u>	<u>R-26</u>
LOCA + Coolant release with 1% equiv. fuel defects	2.0E+4	9.6E+0	1.5E+1
LOCA + fuel rod gap release	9.6E+6	3.9E+3	4.5E+3
LOCA + 100% core overheat*	5.0E+8	4.7E+5	5.5E+5

- *Assumptions:
1. Reactor Coolant System (RCS) capacity is 90,000 gallons.
 2. 100% of the Noble Gases (NG) AND 25% of the Iodines (I) are homogeneously dispersed throughout the containment free volume for core overheat sequences.

- 2.3 Containment high radiation monitor R-25 may be used to determine the approximate concentration of containment activity as follows:

<u>Time After Shutdown (HRS)</u>	<u>Containment $\mu\text{Ci/cc}$ per R/hr</u>		<u>CORE OVERHEAT⁽³⁾</u>
	<u>RCS⁽¹⁾</u>	<u>GAP⁽²⁾</u>	
0	.12	.027	.013
4	.14	.049	.029
8	.14	.055	.043
12	.14	.055	.053
16	.14	.060	.058
20	.14	.062	.063
24	.14	.063	.066

- (1) R-25 reads LESS THAN 10 R/hr
due to 100% NG AND 50% I from RCS
- (2) R-25 reads 10-3900 R/hr
due to 100% NG AND 50% I from GAP
- (3) R-25 reads 3900 - $4.7\text{E}+5$ R/hr
due to 100% NG AND 25% I from CORE

- 2.4 Potential exposure to the population IF a future release of the existing containment source term occurs, may be estimated utilizing the following information:

- 2.4.1 Containment pressure relief line contains three isolation valves (one in containment AND two outside).
- 2.4.2 Containment purge system contains two isolation valves on the INLET DUCT (one in containment AND one outside).
- 2.4.3 Containment purge system contains two isolation valves on the EXHAUST DUCT (one in containment AND one outside).
- 2.4.4 Weld Channel (WC) AND Isolation Valve Seal Water System (IVSWS) are pressurized to ensure that during accident conditions a pressure build up to AT LEAST 50 psi in containment would NOT cause a leak of radioactive material to the environment as long as the isolation valves remained in the closed position.

2.4.5 WITHOUT WC AND IVSWS, BUT with isolation valves closed, the containment leakrate is expected to be LESS THAN 0.1% of the containment volume per day (Tech Spec) WITH a pressure buildup to 50 psi inside containment. At lower pressures the leakrate would be smaller, approaching zero as the pressure differential approaches zero.

2.4.6 Containment Volume = $2.61 \times 10^6 \text{ FT}^3$
 $7.4 \times 10^{10} \text{ CC}$

2.4.7 For release of secondary steam through the safety valves, use 7.6×10^5 LBS/HR/SAFETY VALVE. For releases through atmospheric relief valves, use 3.5×10^5 LBS/HR ATMOS RELIEF VALVE. For releases through #22 Auxiliary Feedwater Pump use 2.5×10^4 LBS/HR.

2.4.8 For Post-SGTR cooldown using blowdown (ES-3.2) situations, the determination of the gaseous release rate from the blowdown flash tank shall be accomplished by determining the noble gas concentration in the faulted SG blowdown (Chem sample $\mu\text{Ci/cc}$) AND the set blowdown rate (GPM).

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D CONTAINED IN EPD BOOK NO. 2.

5.1 MIDAS

5.1.1 Refer to Reference 6.1.

5.2 Hand Calculation

5.2.1 Determine the radioactive release concentration ($\mu\text{Ci/cc}$ OR CPM) from the appropriate monitor (R-27, 28, 29, 30, 31, 44, 45) OR Chem sample.

- a. WHEN the plant vent survey is used, convert contact field reading to $\mu\text{Ci/cc}$ using conversion factor for appropriate time after shutdown. See Form 6A.

5.2.2 Determine the discharge rate (CFM, GPM OR LBS/HR).

- a. Vent: Read R-27 instrument (Reference 6.2) OR vent flow recorder in PAB. Use 170,000 CFM IF instrumentation for flow measurement fails.
- b. Air Ejector: Measurement performed at the air ejector station on 33' el. Use 20 CFM IF unable to perform the measurement.
- c. Main Steam Line: Refer to Section 2.4.7.
- d. SG Blowdown: As set by the operator.

NOTE:

FOR RELEASE THROUGH THE PLANT VENT, THE RELEASE RATE IN $\mu\text{Ci/SEC}$ MAY BE READ DIRECTLY FROM R-27 (REFERENCE 6.2) AND CONVERTED TO Ci/SEC BY DIVIDING THE $\mu\text{Ci/SEC}$ BY 10^6 .

- 5.2.3 Using Form 6a, insert values obtained above into the appropriate equation AND calculate the noble gas (NG) release rate (Ci/sec).
- 5.2.4 Calculate the radioiodine release rate (Ci/sec) using the default equation (assumes NG/I ratio) OR the Chem Sample equation on FORM 6a as appropriate.
- 5.2.5 Obtain the appropriate $X\mu/Qs$ from Addendum 8.1 AND 8.2. Record these values on FORMS 6b AND 6c.
- 5.2.6 Determine the TEDE (Whole Body) AND TODE (thyroid) exposure rates at the site boundary, 2, 5 AND 10 miles. Using FORMS 6b AND 6c, enter the release rates (RR), dilution factors ($X\mu/Q$), wind speed (WS) AND appropriate constants.
 - a. To determine exposure rates at other distances utilize the $X\mu/Q$ from Addendum 8.3.

5.3 Computerized Calculation using Modular Emergency Assessment and Notification System (MEANS)

- 5.3.1 Open MEANS by clicking on the START button on the Taskbar. Slide the mouse up to the PROGRAMS menu. Slide the mouse over to the Indian Point MEANS program and click on the MEANS icon.
- 5.3.2 Click on the Dose Assessment and PARs (DAPAR) button.
- 5.3.3 Enter the time after shutdown in hours (i.e. 2.5) into the first data field and then press the TAB key.
- 5.3.4 Enter the wind speed in meters per second into the next data field and then press the TAB key.
- 5.3.5 Enter the wind direction in degrees (the direction that the wind is coming from) into the next data field and then press the TAB key.
- 5.3.6 Enter the Pasquill Stability Class (A-G) into the next data field and then press the ENTER key.
- 5.3.7 To enter the data from releases through the Plant Vent perform the following:
 - a. Click on the PLANT VENT Button.
 - b. Select the monitoring method by clicking on R-44, R-27, Survey OR Sample button and then press the TAB key.
 - c. Enter the Plant Vent flow in CFM and then press the TAB key.
 - d. Enter the uCi/cc reading from the radiation monitor/chemistry sample OR plant vent survey reading in mR/hr as appropriate and then press the ENTER key (R-27 reading in Ci/sec may be directly entered into that field by clicking on the data field and entering the value).
 - e. Click on Apply Particulate DCF if required to use a particulate dose conversion factor.
 - f. Click on NG:I Ratio to select the default radioiodine calculation method OR click on Chem Sample.
 - g. To enter the Chemistry Sample data press the TAB key and enter the Plant Vent flow in CFM and then press the TAB key as necessary to move to the appropriate Iodine Isotope field. Enter the chemistry sample data in uCi/cc into each field.

- h. Upon successful completion of data entry the Noble Gas and Radioiodine Release Rates (Ci/sec) will be automatically calculated. To save all entered and calculated data click on the SET button.

5.3.8 To enter the data from releases through the Air Ejector perform the following:

- a. Click on the Air Ejector Button.
- b. Enter the current air leakage value in CFM (default value is 20 CFM) and then press the TAB key.
- c. Enter the uCi/cc reading from the R-45 radiation monitor/chemistry sample and then press the ENTER key.
- d. Click on Apply Particulate DCF if required to use a particulate dose conversion factor.
- e. Click on NG:I Ratio to select the default radioiodine calculation method OR click on Chem Sample.
- f. To enter the Chemistry Sample data press the TAB key and enter the current air leakage value in CFM and then press the TAB key as necessary to move to the appropriate Iodine Isotope field. Enter the chemistry sample data in uCi/cc into each field.
- g. Upon successful completion of data entry the Noble Gas and Radioiodine Release Rates (Ci/sec) will be automatically calculated. To save all entered and calculated data click on the SET DATA button.

5.3.9 To enter the data from releases through the Main Steam Line perform the following:

- a. Click on the MSL Button.
- b. Click on the appropriate Main Steam Line Monitor (R-28, 29, 30, 31).
- c. Enter the indicated main steam flow in LBS/HR and then press the TAB key (For releases through the safety valves use 7.6×10^5 LBS/HR/SAFETY VALVE. For releases through atmospheric relief valves use 3.5×10^5 LBS/HR ATMOS RELIEF VALVE. For releases through #22 Auxiliary Feedwater Pump use 2.5×10^4 LBS/HR).
- d. Enter the CPM reading from the Main Steam Line Radiation monitor and then press the ENTER key.

- e. Click on Apply Particulate DCF if required to use a particulate dose conversion factor.
- f. Click on NG:I Ratio to select the default radioiodine calculation method OR click on Chem Sample.
- g. To enter the Chemistry Sample data press the TAB key and enter the indicated main steam flow in LBS/HR, as above, and then press the TAB key as necessary to move to the appropriate Iodine Isotope field. Enter the chemistry sample data in uCi/cc into each field.
- h. Upon successful completion of data entry the Noble Gas and Radioiodine Release Rates (Ci/sec) will be automatically calculated for each release. To save all entered and calculated data click on the SET DATA button.
- i. For multiple steam generator releases repeat Steps 5.3.9.b through 5.3.9.h as necessary.
- j. Upon successful completion of data entry for each Main Steam Line release the total Noble Gas and Radioiodine Release Rates (Ci/sec) will be automatically calculated. To save all entered and calculated data click on the SET DATA button.

5.3.10 To enter the data from releases through the Steam Generator Blowdown perform the following:

- a. Click on the SGBD Button.
- b. Enter the current or desired steam generator blowdown flow in GPM and then press the TAB key.
- c. Enter the uCi/cc reading from the R-49 radiation monitor/chemistry sample and then press the ENTER key.
- d. Click on Apply Particulate DCF if required to use a particulate dose conversion factor.
- e. Click on NG:I Ratio to select the default radioiodine calculation method OR click on Chem Sample.
- f. To enter the Chemistry Sample data press the TAB key and enter the current air leakage value in CFM and then press the TAB key as necessary to move to the appropriate Iodine Isotope field. Enter the chemistry sample data in uCi/cc into each field.

- g. Upon successful completion of data entry the Noble Gas and Radioiodine Release Rates (Ci/sec) will be automatically calculated. To save all entered and calculated data click on the SET DATA button.
- 5.3.11 To calculate the Whole Body (TEDE) and Thyroid (TODE) exposure rate at the Site Boundary, 2 Mile Radius, 5 Mile Radius, 10 Mile Radius click on the CALCULATE button on the DAPAR screen.
- 5.3.12 To print the Dose Assessment Forms 6a,b,c click on the PRINT/PREVIEW button. Select Dose Assessment Forms 6(a-c) and click on the PRINT/FAX button. Select the appropriate Windows Printer device by using SETUP. Click OK to print and then click on DONE.
- 5.3.13 To fax the Dose Assessment Forms 6a,b,c click on the PRINT/PREVIEW button. Select Dose Assessment Forms 6(a-c) and click on the PRINT/FAX button. Select the appropriate Windows Fax device by using SETUP. Click OK to fax. Utilize the installed fax software to transmit Dose Assessment Forms to desired locations and then click on DONE.
- 5.3.14 To calculate the total Whole Body (TEDE) and Thyroid (TODE) exposure for the duration of the release press the TAB key as necessary or click in the Release Duration data field. Enter the estimated time until the release can be terminated (default value is 4 hrs) and then press the ENTER key. The screen will automatically update the projected offsite doses for the duration of the release and display the Protective Action Recommendations based on the total dose.
- 5.2.15 To save DAPAR Click on SAVE. Enter your initials in the data field. Click on OK.
- 5.2.16 To end the Dose Assessment and Protective Action Recommendation (DAPAR) session click on DONE THEN click on EXIT.

6.0 REFERENCES

- 6.1 IP-1047, "Obtaining Offsite Exposure Rates from MIDAS Via Control Room Terminal"
- 6.2 SOP-12.2, "Noble Gas Effluent Radiation Detector R-27 Operation from CCR"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

- 8.1 Site Boundary $X\mu/Q$ for 1 Meter/Sec Windspeed
- 8.2 2, 5 and 10 Mile $X\mu/Q$ for 1 Meter/Sec Windspeed
- 8.3 $X\mu/Q$ for 1 Meter/Sec Windspeed for other Distances

SITE BOUNDARY X_μQ FOR 1 METER/SEC WINDSPEED

<u>Sector</u>	<u>Distance (Meters)</u>	<u>Pasquill Categories</u>						
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
1*	2977	5.5 E-7	9.0 E-7	5.7 E-6	2.1 E-5	4.3 E-5	1.1 E-4	2.0 E-4
2*	3234	5.2 E-7	1.0 E-6	5.0 E-6	1.9 E-5	3.9 E-5	9.6 E-5	1.8 E-4
3	716	3.6 E-6	2.0 E-5	5.3 E-5	1.5 E-4	2.7 E-4	4.9 E-4	7.1 E-4
4	701	3.7 E-6	2.0 E-5	5.4 E-5	1.6 E-4	2.7 E-4	5.0 E-4	7.2 E-4
5	762	3.2 E-6	1.8 E-5	4.8 E-5	1.4 E-4	2.5 E-4	4.7 E-4	6.8 E-4
6	625	4.7 E-6	2.5 E-5	6.4 E-5	1.8 E-4	3.1 E-4	5.5 E-4	7.9 E-4
7	610	4.9 E-6	2.6 E-5	6.6 E-5	1.9 E-4	3.2 E-4	5.6 E-4	8.0 E-4
8	701	3.7 E-6	2.0 E-5	5.4 E-5	1.6 E-4	2.7 E-4	5.0 E-4	7.2 E-5
9	1006	2.1 E-6	1.0 E-5	3.2 E-5	9.9 E-5	1.8 E-4	3.6 E-4	5.4 E-4
10	1006	2.1 E-6	1.0 E-5	3.2 E-5	9.9 E-5	1.8 E-4	3.6 E-4	5.4 E-4
11	488	7.7 E-6	3.6 E-5	8.8 E-5	2.5 E-4	4.0 E-4	6.7 E-4	9.2 E-4
12*	2349	6.6 E-7	1.5 E-6	8.3 E-6	3.0 E-5	6.0 E-5	1.4 E-4	2.6 E-4
13*	1802	8.1 E-7	3.2 E-6	1.3 E-5	4.3 E-5	8.5 E-5	1.9 E-4	3.3 E-4
14*	1689	9.0 E-7	3.7 E-6	1.4 E-5	4.8 E-5	9.2 E-5	2.0 E-4	3.5 E-4
15*	1432	1.2 E-6	5.1 E-6	1.9 E-5	6.1 E-5	1.2 E-4	2.4 E-4	4.0 E-4
16*	1416	1.2 E-6	5.2 E-6	1.9 E-5	6.2 E-5	1.2 E-4	2.5 E-4	4.0 E-4

* These sectors have the plume going out over the water before it touches public or private land. Site boundary in these cases is taken to be the land fall point at the center.

X₁₀/Q FOR 1 METER/SEC WINDSPEED FOR OTHER DISTANCES

Pasquill Categories

<u>MILES</u>	<u>METERS</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
1.0	1608	9.5 E-7	4.0 E-6	1.5 E-5	5.0 E-5	9.0 E-5	2.1 E-4	3.4 E-4
1.5	2412	6.3 E-7	2.1 E-6	1.1 E-5	5.4 E-5	5.4 E-5	1.3 E-4	2.2 E-4
2.0	3216	5.2 E-7	8.3 E-7	5.0 E-6	1.9 E-5	3.9 E-5	9.6 E-5	1.8 E-4
2.5	4020	4.4 E-7	5.8 E-7	3.5 E-6	1.4 E-5	3.7 E-5	7.0 E-5	1.7 E-4
3.0	4824	3.6 E-7	5.0 E-7	2.8 E-6	1.0 E-5	2.2 E-5	5.7 E-5	1.3 E-4
3.5	5628	3.2 E-7	4.2 E-7	2.0 E-6	8.1 E-6	1.8 E-5	4.7 E-5	1.1 E-4
4.0	6432	2.8 E-7	3.7 E-7	1.6 E-6	6.8 E-6	1.5 E-5	4.0 E-5	9.4 E-5
4.5	7236	2.6 E-7	3.5 E-7	1.4 E-6	5.8 E-6	1.3 E-5	3.5 E-5	7.3 E-5
5.0	8040	2.4 E-7	3.2 E-7	1.2 E-6	5.1 E-6	1.1 E-5	3.1 E-5	6.7 E-5
5.5	8844	2.1 E-7	3.1 E-7	9.9 E-7	4.4 E-6	1.0 E-5	2.8 E-5	5.9 E-5
6.0	9648	2.0 E-7	2.7 E-7	8.3 E-7	3.8 E-6	9.1 E-6	2.5 E-5	5.4 E-5
6.5	10452	1.9 E-7	2.5 E-7	7.5 E-7	3.5 E-6	8.2 E-6	2.3 E-5	5.0 E-5
7.0	11256	1.8 E-7	2.4 E-7	6.7 E-7	3.2 E-6	7.5 E-6	2.1 E-5	4.7 E-5
7.5	12060	1.7 E-7	2.3 E-7	6.1 E-7	3.0 E-6	6.9 E-6	1.9 E-5	4.3 E-5
8.0	12864	1.6 E-7	2.2 E-7	5.5 E-7	2.7 E-6	6.3 E-6	1.8 E-5	4.1 E-5
8.5	13668	1.5 E-7	2.1 E-7	5.0 E-7	2.5 E-6	5.8 E-6	1.7 E-5	3.8 E-5
9.0	14472	1.5 E-7	2.0 E-7	4.6 E-7	2.3 E-6	5.5 E-6	1.6 E-5	3.6 E-5
9.5	15276	1.4 E-7	1.9 E-7	4.2 E-7	2.1 E-6	5.4 E-6	1.5 E-5	3.4 E-5
10.0	16080	1.4 E-7	1.8 E-7	4.0 E-7	2.1 E-6	5.3 E-6	1.5 E-5	3.4 E-5

ADDENDUM 8.2

Page 1 of 1

2, 5 AND 10 MILE X_{μ}/Q FOR 1 METER/SEC WINDSPEED

PASQUILL CATEGORY	X_{μ}/Q		
	<u>2 MILE</u>	<u>5 MILE</u>	<u>10 MILE</u>
A	5.2E-7	2.4E-7	1.4E-7
B	8.3E-7	3.2E-7	1.8E-7
C	5.0E-6	1.2E-6	4.0E-7
D	1.9E-5	5.1E-6	2.1E-6
E	3.9E-5	1.1E-5	5.3E-6
F	9.6E-5	3.1E-5	1.5E-5
G	1.8E-4	6.7E-5	3.4E-5

Change Summary for IP-1007 Rev 10
Dose Assessment

Biennial Review. No Changes.

Change Summary for IP-1007 Rev 9
Dose Assessment

Section 2.4.7 Added maximum steam flow for #22 Auxiliary Feedwater Pump for dose calculation.

Section 5.3 Added MEANS Computer Calculation method.

Change Summary for IP-1007 Rev 8
Dose Assessment

Section 2.3 Added core damage assessment for 100% NG and 25% I form Core

Section 2.4.6 Added Containment volume in Cubic Centimeters

Section 5.2.6 EPA 400 change to TODE

PERSONNEL RADIOLOGICAL CHECK AND DECONTAMINATION

Prepared by: CBurne 8/11/98 Technical Reviewer: Tommy Fennell 8/12/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 Dorva Tyner 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Tommy Fennell / ADG EP 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

PERSONNEL RADIOLOGICAL CHECK AND DECONTAMINATION

1.0 PURPOSE

- 1.1 To describe the methods Health Physics personnel use in the checking of personnel for contamination and their subsequent decontamination at the Buchanan Service Center.

2.0 DISCUSSION

- 2.1 Personnel who become contaminated while working in the Protected Area are checked out AND decontaminated at the plant facilities in the Unit No. 1 Nuclear Service Building.
- 2.2 ALL others are decontaminated at the Buchanan Service Center (see Addendum 8.1).
- 2.3 Decontamination of the individual shall be by normal washing in the shower using regular soap. IF normal washing WITH soap DOES NOT remove it, THEN decontamination shall proceed under medical supervision.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

- 4.1 Clean coveralls are stocked at the Cortlandt Warehouse.
- 4.2 Decon materials are located at the Buchanan Service Center in the Emergency Operation Facility (EOF).

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

NOTE:

IT SHOULD TAKE AT LEAST TWO MINUTES TO PROPERLY EXECUTE THE FRISK. FOR LARGE NUMBERS OF INDIVIDUALS WHO HAVE TRAVELED TOGETHER AND ARE SUSPECTED TO BE CONTAMINATED, REPRESENTATIVE NUMBERS MAY BE CHECKED TO EXPEDITE THE EVACUATION. DISCUSS THIS SITUATION WITH THE OFFSITE RADIOLOGICAL ASSESSMENT DIRECTOR (ORAD).

- 5.1 Perform, OR have the individual perform, the check for contamination using a E-140N OR RM-14 WITH an HP-210 probe. The instruments are available at the EOF. Ensure that personnel use the frisker properly.
- 5.2 IF the individual is NOT contaminated, LESS THAN 100 CPM above background, THEN record on FORM 7 AND report findings to the ORAD.
- 5.3 IF the individual is contaminated, GREATER THAN 100 CPM above background, THEN record on FORM 7 AND refer the individual to the shower room facility. Report findings to ORAD.
- 5.4 Segregate the contaminated individual to an area that has been set up as a contaminated area WITH signs AND Step Off Pads.
- 5.5 Initiate FORM 31a OR FORM 31b as APPROPRIATE. Record initial contamination levels as recorded on FORM 7 BEFORE proceeding further.
- 5.6 Check EACH piece of clothing as it is removed AND segregate as to whether it is contaminated OR NOT contaminated. Contaminated clothing should be placed in plastic bags which may be obtained from the storeroom stock. Record on FORM 31a.

NOTE:

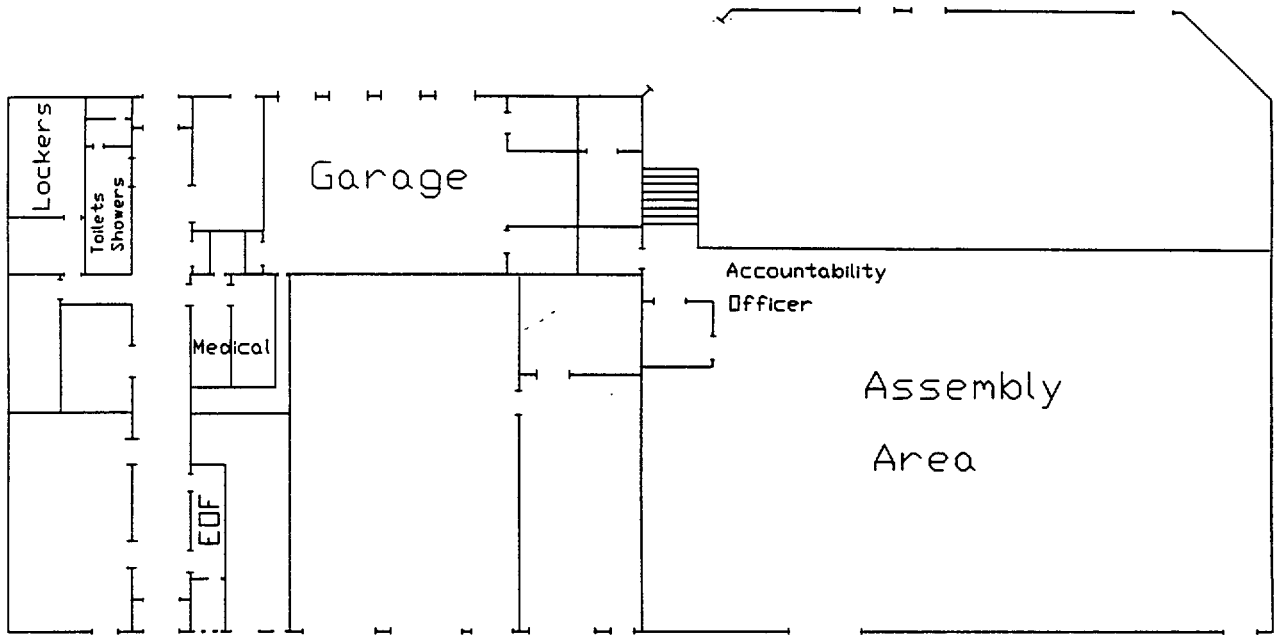
WHERE CLOTHING CONTAMINATION DOES NOT PLAY A PART, BUT BODY ORIFICES DO, FORM 31b SHOULD BE USED. IN CERTAIN INSTANCES BOTH FORMS MIGHT BE REQUIRED.

- 5.7 Recheck individual AFTER clothing is removed. Record on FORM 31a. IF decontamination is required, THEN have the individual shower AND record as found data.
- 5.8 Recheck AFTER shower. Repeat shower as necessary recording EACH recheck on FORM 31a.

- 5.9 Report results to the ORAD.
- 5.10 IF skin contamination occurs AND the normal washing WITH soap did NOT remove it, THEN decontamination shall proceed under the direction of medical supervision. Materials AND supplies are kept in the Medical Office at the Buchanan Service Center. Record ALL decontamination steps AND surveys taken on FORM 31b.
- 5.11 Individuals should be whole body counted, AFTER decontamination is completed, WHEN there is a possibility that they have inhaled a quantity of radioactive material to exceed 200 DAC hours.
- 5.11.1 Reliable assay of thyroid burden AND calculation of intake should occur ONLY in the 12 hour to 10 day interval post-intake.
- 5.11.2 Uncontaminated persons are unlikely to have a measurable intake.
- 5.11.3 Screening for significance of intake may be readily accomplish by MS-2/SPA-3 measurement of thyroid burden. See Reference 6.1.
- 5.11.4 Persons thought, by screening, to have intakes of 10% ALI should be whole body counted by arrangement.
- 5.11.5 All measurable S(ALI) above 10 DAC-hours OR N(ALI) above 50 DAC-hours equivalent for occupationally exposed persons shall be recorded in personnel records.
- 5.12 Turn in ALL completed forms to ORAD.
- 6.0 REFERENCES
- 6.1 IP-1005, "Use of MS-2/SPA-3 Tod Determine Thyroid Radioiodine Uptake".
- 7.0 ATTACHMENTS
- NONE
- 8.0 ADDENDUM
- 8.1 Buchanan Service Center Building.

ADDENDUM 8.1
Page 1 of 1

BUCHANAN SERVICE CENTER BUILDING



RADIOLOGICAL CHECK AND DECONTAMINATION OF VEHICLES

Prepared by: Burn 1/25/99 Technical Reviewer: Ben Green 9/1/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 Dorra Tyner 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Ben Green 1/25/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

RADIOLOGICAL CHECK AND DECONTAMINATION OF VEHICLES

1.0 PURPOSE

- 1.1 To describe the method of checking vehicles for contamination and their subsequent decontamination at the Service Center when required.

2.0 DISCUSSION

- 2.1 The Offsite Radiological Assessment Director (ORAD) shall be responsible for having vehicles checked for contamination AND the subsequent decontamination, IF required. The personnel performing the contamination checks shall be onsite monitoring teams.
- 2.2 Vehicle decontamination shall be performed at the Service Center in the area southwest of the Service Center Building. Access to this area shall be through the gate located near the gasoline pumps. This gate shall be opened by a member of the Security Force. NO vehicles shall be allowed to leave the Site in order to enter the Service Center by way of the Broadway entrance UNLESS authorized by the Emergency Director.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIAL

- 4.1 Instrumentation AND material are available at the EOF.
- 4.1.1 Survey instrument E-140N OR RM-14 WITH HP-210 probe.
- 4.1.2 Gauze pads OR paper disks.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C AND D OF EPD BOOK NO. 2.

- 5.1 Check for removable (loose) contamination. Use either survey instrument WITH either a gauze pad OR paper disks.

- 5.1.1 Using a gauze pad, wipe the major accessible surface areas of an item. Read background, the pad AND background again WITH the survey instrument. The contamination is LESS THAN detectable IF the reading for the pad is equal OR LESS THAN both background readings AND 300 cpm. Record the results for loose contamination on FORM 8.
- 5.1.2 Using a paper disk, wipe 100 cm² of EACH representative accessible surface of an item. Read background, the disks AND background again WITH the survey instrument. Subtract the lowest background reading from the reading for the disk. Record results GREATER THAN 100 cpm on FORM 8.
- 5.2. Check for fixed contamination by moving the survey instrument closely AND slowly over the accessible surfaces. Record the results for fixed contamination on FORM 8.
- 5.3 Items which DO NOT satisfy ALL the following criteria may leave the site only WITH the approved of the Emergency Director.
 - 5.3.1 Loose contamination is LESS THAN detectable as described in section 5.1.1 in a background limited to 300 cpm.
 - 5.3.2 Fixed contamination is LESS THAN 100 cpm in Section 5.1.2 a background limited to 300 cpm.
- 5.4 Position the vehicle close to the corner water run off opening. This shall allow the contamination to run off into a small depression where it shall be contained AND concentrated by the land contour.
- 5.5 Using hoses, hooked up to the nearest fire hydrant OR utilizing a Fire Department pumper, wash the vehicle with detergent AND water. The detergent may be obtained from the Cortlandt Warehouse.
- 5.6 IF the vehicle is still contaminated, rewash AND recheck UNTIL vehicle satisfies criteria of section 5.3.
- 5.7 Record ALL contamination checks AND washes along with the vehicle license plate number on FORM 8.
- 5.8 Vehicles that DO NOT satisfy the criteria of section 5.3 are NOT allowed to leave the site without approval of the Emergency Director.
- 5.9 Report results of vehicle checks AND decontamination to the ORAD upon completion.
- 5.10 Turn in ALL completed FORMS to the ORAD for filing.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

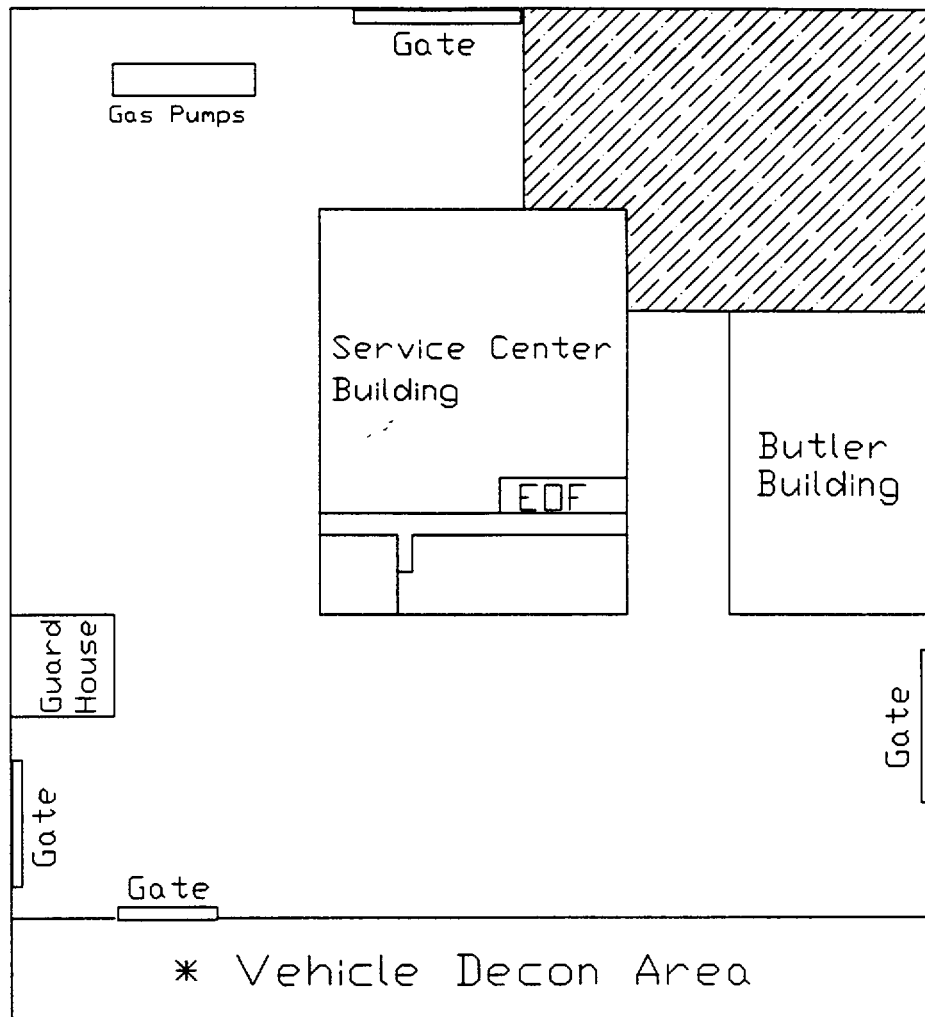
NONE

8.0 ADDENDUM

8.1 Buchanan Service Center Layout

ADDENDUM 8.1
Page 1 of 1

BUCHANAN SERVICE CENTER LAYOUT



ON-SITE MEDICAL EMERGENCY

Prepared by: ABurne 4/10/98 Technical Reviewer: Tony Fennor 4/14/98
Date Date

Reviewer: _____ Date _____
Date

Reviewer: _____ Date _____
Date

SNSC Review Not Required Reviewer: _____
Meeting No. Date QA Date

Approval: McAll D.M. SITE PROT 4/22/98 4/30/98
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date _____ Reviewer/Date _____

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

**Reference
Use**

ON-SITE MEDICAL EMERGENCY

1.0 PURPOSE

- 1.1 To describe the overall procedure to be followed by personnel during an on-site medical emergency.

2.0 DISCUSSION

- 2.1 Accidents occurring in the Controlled Area may be complicated by the contamination of the victim. If the victim must be sent to the hospital, it may be necessary for the Medical/Health Physics personnel to decontaminate the victim to levels as low as practical. Hospital personnel are trained to handle a contaminated patient with the help of Health Physics personnel who shall accompany the victim to the hospital.
- 2.2 The primary hospital is Hudson Valley Hospital Center at Peekskill/Cortlandt AND the backup is Phelps Memorial Hospital Center in Tarrytown.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIAL

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D IN EPD BOOK NO. 2.

5.1 Employee Arriving at Scene

- 5.1.1 IF able, IMMEDIATELY render lifesaving aid to the victim, AND notify, OR cause to be notified the Control Room Operator.
- 5.1.2 IF possible, DO NOT move OR leave the victim UNTIL the First Aid Responder arrives.
- 5.1.3 In the event of fire OR other conditions that jeopardize the safety of the victim, the rescuer shall remove the victim to the nearest safe area.

5.2 Control Room Operator

- 5.2.1 Page First Aid Responder, Health Physics Technician (HPT), AND Senior Watch Supervisor (SWS).
- 5.2.2 Call the Security Supervisor for an E.M.T. IF available.
- 5.2.3 Receive SWS OR designee evaluation AND respond as directed.
- 5.2.4 Call an ambulance if directed.
- 5.2.5 Notify the Command Guard House of the ambulance arrival AND instruct them where to bring the ambulance.

NOTE:

CONTROL ROOM OPERATOR SHOULD INFORM THE HOSPITAL OF THE EXTENT OF THE PATIENT'S INJURIES AND CONTAMINATION.

- 5.2.6 Notify Hudson Valley Hospital Center Supervisor OR the Phelps Memorial Hospital Center Nurse's Station. Refer to Appendix B for phone numbers. | 9
- 5.2.7 Notify the Westchester Medical Center at Valhalla. Refer to Appendix B for phone number. IF the First Aid Responder OR Ambulance Team, because of trauma, decides to transport the patient, notify the Hudson Valley Hospital Center OR Phelps Memorial Hospital Center of the change. | 9

5.3 Senior Watch Supervisor/Designee

- 5.3.1 Respond to the scene of the accident OR sent designee.
- 5.3.2 Evaluate information from First Aid Responder, HPT AND Medical Representative when available.
- 5.3.3 Categorize the accident victim's condition as follows, AND notify the Control Room Operator:
 - a. Victim to hospital but NOT contaminated.
 - b. Minor contamination - local contamination of extremities. Rest of victim's body is clear of contamination. Minimum radiological control needed at hospital.

- c. Major contamination - high levels of contamination that could spread in the hospital emergency areas. Maximum radiological control needed at hospital.

5.3.4 AFTER the victim leaves the site for the hospital perform the following notifications:

- a. Contaminated OR non-contaminated victim - as per Reference 6.1.
- b. Call Radiation Protection Manager OR designee AND request a replacement HPT.
- c. Call Con Edison Medical Director. Refer to Appendix B for phone numbers.

5.4 Watch Health Physics Technician (HPT)

5.4.1 Check to determine that the Radiation Protection Plant Medical Emergency Kit contains the following equipment AND THEN respond to the scene WITH the kit. The kit is stored in the HPT Office/Counting Room Area.

- a. Yellow/Magenta Tape
- b. SOPs
- c. Rad Rope
- d. Caution "Contaminated Area" signs
- e. Surgical Gloves
- f. RM-14/HP-210 "frisker"
- g. A.C. Extension Cord
- h. E-520 Survey Meter
- i. Shoe Covers
- j. Data Pad and Pencil/Pen
- k. Petrie Dish For Smears

- i. Gum Labels for Smear Samples
- m. Procedure Book

5.4.2

At Scene

- a. Evaluate general situation quickly, i.e., water on floor, radiation fields in area of victim.
- b. Solicit assistance from other Health Physics personnel OR NPOs to set up AND control the contaminated area.
- c. Rope off AND set up Step-Off-Pad AND frisker.
- d. Evaluate whether victim needs to be moved because of radiation fields. Recommended guidelines are as follows:

GREATER THAN 100 R/hr - IMMEDIATELY.

10-100 R/hr - IMMEDIATELY UNLESS
moving victim is life threatening to the victim.

1-10 R/hr - IMMEDIATELY UNLESS it
shall cause serious medical complications.

LESS THAN 1 R/hr - as soon as First Aid
Responder authorizes.

- e. Direct ALL non-injured to safe area.
- f. Check contamination level on victim. Use FORM 31a to record results.
- g. Remove anti-C clothing IF necessary. Place in plastic bag.
- h. Re-survey contamination level on victim.
- i. Read victim's dosimeter. Remove dosimeter AND TLD from victim IF dosimeter is off scale AND the victim is NOT in a radiation field at the present time. Call for assistance to read TLD IF necessary. | 9
- j. Direct First Aid Responder relative to contamination levels AND radiation fields. | 9

- k. Concur with First Aid Responder on method of removing victim from roped off contaminated area without spreading contamination OR complicating injuries.
- l. Notify Plant Manager IF practical at this time.
- m. Ensure that First Aid Responders are NOT contaminated as they leave area.
- n. First Aid Responder shall determine whether to transport victim to Decon Suite OR Ambulance.

5.4.3

At First Aid/Decon Suite

- a. Ensure that decon room is set up as a contaminated area i.e., SOPs at the doorways AND plastic bags for contaminated material. Utilize other HP personnel OR NPOs for assistance.
- b. Check victim for contamination levels. Mark as necessary AND record on FORM 31a.
- c. Advise Medical Representative AND First Aid Responder of any radiological controls necessary.
- d. Supply, as needed, Medical Representative(s) with a TLD AND dosimeter. NOT EVERY medical Representative is permanently badged. Record on FORM 24. | 9
- e. Determine that ALL contaminated material used is placed in proper plastic bag.
- f. Record decon survey data during ALL phases on FORM 31a.
- g. Solicit assistance from other HP personnel to count nose, ear, mouth, eye swabs as required. Record on FORM 31b. Place in individual container AND save. Label EACH container WITH individual's name, time AND smear locations on body.
- h. Determine whether data taken AND information received from the victim indicates internal contamination (inhalation, ingestion) of radioactive material.
- i. Request isotopic analysis from Chemistry as appropriate.

NOTE:

INGESTION OR INHALATION OF 1 UCI OF I-131 WITHOUT IMMEDIATE RECEIPT (WITHIN TWO HOURS) OF POTASSIUM IODIDE (KI) WOULD RESULT IN AN APPROXIMATE THYROID EXPOSURE OF 1 - 1.5 REM.

- j. Whole Body Counting of accident victim may be required, BUT shall wait for medical aid AND decontamination to be completed. Thyroid counting is best performed AFTER one to two days have elapsed.
- k. Contact the Plant Manager AND inform him of the situation.
- l. Participate in the transfer of the victim to the ambulance.
- m. Issue dosimeter AND TLD to ambulance crew IF necessary i.e., IF they should be exposed to radiation fields GREATER THAN 1 mR/hr. Record on FORM 24.
- n. Accompany victim to hospital IF victim is contaminated. Whenever possible obtain the assistance of another HPT. Request the SWS call in an HPT to report to the hospital.
- o. Check to determine that the Radiation Protection Hospital Medical Emergency Kit contains the appropriate equipment (listed in Section 5.4.1) along with 15 TLDs, 15 dosimeters, a charger, AND a second frisker AND THEN take it along to the hospital. The kit is stored in the First Aid/Decon Suite.

5.4.4

At Hospital

- a. Determine that emergency room has been set up as contaminated area i.e. SOPs, frisker, shoe covers AND plastic bags to receive contaminated shoe covers AND materials. Refer to Addendum 8.1 for Hudson Valley Hospital Center AND Addendum 8.2 for Phelps Memorial Hospital Center layouts. | 9
- b. Issue dosimeters AND TLD badges to Hospital Medical Team members IF necessary i.e., IF they shall be exposed to radiation fields GREATER THAN 1 mR/hr. Record on FORM 24. | 9

- c. Apprise Medical Team members of contamination AND radiation field levels they shall be exposed to AND victim exposure history.
- d. Assist the Medical Team by taking field readings OR contamination level readings as requested.
- e. Check the ambulance for contamination using an RM-14/HP-210 BEFORE it is allowed to leave. A reading GREATER THAN 100 cpm above background is considered contaminated. IF contaminated, instruct the ambulance crew that it should be kept out of service UNTIL it is decontaminated by Con Edison personnel. Determine if ambulance needs to go back to Indian Point.
- f. Call the Senior Watch Supervisor AND notify him of the ambulance contamination. Request that he contact the Plant Manager for direction.
- g. Save AND label (include time) ALL specimens of urine, vomitus, feces, blood, tissue AND foreign bodies from the patient UNTIL their use in the evaluation has been completed.
- h. AFTER victim has been discharged from emergency room i.e., admitted to hospital OR released, check medical personnel AND emergency equipment AND surfaces for contamination using the RM-14/HP-210. A reading GREATER THAN 100 cpm above background is considered contaminated.
- i. Give direction to hospital staff on methods of decontamination. Supervise decontamination effort. Insure that ALL contaminated waste is brought back to Indian Point for disposal.

5.4.5

Follow Up

- a. Gather ALL data AND samples together.
- b. Give ALL data to Con Edison Health Physics Supervisor at the first opportunity.
- c. The Health Physics Supervisor shall prepare a report (memo) to the Plant Manager listing ALL actions, surveys, sample counting, evaluations AND instructions to personnel. Attach ALL data forms.

5.5 First Aid Responders

- 5.5.1 Obtain emergency equipment AND respond to call through Control Room to designated location.
- 5.5.2 Utilize anti-C clothing (gloves, shoe covers, coveralls) to protect yourself WHEN administering to victim.
- 5.5.3 Render IMMEDIATE care under HPT direction.
- 5.5.4 Set up protective shielding IF instructed by HPT.
- 5.5.5 Assist in decontamination of victim.
- 5.5.6 Decontaminate self, IF necessary.
- 5.5.7 Assist with delivery of victim to ambulance.
- 5.5.8 Assist transfer of victim from ambulance to hospital.

5.6 Medical Representative

- 5.6.1 Obtain information from Control Room Operator OR Security Supervisor at Command Guard House.
- 5.6.2 BEFORE responding to scene obtain TLD AND dosimeter at HP No. 1 Control Point IF you are permanently badged, otherwise obtain them from the Security Guard at the Command Guard House WHEN you enter.
- 5.6.3 Obtain anti-C coveralls at entrance to the Controlled Area.
- 5.6.4 Report to Decontamination Suite OR accident scene.
- 5.6.5 Evaluate patient AND render emergency care as necessary.
- 5.6.6 Provide for decontamination (removal of clothing).
- 5.6.7 Remove patient to Decontamination Suite IF indicated following route approved by HPT.
- 5.6.8 In Decontamination Suite, evaluate patient so that you can describe findings to hospital. Request implementation of emergency medical notification by Control Room Operator IF indicated AND have first member of roster contacted call you for consultation (Appendix B).

- 5.6.9 Under the HP instruction start medical decontamination IF required. Decontamination agents are stored in the Decon Locker located in the NSB 72' El. Decon Room.
- a. Wounds, body orifices and skin decontamination.
 - b. Radioiodine Skin Contamination - use Betadine to remove radioiodine contamination from the skin.
- 5.6.10 Collect ALL urine, stool, vomitus, etc. AND label.
- 5.6.11 Draw 1 tube of blood for CBC (lavender top) mixing well, 1 full tube of unhemolyzed blood (red top) for chemistries, being careful to obtain from non-contaminated area. Specimens should be drawn, IF possible, PRIOR to starting any I.V. fluids.
- 5.6.12 Start I.V. as medically indicated.
- 5.6.13 IN the event of mass casualties initiate Triage procedure.
- 5.6.14 WHEN the patient is stabilized AND decontaminated as much as practical, decontaminate self AND prepare to go with patient to the hospital, maintaining life support as required.
- 5.6.15 Provide patient radiation-medical status record sheet to the hospital staff and retain duplicate copy.

6.0 REFERENCES

- 6.1 SAO-124, "Oral Reporting of Non-Emergency Events and Items of Interest and Significant Occurrence Reporting"

7.0 ATTACHMENTS

NONE

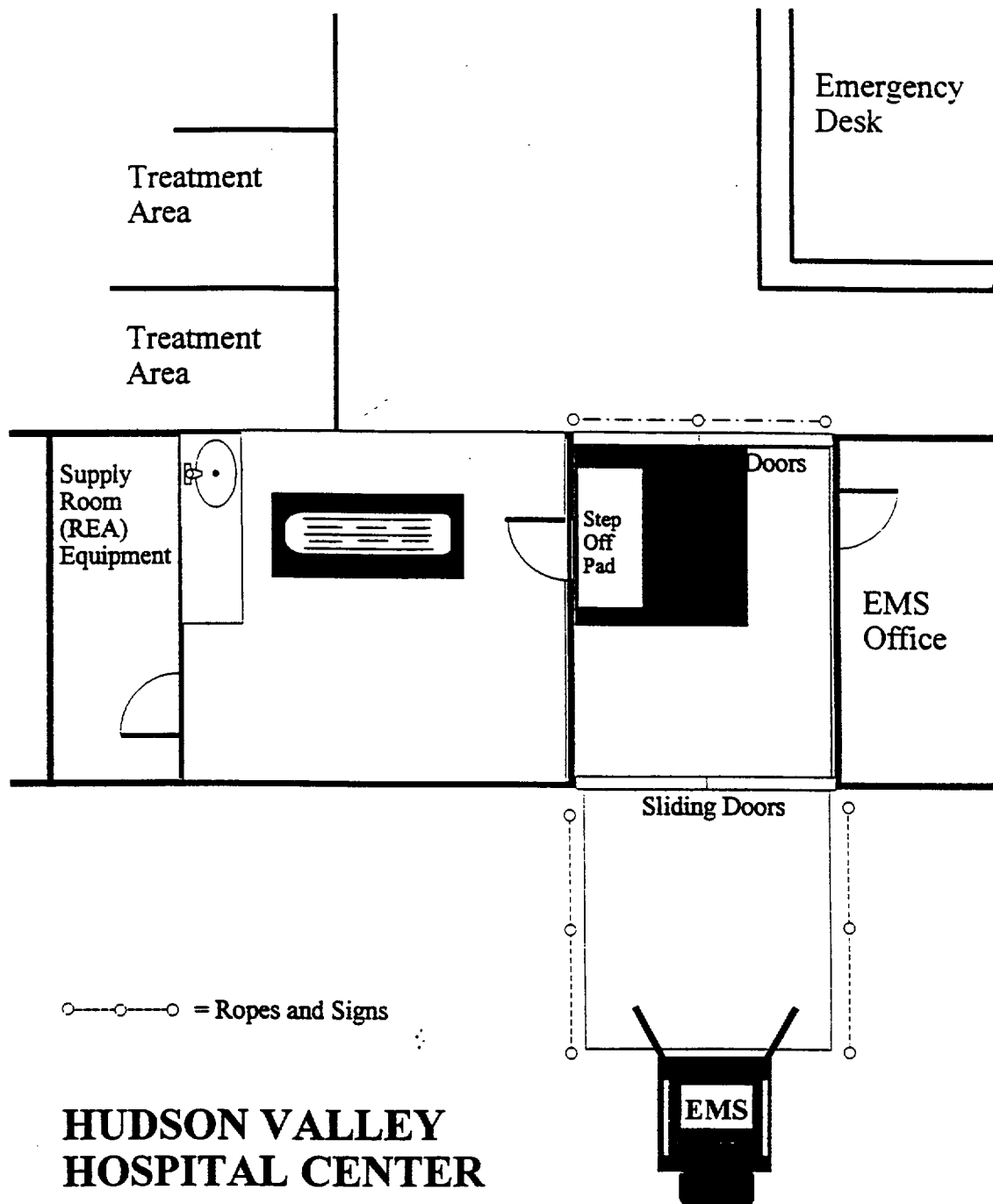
8.0 ADDENDUM

- 8.1 Hudson Valley Hospital Center Decon Suite and Access Layout
- 8.2 Phelps Memorial Hospital Center Layout

| 9

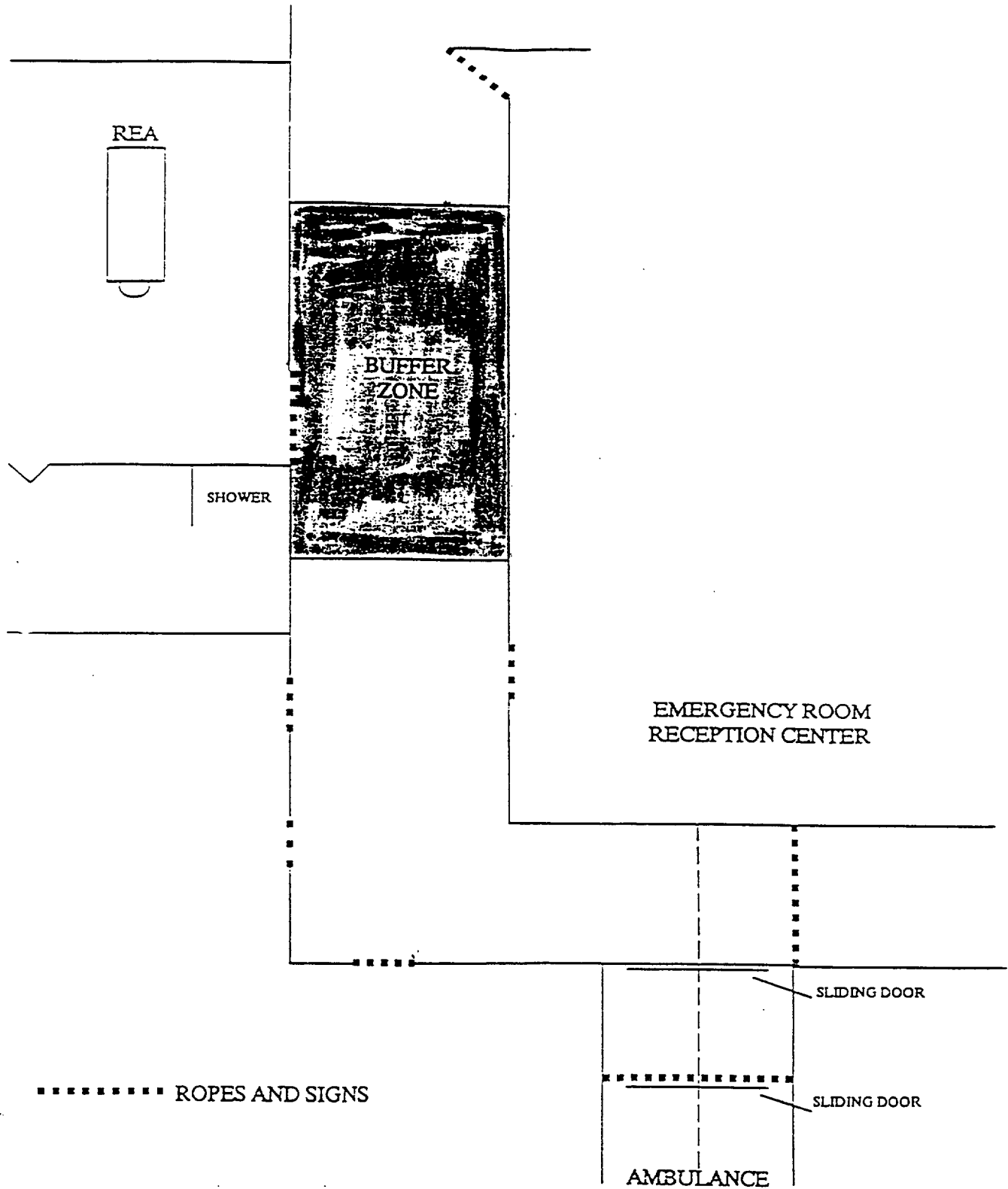
ADDENDUM 8.1
Page 1 of 1

HUDSON VALLEY HOSPITAL CENTER DECON SUITE AND ACCESS LAYOUT



ADDENDUM 8.2
Page 1 of 1

PHELPS MEMORIAL HOSPITAL CENTER LAYOUT



PROTECTIVE ACTION RECOMMENDATIONS

Prepared by: Burns 9/21/98 Date
Technical Reviewer: Devin Kellum 9/1/99 Date
Reviewer: _____ Date
Reviewer: _____ Date
Reviewer: _____ Date
Reviewer: _____ Date
SNSC Review: #2622 Donna Tyler 8/19/99 Date
Meeting No. _____ Date
Approval: Devin Kellum / Acting EP by 9/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date

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FOR CONTINUOUS USE

PROTECTIVE ACTION RECOMMENDATIONS

1.0 PURPOSE

- 1.1 To describe the method used to determine protective actions to be recommended to offsite authorities (State and Counties).

2.0 DISCUSSION

- 2.1 It is the responsibility of the Shift Manager during the initial phases of the accident, AND the Emergency Director with the assistance of the Offsite Radiological Assessment Director AFTER taking over the responsibilities from the Shift Manager, to evaluate the accident conditions, classify the accident and recommend protective actions to offsite authorities.
- 2.2 The decision to initiate any protective actions is solely the responsibility of the local authorities.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIAL

NONE

5.0 INSTRUCTIONS

5.1 NUE, Alert, Site Area Emergency

- 5.2.1 Recommend no protective actions be taken.

5.2 General Emergency

- 5.2.1 Protective Action Recommendations (PARs) shall be made in accordance with Addendum 8.1. All recommendations shall be made using in Addendum 8.2.
- 5.2.2 The initial PAR shall be made in the first GENERAL EMERGENCY notification to the State/Counties. All subsequent, Part I notifications shall include the latest PAR.

5.2.3 Re-evaluate the PARs based on the following:

- a. Dose Assessment - (When release duration is NOT able to be estimated, use four hours as a default value)
- b. Field data
- c. EPA PAGs
- d. Emergency Response Planning Areas (ERPAs affected)
- e. ETTEs (Evacuation Travel Time Estimates)
- f. Hazardous travel conditions
- g. State/County actions

6.0 REFERENCES

- 6.1 1993 Evacuation Travel Time Estimates Report
- 6.2 IP-1007, "Dose Assessment"

7.0 ATTACHMENTS

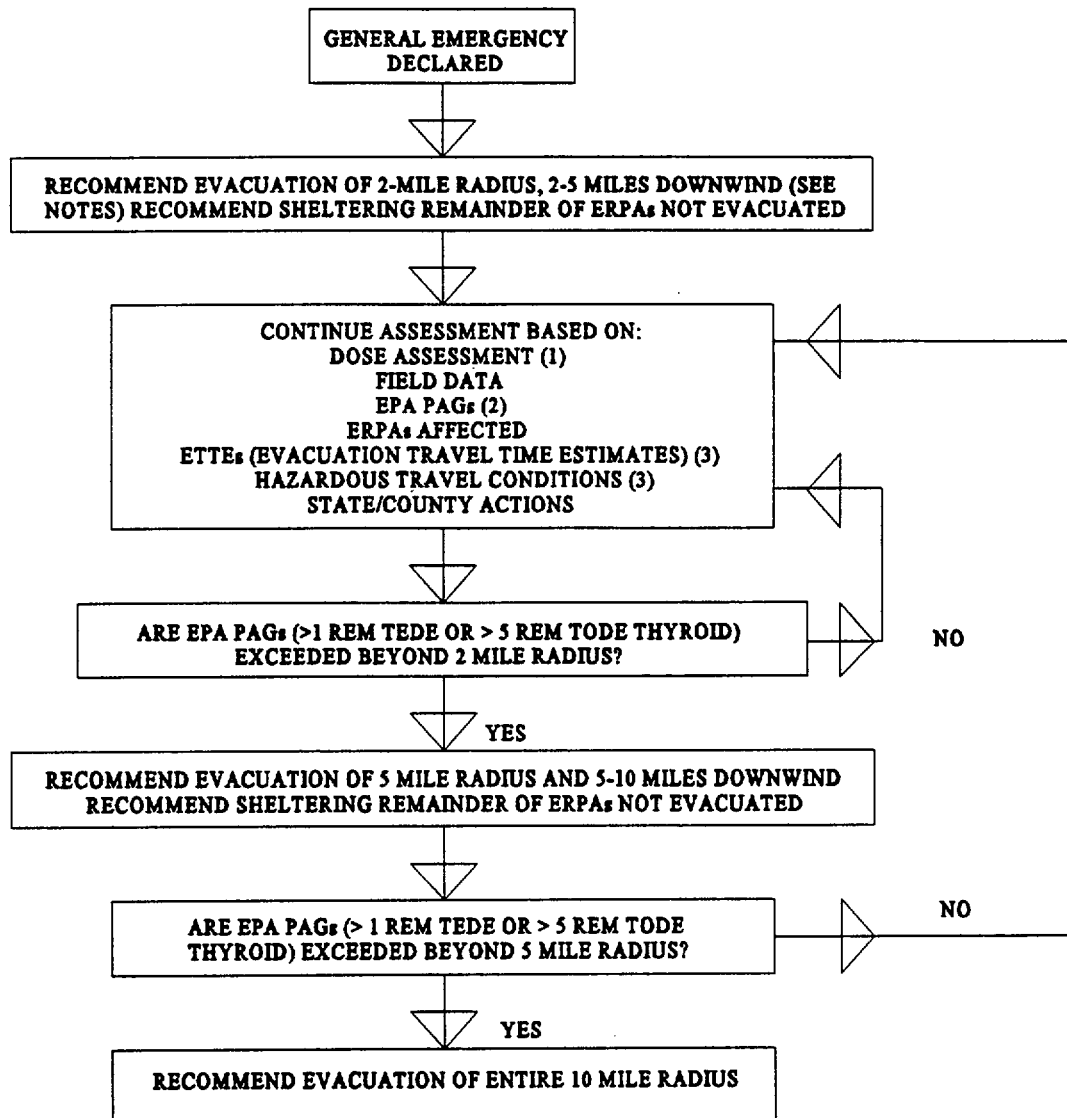
- 7.1 NONE

8.0 ADDENDUM

- 8.1 Flowchart for General Emergency Protective Action Decisions
- 8.2 Conversion of Sector/Zones to ERPAs
- 8.3 EPA Protective Action Guidelines
- 8.4 Overlay Selection Flow Chart

ADDENDUM 8.1
Page 1 of 1

**FLOWCHART FOR GENERAL EMERGENCY PROTECTIVE
ACTION DECISIONS**



NOTES: - DISTANCES ARE APPROXIMATE. ACTUAL DISTANCES ARE BASED ON ERPA BOUNDARIES
IF OFFSITE DOSE IS KNOWN CONSIDER EPA PAGs (ADDENDUM 8.3)
EVACUATION MAY BE REQUIRED BEYOND THE 2 MILE RADIUS AND 5 MILES DOWNWIND IF THE PAGs ARE EXPECTED TO BE EXCEEDED.

- (1) Refer to REFERENCE 6.2
- (2) Refer to ADDENDUM 8.3
- (3) Refer to REFERENCE 6.1

ADDENDUM 8.2
Page 1 of 1

CONVERSION OF SECTOR/ZONES TO ERPAS

RADIUS

AFFECTED ERPAs

0-2 MILE

1, 2, 3, 4, 7, 29, 30, 38, 39, 43, 44

0-5 MILE

1, 2, 3, 4, 5, 6, 7, 8, 9, 16, 18, 24, 26, 29
30, 31, 38, 39, 40, 43, 44, 45, 47, 48, 49

NOTE:

USING ADDENDUM 8.4, PLACE APPROPRIATE OVERLAY ON MAP, AND DETERMINE AFFECTED SECTORS. (AFFECTED SECTORS ARE ANY SECTORS THAT THE ISOPLETH LINES TOUCH BEYOND 2 MILES). THEN USE THE TABLE BELOW TO DETERMINE ERPAs TO BE EVACUATED.

SECTORS

AFFECTED ERPAs

NO.

2-5 Miles

5-10 Miles

1	8, 16, 45	17, 23, 46
2	8, 16, 18	17, 19
3	8, 9	10, 11, 19, 20
4	8, 9, 49	10, 11, 12, 13, 14, 20
5	9, 49	11, 12, 13, 14, 15
6	5, 48, 49	12, 13, 21, 50
7	5, 6, 47, 48, 49	12, 21, 22, 50, 51
8	6, 47, 48,	22, 32, 42, 51
9	31	32, 33, 34, 35, 42
10	31	34, 35, 36, 37
11	31	34, 36, 37, 41
12	40	41
13	40	28
14	40	27, 28
15	24, 26, 40, 45	25, 27
16	16, 26, 45	25

ADDENDUM 8.3
Page 1 of 1

EPA PROTECTIVE ACTION GUIDELINES

Recommended protective actions to reduce whole body and thyroid dose from exposure to a gaseous plume.

PROJECTED DOSE (REM) TO THE POPULATION		RECOMMENDED ACTIONS (a)	COMMENTS
Whole Body (TEDE)	< 1	No planned actions. (b)	Previously recommended protective actions may be reconsidered or terminated.
Thyroid (TODE)	< 5	State may issue an advisory to seek shelter and await further instructions. Monitor environmental radiation levels	
Whole Body (TEDE)	≥ 1	Evacuate unless constraints make it impractical; then shelter. Monitor environmental radiation levels.	If constraints exist, special consideration should be given for evacuation of children and pregnant women.
Thyroid (TODE)	≥ 5	Control access.	

GUIDANCE ON DOSE LIMITS FOR WORKERS PERFORMING EMERGENCY SERVICES (REM)

Whole Body (TEDE):		
10	Protecting valuable property	Lower dose not practicable.
25	Lifesaving or protection of large populations	Lower dose not practicable.
> 25	Lifesaving or protection of large population	Only on a voluntary basis to persons fully aware of the risks involved.

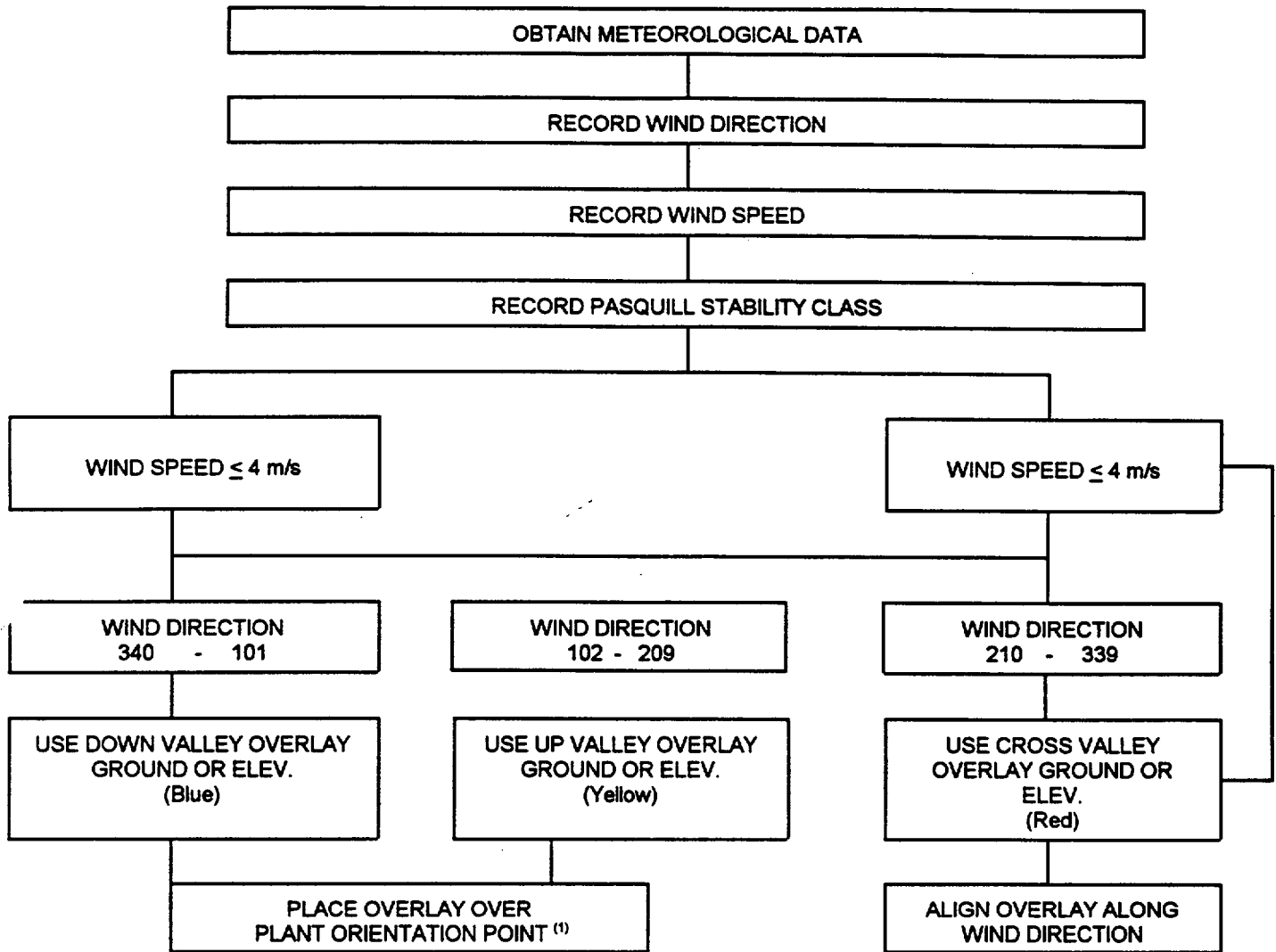
TEDE- Total Effective Dose Equivalent: Sum of external effective dose equivalent and committed effective dose equivalent to nonpregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any organ (including skin and body extremities) to ten times the listed value.

TODE- Total Organ Dose Equivalent: Sum of external effective dose equivalent and committed dose equivalent (to the Thyroid).

- (a) These actions are recommended for planning purposes. Protective action decisions at the time of the incident must take existing conditions into consideration.
- (b) At the time of the incident, officials may implement low-impact protective actions in keeping with the principle of maintaining radiation exposures as low as reasonably achievable (ALARA)

ADDENDUM 8.4
Page 1 of 1

OVERLAY SELECTION FLOW CHART



1. Plant Orientation Point

- a. Using down valley overlay (Blue) align horizontal axis on 90° - 270° line with plume extending south.
- b. Using up valley overlay (Yellow) align horizontal axis on 90° - 270° line with plume extending north.

RADIOLOGICAL CHECK OF EQUIPMENT BEFORE LEAVES THE SITE

Prepared by: [Signature] 1/28/99 Date Technical Reviewer: [Signature] 8/1/99 Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #2627 8/19/99 Date Reviewer: _____ Date
Meeting No. Date
Approval: [Signature] 9/1/99 Date /Effective Date
Signature/Title Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

OR REFERENCE USE

RADIOLOGICAL CHECK OF EQUIPMENT BEFORE IT LEAVES THE SITE

1.0 PURPOSE

- 1.1 To describe the method used for radiological checking of equipment and material before removal from the Site during Alert, Site Area or General Emergency.

2.0 DISCUSSION

- 2.1 Authorization for the removal of equipment shall be from the Emergency Director after consultation with the Plant Operations Manager AND Offsite Radiological Assessment Director. The area of responsibility for the radiological check of the equipment shall be as follows:

2.1.1 Inside the Protected Area fence - in plant Health Physics personnel using normal Rad Protection Procedures.

2.1.2 Outside the Protected Area fence - onsite monitoring team using this procedure.

- 2.2 The need for radiological checks on equipment AND material located outside the Radiologically Controlled Area (RCA) is determined by the Emergency Director/Offsite Radiological Assessment Director AFTER evaluating the releases of radioactive materials to the environment.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIAL

- 4.1 Instrumentation AND materials are located at the EOF.

4.1.1 Frisker with probe.

4.1.2 Gauze pads OR paper disks.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 Check for removable (loose) contamination. Use either survey instrument WITH either a gauze pad OR paper disks.
 - 5.1.1 Using a gauze pad, wipe the major accessible surface areas of an item. Perform this survey in an area where background is LESS THAN 300 cpm. Read background, read the pad AND THEN read the background again WITH the survey instrument. The contamination is LESS THAN detectable IF the reading for the pad is equal OR LESS THAN both background readings AND less than 300 cpm. Record the results for loose contamination on FORM 9.
 - 5.1.2 Using a paper disk, wipe 100 cm² of EACH representative accessible surface of an item. Perform this survey in an area where background is LESS THAN 300 cpm. Read background, read the disks AND THEN read the background again WITH the survey instrument. Subtract the lowest background reading from the reading for the disk. Record results that are GREATER THAN 100 cpm on FORM 9.
- 5.2 Check for fixed contamination by moving the survey instrument closely AND slowly over the accessible surfaces. Perform this survey in an area where background is LESS THAN 300 cpm. Read background, survey surfaces, AND THEN read the background again WITH the survey instrument. Subtract the lowest background reading from the highest surface reading. Record the results for fixed contamination on FORM 9.
- 5.3 Items which do not satisfy ALL three of the following criteria may leave the site only WITH the approved of the Emergency Director.
 - 5.3.1 ALL surfaces interior AND exterior were accessible AND checked for loose AND fixed contamination.
 - 5.3.2 Loose contamination is surveyed in a background limited to 300 cpm AND is LESS THAN detectable as described in section 5.1.1 OR loose contamination is LESS THAN 100cpm above background as described in section 5.1.2.

5.3.3 Fixed contamination is surveyed in a background limited to 300 cpm AND is LESS THAN 100 cpm above a background.

5.4 Deliver the completed FORM 9 to the Survey Team Health Physicist at the EOF.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

7.1 NONE

8.0 ADDENDUM

NONE

MOBILIZATION OPERATIONAL PROCEDURE
FOR OFFSITE MONITORING TEAMS

Prepared by: Burns 8/11/98 Date 8/11/98 Technical Reviewer: [Signature] Date 8/11/98
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2027 Date 9/2/99 Reviewer: _____ Date _____
Meeting No. 9/2/99 Date _____ Date _____
Approval: [Signature] [Signature] 9/16/99 9/13/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

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FOR REFERENCE USE

MOBILIZATION AND OPERATIONAL PROCEDURE FOR OFFSITE MONITORING TEAMS

1.0 PURPOSE

- 1.1 To describe the mobilization and duties of the offsite monitoring teams that are involved with the response during Alert, Site Area and General Emergencies.

2.0 DISCUSSION

- 2.1 Two offsite monitoring teams from Con Edison respond to the emergency. The Shift Manager will call the New York Power Authority (NYPA) Unit No. 3 to request their offsite team to respond. During normal working hours the Con Edison team members are available on-site and call the Central Control Room when the assembly alarm is sounded. During off-hours the Offsite teams respond, within 60 minutes, to the location identified in the emergency notification message.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Environmental sampling points are specified by the ORAD OR Communicator by sector/mile (see Addendum 8.1).
- 3.2 Unit No. 3 offsite teams should mobilize according to their procedures. AFTER the mobilization they shall report to the Con Edison ORAD for briefing BEFORE leaving site.
- 3.3 BEFORE leaving the EOF OR AEOF parking area the following actions shall be performed:
- 3.3.1 EACH individual obtains a bottle of KI from the EOF OR AEOF. KI is taken at the direction of the ED OR ORAD.
- 3.3.2 EACH individual selects a TLD badge AND dosimeter from the truck supplies AND wears them.
- 3.3.3 EACH individual selects respirator WITH iodine filters for use as directed by the ED OR ORAD.
- 3.3.4 Anti-C clothing is NOT worn off-site.

3.3.5 Check the operation of the ion chamber survey instrument, the sample counters AND the sample pumps.

a. Ion Chamber - 5 uCi Cs-137 source on contact with unshielded chamber gives an APPROXIMATE 15 mR/hr indication.

b. Counter - Reference 6.2.

3.3.6 There is NO need to check the emergency vehicle for contamination BEFORE leaving the Indian Point Site UNLESS there has been an airborne release to the environment.

3.3.7 Check to ascertain that ALL equipment listed on the FORM 2 check list is present.

3.3.8 Contact the EOF OR AEOF by radio AND report you are proceeding to sample point.

4.0 EQUIPMENT AND MATERIAL

4.1 Listed on FORM 2.

5.0 INSTRUCTIONS

NOTE 1:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

NOTE 2:

TO CALL THE EOF OR CONTROL ROOM USE A REGULAR TELEPHONE OR CELL PHONE REFER TO APPENDIX C FOR NUMBERS.

5.1 Arrival At Emergency Operations Facility (EOF).

5.1.1 Normal Work Day: arrive at EOF WITH emergency vehicle.

a. Report to the Offsite Radiological Assessment Director (ORAD) at the EOF. Contact the Unit No. 2 Control Room using the area radio, telephone or cell phone AND notify them of your availability.

5.1.2 Off-Hours: arrival WITHOUT emergency vehicle.

- a. EOF - Report to the ORAD. Vehicle keys are located in the EOF cabinet. Contact the Unit No. 2 Control Room using the area radio, telephone or cell phone AND notify them of your availability.
- b. AEOF - Report to the ORAD to find out IF any radiological problems are associated WITH the vehicles from the site. IF the ORAD has NOT arrived yet wait for him. Place a call to the Unit 2 Control Room using the area radio, telephone or cell phone AND notify them of your availability.

5.2 Emergency Radiological Surveys

- 5.2.1 Receive instructions via the radio or cell phone to PROCEED to an emergency sample site to perform surveys. Verify the instructions AND sample site location WITH the EOF communicator by repeating them over the radio channel/cell phone.

NOTE:

BETA FIELD READINGS ARE OBTAINED BY SUBTRACTING THE GAMMA FIELD READING (CLOSED WINDOW) FROM THE BETA/GAMMA FIELD READING (OPEN WINDOW) AND MULTIPLYING BY TWO.

- 5.2.2 WHEN proceeding to the specified sampling point, take beta/gamma (OW) AND gamma (CW) readings periodically by holding the ion chamber instrument outside the vehicle as you proceed along. Relate these readings to known areas such as intersections, shopping centers, etc. AND record on Form 10. DO NOT enter areas where the gamma field reading is GREATER THAN 1 R/hr WITHOUT permission of the ORAD. AFTER arriving at the sample point transmit these readings to the EOF. DO NOT remain in areas where the gamma field reading is GREATER THAN 100 mR/hr WITHOUT permission of the ORAD.
- 5.2.3 Perform beta AND gamma field surveys at the sample point. Perform Beta/Gamma surveys 3' and 3" above ground, away from other contaminated surfaces. A difference between Open Window and Closed Window readings is indicative of airborne activity or surface contamination. Record on FORM 10.
- 5.2.4 Take an air sample (300 liters OR 10 cubic feet unless otherwise directed by the ORAD OR EOF Communicator). Use plastic gloves to protect your hands. Take precautions to prevent spreading contamination especially to another filter OR to yourself. Avoid touching the samples.

- a. Use silver/zeolite filters WHEN the beta field survey indicates GREATER THAN 50 mRad/hr OR WHEN the indicated radioiodine activity on a charcoal filter is GREATER THAN 10^{-8} μ ci/cc.
- b. IF the designated sampling location corresponds to a fixed sampling location (asterisk Addendum 8.1), the filters shall be removed IMMEDIATELY UPON ARRIVING at the sample point AND counted. This is in addition to taking a sample as just described. New filters shall be placed in the sampling system at the time the used filters are removed.

NOTE:

UNLESS OTHERWISE DIRECTED, USE AN HP-210T (TUNGSTEN SHIELDED DETECTOR) AND COUNT THE SAMPLES WHERE THE BACKGROUND GAMMA READING IS LESS THAN 1MR/HR. WITH EITHER THE E-140N OR THE RM-14 BACKGROUND MUST BE LESS THAN 4000 CPM TO DETECT AN IODINE CONCENTRATION OF $1.0E-08$ MICRO CI/CC IN AN AIR SAMPLE OF 10 CUBIC FEET (300 LITERS).

- 5.2.5 Using the counting equipment count the particulate AND charcoal/zeolite filters according to procedure Reference 6.2. Approximately 25,000 CPM may be the equivalent of 25 Rem/hr. CDE thyroid. Record on Form 21.
- 5.2.6 Place the filter in a container, i.e., envelope OR plastic bag to prevent cross contamination of samples. Use a label, tag OR grease pencil to identify the filters (date, time, volume, location), AND save them for later isotopic determination.
- 5.2.7 Contact the EOF via the radio or cell phone AND report the following:
 - a. The sample point.
 - b. Beta/gamma (OW) AND gamma (CW) readings obtained while proceeding to the sample point.
 - c. Beta/gamma (OW) AND gamma (CW) readings obtained at the sample point.
 - d. Total filter AND background CPM, sample volume in FT^3 AND background CPM for EACH particulate AND EACH charcoal/silver zeolite filter.

- e. There are certain areas, especially in sectors 13, 14, 15, AND 16 where the mountainous terrain interferes WITH the reception from OR transmission to the EOF. Move the vehicle to another area OR use another vehicle to relay messages.

5.2.8 Request further instructions from the Communicator. DO NOT remain in high field areas.

5.3 Post Accident Environmental Sampling

5.3.1 The sampling AND the locations shall be specified by the ORAD.

5.3.2 Perform a radiation survey where the sampling is to be conducted.

5.3.3 Collect samples using the appropriate Nuclear Environmental Monitoring, Section 5 procedure.

5.3.4 Check the outside of the sample bag OR container for loose contamination.

5.4 Return to the EOF

5.4.1 UPON return to the EOF parking area, check the survey vehicle for contamination. Refer to Reference 6.3.

5.4.2 Turn in ALL completed FORMS to the ORAD.

5.4.3 Determine from the ORAD WHETHER the environmental samples (air, water, soil, etc.) are to be stored in the Environmental Building OR the EOF electrical equipment room overnight.

6.0 REFERENCES

6.1 IP-1001, "Mobilization of Onsite Emergency Organization"

6.2 IP-1020, "Airborne Radioiodine Determination"

6.3 IP-1009, "Radiological Check And Decontamination of Vehicles"

7.0 ATTACHMENTS

7.1 NONE

8.0 ADDENDUM

8.1 Off-Site Emergency Sampling Sites

ADDENDUM 8.1
Page 1 of 9

OFFSITE EMERGENCY SAMPLING SITES

All Routes Start With Route 287 West to Either Route 9A North or Tappan Zee Bridge to Route 87 North (NYS Thruway)

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
1-2	W-14 (G-4)	ROA HOOK RD.. & BEAR MOUNTAIN BRIDGE ROAD (SANITATION GARAGE) RD..	RTE. 9 NORTH TO ANNSVILLE CIRCLE RTS 6 & 202 WEST TO 1ST LEFT ROA HOOK ROAD TO GARAGE
1-7	W-17 (B-4)	ROUTE 9D IN FRONT OF RETREAT HOUSE	SEE SECTOR 1-2. WEST ON BEAR MT. BRIDGE RD.. RT ON RTE. 9D. NORTH ON TO ENTRANCE OF RETREAT HOUSE
1-10	P-5 (M-4)	ROUTE 9D @ DERHAM	RT. 9 NORTH TO RTE. 403 Rd.. TO RTE. 9D. RT ON RTE. 9D TO LOCATION PAST BRIDGE
2-2	W-14 (G-5)	OLD PEMART AVE. (TLD SITE)	RTE. 9 NORTH TO RTE'S 202& 6 (MAIN ST.) RT ON MAIN ST. TO RIVER. RT AT BOTTOM OF HILL ALONG R.R. TRACKS TO LOCATION
2-3	W-14 (G-6)	SPROUT BROOK RD. & HIGHLAND AVE.	RTE. 9 NORTH TO BEAR MTN. EXTEN. NORTH TO HIGHLAND AVE. (2ND EXIT) RT ON HIGHLAND AVE. TO SUNOCO STATION
2-6	W-17 (C-7)	CANOPUS HOLLOW RD. & OLD ALBANY POST RD.	RTE. 9 NORTH TO BEAR MTN. EXTEN. NORTH ON EXTEN. TO DIVISION ST. EXIT LT ON DIVISION ST. TO OREGON RD. NORTH ON OREGON RD. TO GALLOWES HILL RD. LT ON GALLOWES HILL RD. TO CANOPUS HOLLOW RD.

*FIXED SAMPLING LOCATIONS

ADDENDUM 8.1
Page 2 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
2-10	P-5 (P-8)	CANOPUS HOLLOW RD. & BELL HOLLOW RD.	SEE 2-6, PROCEED NORTH ON CANOPUS HOLLOW RD. TO INTERSECTION OF BELL HOLLOW RD.
3-1	W-14 (J-5)	LOUISA ST. OFF LOWER SOUTH ST. @ R.R. BRIDGE	RT. 9 NORTH TO WELCHER AVENUE EXIT. LT TO SOUTH ST. RT ON SOUTH TO LOUISA ST. LT TO R.R. BRIDGE
3-3	W-14 (G-7)	HILLCREST SCHOOL	RTE. 9 NORTH TO BEAR MOUNTAIN EXTEN. NORTH TO CARHART AVE. RT TO LEDA DRIVE. RT TO SCHOOL
3-6	W-17 (D-9)	OREGON RD. & PEEKSKILL HOLLOW RD.	RTE. 9 NORTH TO BEAR MOUNTAIN EXT EXTENSION NORTH ON OREGON RD. TO INTERSECTION OF OREGON RD. & PEEKSKILL HOLLOW RD.
3-10	P-2 (Q-11)	PEEKSKILL HOLLOW RD. & TINKER HILL RD.	SEE 3-6 CONTINUE PAST 3 1/2 MILES TO LOCATION AT INTERSECTION
4-1	W-14 (J-5)	LOWER SOUTH ST. AT MEARL CORP. ENTRANCE	SEE 3-1 GO PAST A&P SHOPPING CENTER TO ENTRANCE OF MEARL CORP. ON LOWER SOUTH ST.
4-3	W-14 (J-7)	MAPLE AVE. @ ENTRANCE TO CHAPEL HILL ESTATES	RTE. 9 NORTH TO WELCHER AVENUE EXIT. RT TO WASHINGTON ST. LT ON WASHINGTON ST. TO HUDSON AVE. RT ON HUDSON AVE. TO MAPLE AVE. RT ON MAPLE AVE. TO ENTRANCE TO DEVELOPMENT
4-6	W-17 (G-10)	LEXINGTON AVE. & TOWNSEND RD.	RT. 9 NORTH TO RTE. 6 EAST TO LEXINGTON AVE. RT ON LEXINGTON AVE. TO INTERSECTION

ADDENDUM 8.1
Page 3 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>SECTOR/ MILE</u>	<u>MAP NUMBER (COORDINATES)</u>	<u>LOCATION</u>	<u>DIRECTIONS</u>
4-10	W-18 (E-16)	SOMERSTON RD. & CAROL COURT	TACONIC PARKWAY NORTH TO ROUTE 6 EXIT. RT ON RTE. 6 TO CURRY ST. RT ON CURRY ST. TO WESKORA RD. LT ON WESKORA RD. TO SOMERSTON RD. LEFT ON SOMERSTON RD. TO 3.02 CAROL CT.
5-2	W-14 (K-5)	MCKINLEY SCHOOL WELCHER AVE.	RTE. 9 NORTH TO WELCHER AVENUE EXIT. RT RT ON WELCHER TO SCHOOL ON LEFT OPPOSITE JACKSON AVE.
5-4	W-14 (K-8)	MAPLE AVE. & FURNACE WOODS RD.	RTE. 9 NORTH TO MONTROSE EXIT. RTE. 9A NORTH TO WATCH HILL RD. RT ON WATCH HILL RD. TO FURNACE WOODS RD. TO MAPLE AVENUE INTERSECTION
5-7	W-14 (K-12)	HUNTERBROOK RD @ COAXIAL CROSSING #571	RTE. 9 NORTH TO RTE. 129. NORTH ON ROUTE 129 TO HUNTERBROOK RD. LT ON HUNTERBROOK RD. TO CABLE CROSSING
5-10	W-15 (K-16)	MOSEMAN RD. @ ST. PATRICK'S SCHOOL	TACONIC PKWAY NORTH TO UNDERHILL AVE. NORTH ON UNDERHILL AVE. TO HANOVER ST. ROUTE ON HANOVER ST. TO INTERSECTION OF MOSEMAN AVENUE
6-1	W-14 (K-5)	TENSOLITE CORP. RT. 9A BUCHANAN	RTE. 9 NORTH TO WELCHER AVENUE EXIT. LT TO RTE. 9A TO TENSOLITE CORP ENTRANCE
6-3	W-14 (L-8)	WATCH HILL RD. & MOUNTAINSIDE TRAIL	SEE 5-4 EAST FURNACE WOODS ROAD TO MOUNTAINSIDE TRAIL
6-7	W-14 (N-12)	RT. 129 @ HUNTER- BROOK BRIDGE	RTE. 9 NORTH TO ROUTE. 129 EXIT. NORTH ON RTE. 129 TO BRIDGE
6-10	W-12 (P-16)	RT. 100 & RT. 134	ROUTE 9 NORTH TO ROUTE 100 RT ON ROUTE 100. NORTH TO ROUTE 134.

ADDENDUM 8.1
Page 4 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
7-1	W-14 (L-5)	WESTCHESTER AVE. & ON 1ST ST.	RTE. 9 NORTH TO WELCHER AVE. EXIT. LT ON WELCHER TO RTE. 9A SOUTH. LT ON RTE. 9A TO 2ND TRAFFICLIGHT (TATE AVE.) RT ON TATE AVE. TO WESTCHESTER AVE. RT TO FIRST ST. INTERSECTION
7-4	W-14 (M-7)	WATCH HILL RD. & WESTMINSTER DR.	SEE 5-4 RT ON WATCH HILL RD. TO INTERSECTION OF WESTMINSTER DRIVE
7-6	W-11 (P-9)	CLEVELAND DR. & HUGHES ST.	RTE. 9 NORTH TO RTE. 129 EXIT. NORTH 129 TO OLD POST RD. RT TO CLEVELAND DR. LT TO HUGHES ST.
7-10	W-11 (T-13)	NORTH STATE RD. & RYDER AVE.	RTE. 9 NORTH TO NORTH STATE RD. RT TO RYDER AVENUE. INTERSECTION
8-1	W-14 (L-4)	WESTCHESTER AVE. BY SCHOOL EXIT RD.	SEE 7-1. CONTINUE PAST FIRST ST. TO SCHOOL EXIT RD.
8-3	W-14 (N-6)	CRUGERS R.R. STATION	RTE. 9 NORTH TO MONTROSE EXIT. LT TO CRUGERS STATION ROAD. LT TO R.R. STATION
8-7*	W-11 (R-7)	CROTON PT. BY PERMANENT AIR SAMPLER	RTE. 9 NORTH TO CROTON PT. AVENUE. LT TO CROTON TRAILER PT. PARK TO TRAILER SITE
8-10	W-9 (V-10)	LIBERTY ST. & HUDSON ST. OSSINING	RTE. 9 NORTH TO REVOLUTIONARY ROAD ROCKLEDGE AVENUE LT AT LIBERTY ST. TO HUDSON ST.

* FIXED SAMPLING LOCATIONS

ADDENDUM 8.1
Page 5 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
9-1	W-14 (L-4)	14TH ST. BETWEEN BROADWAY AND WEST-	SEE 8-1. CONTINUE PAST SCHOOL EXIT 14TH ST.. RT AT 14TH STREET. 1/2 WAY BETWEEN WESTCHESTER AVE. & BROADWAY
9-3	W-14 (M-4)	MONTROSE PT. ROAD (END)	RTE. 9 NORTH TO MONTROSE EXIT. LT TO KINGS FERRY RD. LT AT TRAFFIC LIGHT TO MONTROSE PT. RD. TRAFFIC LIGHT. BEAR LEFT AT LIGHT TO END OF ROAD
9-7	R-3 (J-13)	RT. 9W & SOUTH MOUNTAIN RD. CLARKS- TOWN (SHORT COVER RD)	TAPPAN ZEE BRIDGE TO RTE. 9 W NORTH. RTE 9W NORTH TO INTERSECTION OF So. MOUNTAIN RD. (SHORT COVE RD.)
9-10	R-5 (M-12)	KINGS HIGHWAY & OLD MILL RD.	TAPPAN ZEE BRIDGE TO NYS THRUWAY. NORTH TO RTE. 303 NORTH. LT TO NEW ROCKLAND RD. TO INTERSECTION OF CASPER HILL RD. & KINGS HIGHWAY. RT TO INTERSECTION OF KINGS HIGHWAY & OLD MILL RD.
10-1*	W-14 (L-3)	11TH ST. & HIGHLAND AVE. VERPLANCK	RTE. 9 NORTH TO WELCHER AVENUE EXIT. LT TO RTE. 9A SOUTH. LT TO BLEAKLEY AVE. RT TO BROADWAY. LT TO 11TH ST. RT TO INTERSECTION OF HIGHLAND AVE.
10-4	R-3 (F-12)	BEACH ROAD & GRASSY PT. ROAD	TAPPAN ZEE BRIDGE TO RTE. 9W NORTH TO WORTH TO RTE. 210. RT TO INTERSECTION OF BEACH RD. & GRASSY PT. RD.
10-7	R-3 (H-11)	LITTLE TOR ROAD & SOUTH MOUNTAIN RD.	TAPPAN ZEE BRIDGE TO RTE. 9W NORTH 9W NORTH. RTE. 9W NORTH TO RTE. 202. LT AT RTE. 202 TO CENTRAL HIGHWAY. LT AT CENTRAL HIGHWAY TO INTERSECTION OF So. MOUNTAIN RD. & CENTRAL HIGHWAY & LITTLE TOR ROAD.

ADDENDUM 8.1
Page 6 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
10-10	R-5 (L-10)	WEST CLARKSTOWN RD. @ PALISADES PARKWAY OVERPASS	TAPPAN ZEE BRIDGE TO PALISADES PARKWAY NORTH TO EXIT 11 (NEW HEMPSTEAD ROAD) RT AT WEST CLARKSTOWN RD. TO OVERPASS OF PARKWAY
11-1	W-14 (L-3)	WHITE BEACH @ 9TH ST. VERPLANCK	SEE SECTOR 10-1. TAKE BROADWAY TO 9TH ST. RT AT 9TH ST. TO RIVER. GO PAST GUARD HOUSE TO BEACH AREA.
11-3	R-3 (E-12)	GILMORE DR. & ADAMS DRIVE	TAPPAN ZEE BRIDGE TO ROUTE. RT 9W NORTH TO STONY POINT. LT AT ADAMS DR. TO GILMORE DR.
11-6	R-3 (F-10)	WILLOW GROVE RD. & KNAPP ROAD	TAPPAN ZEE BRIDGE TO PALISADES PARKWAY NORTH TO EXIT 14. RT ON WILLOW GROVE RD. TO INTERSECTION OF KNAPP RD.
11-10	R-3 (J-7)	HAVERSTRAW RD. & WILDER RD., RTE. 202	TAPPAN ZEE BRIDGE TO PALISADES PARKWAY NORTH TO EXIT 11 (NEW HEMPSTEAD RD.) LT TO GRADVIEW AVE. RT TO FORSHAY RD. WHICH GOES INTO WILDER RD. TO INTERSECTION OF RTE. 202
12-2	R-1 (D-12)	GAYS HILL Rd (SOUTH) & ROUTE 9W	TAPPAN ZEE BRIDGE TO ROUTE 9W NORTH. NORTH ON ROUTE 9W TO STONY PT. TO INTERSECTION OF ROUTE 9W AND GAYS HILL ROAD (SOUTH)
12-4	R-1 (E-11)	BULSONTOWN RD. & INTERSECTION 1ST LEFT PAST FRANCE RD.	TAPPAN ZEE TO PALISADES PARKWAY NORTH PARKWAY NORTH TO EXIT 15 (ROUTE 210). LT ON ROUTE 210 TO CEDAR POND RD. LT ON CEDAR POND RD. TO BULSONTOWN ROAD LT AT BULSONTOWN RD TO 1ST ROAD ON LEFT PAST FRANCK ROAD

ADDENDUM 8.1
Page 7 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
12-7	R-1 (E-9)	LAKE WELCH PARKWAY BY SEWAGE PLANT	TAPPAN ZEE BRIDGE TO PALISADES PARKWAY NORTH TO EXIT 16. LT ONTO LAKE WELCH PARKWAY TO SEWAGE PLANT (RD. CLOSED DURING WINTER MONTHS)
12-10	O (J-10)	LAKE WELCH PKWY & 7 LAKES PARKWAY	SEE 12-7, CONTINUE ON LAKE WELCH PARKWAY TO INTERSECTION OF SEVEN LAKES PARKWAY. (ROAD CLOSED DURING WINTER MONTHS)
13-2	R-1 (D-13)	GAYS HILL RD. NORTH & ROUTE 9W	SEE 12-2, PASS SOUTH END AND CONTINUE TO NORTH END OF GAYS HILL ROAD.
13-3	R-1 (D-12)	MOTT FARM RD @ ENTRANCE TO CAMP	TAPPAN ZEE BRIDGE TO ROUTE 9W NORTH. ROUTE 9W NORTH ADDISON BOYCE TO INTERSECTION OF ROUTE 9W & MOTT FARM RD. LT ON MOTT FARM RD. TO CAMP ADDISON BOYCE
13-9	O (J-10)	ARDEN VALLEY RD. & ARDEN ROAD	PALISADES PARKWAY NORTH TO SEVEN LAKES CIRCLE. LT ON SEVEN LAKES PARKWAY TO LAKE TIORATI CIRCLE. ROUTE AT ARDEN VALLEY ROAD TO INTERSECTION OF ARDEN ROAD
14-2	R-1 (C-13)	ROUTE 9W @ REUTER STOKES LOCATION #14	TAPPAN ZEE BRIDGE TO ROUTE 9W NORTH. ROUTE 9W NORTH TO STONY POINT TO LOCATION
14-6	O (I-10)	ROUTE 6, 1 MILE WEST OF PALISADES PKWY	TAPPAN ZEE BRIDGE NORTH TO PALISADES PARKWAY (7 LAKES CIRCLE) NORTH TO SEVEN LAKES CIRCLE AND RTE. 6. TAKE ROUTE 6 WEST 1 MILE.

ADDENDUM 8.1
Page 8 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
15-1	R-1 (C-13)	ROUTE 9W (NEAR ANCHOR MONUMENT)	ROUTE 9A NORTH TO RTE 9 TO TO 6 & 202 WEST TO BEAR MOUNTAIN BRIDGE. WEST ON BRIDGE TO ROUTE 9W SOUTH TO MONUMENT DIRECTLY ACROSS FROM INDIAN POINT
15-4	R-1 (A-12)	AT FRONT OF BEAR MOUNT INN	SEE 15-1. STOP AT BEAR MOUNTAIN INN 1/2 MILE SOUTH FROM BRIDGE (ALTER.) TAPPAN ZEE BRIDGE NORTH TO RTE. 9W NORTH TO BEAR MOUNTAIN INN
15-6	O (I-11)	MINE RD. & WEYNANTS POND ROAD	SEE 15-1 & 15-4. ROUTE 9W 9W NORTH TO INTERSECTION OF OLD ROUTE 9W. LT AT OLD RTE. 9W TO LIGHT AT MINE ROAD
15-10	O (H-10)	MINERAL SPRINGS ROAD & COUNTY ROUTE 34	SEE 14-10. CONTINUE ON SMITH CLOVE RD (CTY. RTE. 9) NORTH TO INTERSECTION OF CTY. ROUTE 34 & MINERAL SPRINGS RD.
16-1	R-1 (C-13)	AYERS RD JONES PT. OR (TLD SITE) REUTER	SEE 11-1 OR 15-4, ROUTE 9W SOUTH TO AYERS ROAD STOKES LOCATION #16 LT ON AYERS RD. TO TLD SITE BY REUTER STOKES LOCATION #16
16-4	R-1 (A-12)	BEAR MT. BRIDGE (WEST END)	SEE 15-1 & 15-4. STOP AT WEST END OF BRIDGE AT CIRCLE

ADDENDUM 8.1
Page 9 of 9

OFFSITE EMERGENCY SAMPLING SITES

<u>Sector/ Mile</u>	<u>Map Number (Coordinates)</u>	<u>Location</u>	<u>Directions</u>
16-6	O (H-111)	0.4 MILES WEST OF JUNCTION OF RTE'S 9W &	SEE 15-1 & 15-4. NORTH ON ON RTE. 9W TO INTERSECTION 9W & SECTION OF RTE. 218. LT ON RTE. 218 (0.4 MILES IN)
16-9	O (H-111)	ROUTE 9W & ROUTE 293	SEE 15-1 & 15-4. NORTH ON ROUTE 9W TO INTERSECTION OF ROUTE 293

KEY FOR COUNTY MAPS

W- WESTCHESTER COUNTY MAP
R- ROCKLAND COUNTY MAP
P- PUTNAM COUNTY MAP
O- ORANGE COUNTY MAP

OBTAINING METEOROLOGICAL DATA

Prepared by: Burne 4/8/99 Date Technical Reviewer: Benfleur 9/1/99 Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #2627 Donna Syner 8/19/99 Date Reviewer: _____ Date
Meeting No. Date
Approval: Tommy Furrer / Acting EP mgr 9/1/99 Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

OBTAINING METEOROLOGICAL DATA

1.0 PURPOSE

- 1.1 Obtain meteorological data in the Central Control Room (CCR), the Emergency Operating Facility (EOF) or the Alternate Emergency Operating Facility (AEOF).

2.0 DISCUSSION

- 2.1 Meteorological data (i.e. wind speed, wind direction AND Pasquill stability category) are normally available from the following sources:
- 2.1.1 Primary Meteorological (Met) Tower
 - 2.1.2 Backup Met (LOCAL/REMOTE) Towers
 - 2.1.3 Contractor Weather Service
 - 2.1.4 National Weather Service
 - 2.1.5 Local observation
- 2.2 Primary Met data is displayed on a Met Display Panel in both the EOF AND the CCR. In the CCR, the data is also available on a printer at the back of the Panel. Primary Met data is recorded by the MIDAS computer at the EOF AND by a data logger and chart recorder at the support shack for the Primary Tower. MET Data from MIDAS is available in reports prepared by the tasks NRCMET AND NRCSUM. MIDAS is accessible with the Graphics AND RISC Stations in the EOF. Both MIDAS AND the logger are accessible by telephone with a data terminal.
- 2.3 Backup Met data is not displayed in the CCR. Data is recorded in the EOF by the MIDAS, the data logger AND a chart recorder. Backup data recorded by the MIDAS is substituted in the NRCMET report when Primary data is not available. The chart recorder may be read in the EOF. There are two towers for Backup data, the primary backup tower and the standby backup tower. The backup tower data logger located in the EOF automatically switches to the standby backup tower if the primary backup tower is unavailable. The standby tower is on the roof of the EOF AND the primary backup is a 33 meter tower near the road to the City Water Tank. These Data Loggers are accessible by telephone with a data terminal, however, due to the limited access to these Data Loggers, use of the HP-9000 system is preferred.

2.4 Data is also available in reports prepared by contractors including reports to Con Edison specifications. Reports accessible by telephone with a data terminal include:

2.4.1 Meteorological data from National Weather Service (NWS) stations, within fifty miles of Indian Point.

2.4.2 Surface weather, upper air data AND forecasts for the Indian Point Emergency Planning Zone.

Forecast wind speed, wind direction, Pasquill stability category AND precipitation are available from MIDAS in reports prepared by tasks NRCFC AND NRCSUM. IF MIDAS is unavailable the contractor shall forward the data by facsimile to the EOF OR other location.

2.5 Data is accessible by telephone from the representatives of the National Weather Service AND the contractor weather service for MIDAS. These services are available 24 hours daily.

2.6 Using Addendum 8.5 the Pasquill Category can be determined by local weather observations.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Primary AND Backup Tower data is normally available in fifteen minute intervals for Eastern Standard Time (EST), 01:00 through 24:45 each day.

3.2 Wind speed is recorded in miles per hour (mph) AND meters per second (m/s); $\text{mph} = 2.237 \times \text{m/s}$; $\text{m/s} = .447 \times \text{mph}$.

3.3 Pasquill stability category is determined from the measured parameters listed in Addendum 8.4 and alternately from the observed parameters listed in Addendum 8.5.

3.4 The proprietary MIDAS "userid"s and "password"s, in this procedure are on file in the EOF.

4.0 EQUIPMENT AND MATERIAL

- 4.1 The available equipment, it's location AND the section in this procedure prescribing it's use are listed below.

<u>EQUIPMENT</u>	<u>AEOF</u>	<u>CCR</u>	<u>EOF</u>	<u>Section</u>
Data Terminal	X	X	X	(5.1)
Chart Recorder (B/U)			X	(5.2)
Graphics Station (MIDAS)			X	(5.3)
Met Display Panel (Pri)		X	X	(5.4)
Met Display Printer (Pri)		X		(5.5)
RISC Station (MIDAS)			X	(5.6)
Telephone (NWS)	X	X	X	(5.7)
Windows Terminal	X	X	X	(5.9)

- 4.2 The available sources of Meterological Data AND the section in this procedure prescribing it's use are listed below.

<u>SOURCE</u>	<u>Equipment</u>	<u>Section</u>
MIDAS	Data Terminal	(5.1.9)
HP-9000	Data Terminal	(5.1.10)
Primary Data Logger	Data Terminal	(5.1.11)
Backup Data Logger	Data Terminal	(5.1.12)
Contractor Reports	Data Terminal	(5.1.13)
MIDAS	Windows Terminal	(5.9.7)
HP-9000	Windows Terminal	(5.9.11)
Primary Data Logger	Windows Terminal	(5.9.15)
Backup Data Logger	Windows Terminal	(5.9.19)
Contractor Reports	Windows Terminal	(5.9.23)

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF BOOK NO. 2.

5.1 Data Terminal (AEOF, CCR & EOF)

- 5.1.1 Select the data source: (1) MIDAS, (2) HP-9000 (3) Primary Data Logger, (4) Backup Data Logger OR (5) Contractor.
- 5.1.2 Find the phone number for the source in Appendix C of Reference 6.1.
- 5.1.3 Toggle the "UPPER CASE" switch "dot" side up. Toggle the "ON LINE" switch "dot" side down. Toggle the "LOCAL COPY" switch "dot" side up.

- 5.1.4 Place terminal power switch in "ON" position (located at back right corner of the terminal).
- a. Ensure the green "PRINT" light is on, IF NOT depress the "PRINT" key.
- 5.1.5 Push the "CMD" key, THEN push the "D" key.
- 5.1.6 The system will ask for the dial number. Enter phone number from step 5.1.2, AND push the "RTN" key.
- 5.1.7 AFTER the system dials the location a ringing is heard AND the "LINE RDY" light will blink.
- 5.1.8 The connection is made WHEN a high pitch signal is heard AND the "LINE RDY" light remains "ON".
- 5.1.9 To obtain data from MIDAS perform the following:
- a. System will ask for login. Type in "contrl" AND push "RTN" key.
- b. System will ask for password. Type "unit2" AND push "RTN" key.
- c. The following display will appear:
- | | | |
|--------|------|----------------|
| Enter: | [em] | EMERGENCY MENU |
| | [dm] | DRILL MENU |
| | [ex] | EXIT |
- d. Enter "em" AND push "RTN" key.
- e. The following display will appear:
- | | | |
|--------|------|---------------|
| Enter: | [U2] | Con Ed Unit 2 |
| | [U3] | NYPA Unit 3 |
| | [EX] | Exit |
- f. Enter "u2" AND push "RTN" key.
- g. The following display will appear:
- | | | |
|------------------|--------|------------------------|
| WELCOME TO MIDAS | | |
| ENTER: | [XX] | FUNCTION OR TASK CODE |
| | [XXXX] | FUNCTION AND TASK CODE |
| | [FM] | FUNCTION MENU |
| | [EX] | EXIT |

- h. Enter "nm" AND push "RTN" key.
- i. The following display will appear:

SCHEDULING...MET...DATA...(NRCMET)...
ENTER: [JU] JULIAN DATE
[MO] MONTH/DAY...
- j. Enter "mo" AND push "RTN" KEY.
- k. The following display will appear:

ENTER: [YYMMDDHHMM YYMMDDHHMM] START...
[99] LAST...
[RETURN] ...PROMPT
- l. Enter 99 AND push "RTN" KEY
- m. The following display will appear:

NRC DATES...
ENTER: [RETURN]...CONTINUE, [EX]...EXIT
- n. Push "RTN" KEY
- o. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.1.
- p. Advance paper as desired by pressing "PAPER ADV" key. Detach printed section by tearing up against the lucite edge.
- q. To Exit press the "RTN" key, type "ZZ" AND press "RTN".

5.1.10 To obtain data from the HP-9000 perform the following:

- a. Complete steps 5.1.1 THROUGH 5.1.8 THEN continue.
- b. Push the "RTN" key until an asterisk "*" appears (approximately 3-4 times).
- c. The following display will appear:

New York Power Authority IP#3
[Software Release 8.0]
login:

- d. Enter ccr AND push "RTN" KEY
- e. The following display will appear:

New York Power Authority
Indian Point #3 Nuclear Station
Meteorological Data System
CCR Report...

Meteorological data...

...see Addendum 8.7...

- f. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.7.
- g. Advance paper as desired by pressing "PAPER ADV" key. Detach printed section by tearing up against the lucite edge.
- h. To Exit press "RTN".

5.1.11 To obtain data from Primary Met Tower Data Logger perform the following:

- a. Complete steps 5.1.1 THROUGH 5.1.8 THEN continue.
- b. Push the "RTN" key until an asterisk "*" appears (approximately 3-4 times).
- c. Enter "4b" AND push "RTN" KEY. (This selects the four most recent 15 minute records, "B")
- d. The following display will appear:

A1 L+23419. C0842
- e. Enter "4d" AND push "RTN" KEY. (This selects the four most recent 15 minute records, "D")
- f. The following prompt will appear:

01+0181...
...see Addendum 8.2...

See Addendum 8.2 for an example of the report.

- g. Press "PAPER ADV" to advance the report. Detach the report by tearing up against the lucite shield.

5.1.12 To obtain data from Backup Met Tower Data Logger perform the following:

- a. Complete steps 5.1.1 THROUGH 5.1.8 THEN continue.
- b. Push the "RTN" key until an asterisk appears (approximate 3-4 times).
- c. Enter "4b" AND push "RTN" KEY. (This selects the four most recent 15 minute records, "B")
- d. The following display will appear:

A1 L+10760. C0837
- e. Enter "4d" AND push "RTN" KEY. (This selects the four most recent 15 minute records, "D")
- f. The following display will appear:

01+0181...
...see Addendum 8.3 for an example of the report...
- g. Press "PAPER ADV" to advance the report. Detach the report by tearing up against the lucite shield.

5.1.13 Contractor, Accu-Weather Incorporated (AWI)

- a. Complete steps 5.1.1 THROUGH 5.1.8 THEN continue.
- b. After a 5 second delay a series of slashes(////...) will be displayed. Press the "RTN" key to continue.

NOTE:

IF "PLEASE SIGN ON--" IS NOT DISPLAYED, PRESS "RETURN" AND WAIT. IF UNSUCCESSFUL, REPEAT THEN RETURN TO STEP 5.1.12.a.

- c. The following display will appear:

PLEASE SIGN ON--
- d. Type "EDISON" THEN press the "RTN" key.
- e. When PASSWORD is displayed enter "INDIAN".

- f. The following display will appear:

WELCOME TO ACCU-WEATHER'S INTERACTIVE DATABASE...
...One moment please while we prepare your account for you.
?

- g. Type "POINT" THEN press the "RTN" key.

- h. The following display will appear:

\$ HRP HPN 7
MOST RECENT DATA: [time] est...

...see Addendum 8.6...

*** END OF REPORT ***
?

- i. To exit type "bye" THEN press the "RTN" key.

- j. Press "PAPER ADV" to advance the report. Detach the report by tearing up against the lucite shield.

5.2 Chart Recorder (EOF)

- 5.2.1 Check the chart to assure wind speed AND wind direction data are being recorded. The green trace tracks wind speed and the yellow trace tracks wind direction. The wind speed and wind direction data are also displayed in the upper right corner of the display. This is a text display which changes according to the scan rate (one sample per second) and the meteorological conditions. The time is displayed in the left column of the trace and is displayed in Eastern Standard time.

- 5.2.2 IF the wind speed and wind direction are NOT recorded, attempt to access the primary or secondary data logger following Section 5.1.10 or 5.1.11.

- 5.2.3 To convert mph to meters per second $m/s = mph \times .447$.

5.3 Graphics Station (EOF)

- 5.3.1 Check the Graphics Station Display and Keyboard:

- a. At the lower right of the Display, the red power switch "I" is down.
b. The green light is on.

- c. The green "TEK" key light on the keyboard is on.
- d. Press the "Return" key to de-activate the screen saver.
- e. The prompt "IBM AIX...1990.login" is displayed on the screen.

5.3.2 Check that the Printer is ready:

- a. The power switch "I" is depressed.
- b. The "POWER" light is on.
- c. The "READY" light is on.
- d. "Make Print?, Print 1" appears on the personal control unit.

5.3.3 Login to MIDAS at the Graphics Station display monitor by typing "eof" (use lower case) at the login prompt AND press the "Return" key.

5.3.4 At the password prompt type "color" (use lower case) AND press the "Return" key.

NOTE:

THE SCREEN SAVER IS ACTIVATED AFTER 30 SECONDS. MOVE THE MOUSE TO RESTORE THE SCREEN.

5.3.5 A series of screens are displayed. The first with the title "MIDAS". Subsequent screens are arrays of thirty (30) boxes. Each box represents one choice BUT there may NOT be a choice in every box. Use the mouse to choose. Move the crosshairs to a box AND press any button on the mouse. To change, move crosshairs to another box AND press the mouse button again. To enter your choice, choose "CONFIRM". To get a previous screen, choose "RESET". To start over choose "EXIT".

5.3.6 AT the RUN SELECTION MENU use the mouse to move the cross hair to the EMERGENCY OR DRILL selection AND click once to highlight the selection. Move the cross hair to CONFIRM AND click once. This will display the UNIT SELECTION MENU.

5.3.7 AT the UNIT SELECTION MENU move the cross hair to CON ED UNIT2 AND click once to highlight the selection. Move the cross hair to CONFIRM AND click once. This will display the FUNCTION SELECTION MENU.

5.3.8 AT the FUNCTION SELECTION MENU move the cross hair to **ACCIDENT REPORTS FOR NRC (NR)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.

5.3.9 To print the Met data move the cross hair on the **ACCIDENT REPORTS FOR NRC MENU** to **PRINT MET DATA (NRCMET)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.

a. The following prompt will be displayed:

ENTER: [JU] JULIAN DATE
[MO] MONTH/DAY
[RETURN] EXIT

b. Type "mo" (use lower case) AND press "Return".

c. The following prompt will be displayed:

ENTER: [YYMMDDHHMM YYMMDDHHMM] START AND END DATES
[99] LAST 6 HRS
[88] FUTURE (NEXT 6 HRS FORECAST)
[77] LAST 3 HRS PLUS FUTURE 3 HRS.
[RETURN] GO BACK TO PREVIOUS PROMPT

d. Type "99" AND press "Return".

e. Press "Return" to continue.

f. The following will be displayed:

DISPLAY: SITE: ...
...see Addendum 8.1...
ENTER: [RETURN] CONTINUE

g. Press the print button on the personal control unit to print the data displayed on the screen

h. Press "Return" to continue.

SCREEN: ACCIDENT REPORTS FOR NRC (NR)

- 5.3.10 To print the met forecast move the cross hair on the ACCIDENT REPORTS FOR NRC MENU to **PRINT FORCAST MET DATA (NRCMET)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.

a. The following will be displayed:

DISPLAY: IBM AIX...
SCHEDULING...FORECAST...DATA...(NRCFC)...
SITE: ...
...see Addendum 8.1...
ENTER: [RETURN] CONTINUE

b. Press the print button on the personal control unit to print the data displayed on the screen

c. Press "Return" to continue.

- 5.3.11 Enter "RESET" from the "ACCIDENT REPORTS FOR NRC" (NR) screen AND "EXIT" from the "FUNCTION SELECTION SCREEN" to return to the initial display.

5.4 Met Display Panel (CCR & EOF)

- 5.4.1 Read the data acquisition time, wind speed (m/s), wind direction AND Pasquill category at 10, 60 or 122 meters.

- 5.4.2 Use ground data at 10 meters for dose assessment calculations and NYS Radiological Emergency Data Form information.

5.5 Met Display Printer (CCR)

- 5.5.1 Read the printout. It is similar to that shown in Addendum 8.1 WITHOUT the PCP column. Use the data listed in columns HHMM, WDL, WSL AND S for ground level releases.

- 5.5.2 Select a time on the printout. From the same row, in the following order of preference, select the value of "S", "DTIL" OR "STL". Find the selected value OR the equivalent range in Table 1 of Addendum 8.4. Determine the Pasquill Category letter in the same row at the column to the left.

5.6 RISC Station

5.6.1 Check the IBM Station Display and keyboard:

- a. At the lower right of the Display, the black power switch handle is in the "I" position.
- b. Press the "Return" key to de-activate the screen saver.
- c. The prompt "IBM AIX...1990. Console login" is displayed on the screen.

5.6.2 Check that the Printer is ready:

- a. At the back right sidepanel, the power switch "I" is depressed.
- b. The "POWER" light is on.
- c. The "READY" light is on.

5.6.3 Log on to RISC Station as follows:

- a. System will ask for login. Type in "contrl" AND push "RETURN" key.
- b. System will ask for password. Type "unit2" AND push "RETURN" key.
- c. The following display will appear:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

- d. Enter "em" AND push "RETURN" key.
- e. The following display will appear:

Enter:	[U2] Con Ed Unit 2
	[U3] NYPA Unit 3
	[EX] Exit

- f. Enter "u2" AND push "RETURN" key.

- g. The following display will appear:

```
WELCOME TO MIDAS
ENTER:      [XX]      FUNCTION OR TASK CODE
           [XXXX]     FUNCTION AND TASK CODE
           [FM]       FUNCTION MENU
           [EX]       EXIT
```

- 5.6.4 To obtain Met Data perform the following:

- a. Enter "nm" AND push "RETURN" key.

- b. The following display will appear:

```
SCHEDULING...MET...DATA...(NRCMET)...
      ENTER: [JU]  JULIAN DATE
             [MO]  MONTH/DAY...
```

- c. Enter "mo" AND push "RETURN" KEY.

- d. The following display will appear:

```
ENTER: [YYMMDDHHMM YYMMDDHHMM] START...
             [99]      LAST...
             [RETURN]  ...PROMPT
```

- e. Enter 99 AND push "RETURN" KEY

- f. The following display will appear:

```
NRC DATES...see Addendum 8.1...
      ENTER: [RETURN]...CONTINUE, [EX]...EXIT
```

- g. Push "RETURN" KEY

- 5.6.5 To obtain forecast data perform the following:

- a. Enter "fp" AND push "RETURN" key.

- b. The following display will appear:

```
SCHEDULING...FORCAST...DATA...(NRCFC)
      ..see Addendum 8.1...
      ENTER: [RETURN]...CONTINUE
```

- c. Push "RETURN" KEY

- 5.6.6 To Exit type "ZZ" AND press "RTN"
- 5.7 Telephone with National Weather Service (NWS)
- 5.7.1 Select a phone number for the NWS from Appendix C of Reference 6.1.
- 5.7.2 State your name AND that you are calling from Con Edison's Indian Point Nuclear Power Station.
- 5.7.3 Ask for the current wind speed, wind direction AND cloud cover at White Plains, Stewart Field AND La Guardia.
- 5.7.4 Ask for the forecast for Westchester County.
- 5.8 Other Data Sources
- 5.8.1 Estimate Pasquill category from observed cloud cover, wind speed AND time of day using Addendum 8.5. Wind speed at NO MORE THAN 10 meters off the ground, from any source in this procedure, may be used.
- 5.8.2 Read wind speed, wind direction AND Pasquill Category from data displayed on the display panel AND chart recorders in the support shack for the primary tower.
- 5.8.3 Internet Weather Web Sites:
- a. National Weather Service

<http://tgsv7.nws.noaa.gov/weather/current/KHPN.html>
<http://tgsv7.nws.noaa.gov/weather/current/KLGA.html>
<http://tgsv7.nws.noaa.gov/weather/current/KJFK.html>
 - b. The Weather Channel

<http://www.weather.com/weather/us/zip/10511.html>
<http://www.weather.com/weather/us/zip/10566.html>
<http://www.weather.com/weather/us/zip/10596.html>
 - c. USA Today Weather

<http://www.usatoday.com/weather/basemaps/nw725037.htm>
<http://www.usatoday.com/weather/basemaps/nw725030.htm>
<http://www.usatoday.com/weather/basemaps/nw725033.htm>

5.9 Windows Terminal

- 5.9.1 Computer terminal must have a modem properly connected.
- 5.9.2 Click on the Start Button.
- 5.9.3 From the Programs menu select the Accessories menu and click on the Hyper Terminal icon.
- 5.9.4 IF Hyperterminal has icons set up for access to MIDAS, HP-9000, PRIMARY TOWER DATALOGGER, BACKUP TOWER DATALOGGER, AND ACCU-WEATHER, THEN go to step 5.9.6.
- 5.9.5 To create a hyper terminal perform the following:

- a. Double click on the Hypertm.exe icon.



- b. Type in terminal name (i.e. MIDAS, HP-9000, Primary Datalogger, Backup Datalogger, Accu-Weather).
- c. Click on OK
- d. Type in the phone number listed in EPD Book 2. Be sure to include 9 to get an outside phone line if necessary and 1 before the 800 number. Click on "OK".
- e. Repeat steps 5.9.5.a-d as necessary until all desired locations have been created.

5.9.6 Select hyperterminal connection and continue as follows:

- a. To access MET data from MIDAS go to Step 5.9.7.
- b. To access MET data from HP-9000 go to Step 5.9.11.
- c. To access MET data from the Primary Datalogger go to Step 5.9.15.
- d. To access MET data from the Backup Datalogger go to Step 5.9.19.
- e. To access MET data from Accu-Weather go to Step 5.9.23.

5.9.7 Double click on the MIDAS hyper terminal icon.

- 5.9.8 Dial MIDAS by clicking on "DIAL".



5.9.9 AFTER the system dials MIDAS, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

5.9.10 The system will ask the following questions:

a. System will ask for login. Type in "contrl" AND push "ENTER" key. Use lower case letters.

b. System will ask for password. Type "unit2" AND push "ENTER" key. Use lower case letters.

c. The following prompt will appear on the screen:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

d. Enter "em" AND push "ENTER" key.

e. The following prompt will appear on the screen:

Enter:	[U2]	Con Ed Unit 2
	[U3]	NYPA Unit 3
	[EX]	Exit

f. Enter "u2" AND push "ENTER" key.

g. The following prompt will appear on the screen:

WELCOME TO MIDAS		
ENTER:	[XX]	FUNCTION OR TASK CODE
	[XXXX]	FUNCTION AND TASK CODE
	[FM]	FUNCTION MENU
	[EX]	EXIT

h. Enter "nm" AND push "ENTER" key.

i. The following prompt will appear on the screen:

ENTER:	[JU]	JULIAN DATE
	[MO]	MONTH/DAY
	[RETURN]	EXIT

j. Enter "mo" AND push "ENTER" KEY.

- k. The following prompt will appear on the screen:

```
[YYMMDDHHMM YYMMDDHHMM] START AND END DATES
                        [99]          LAST 6 HRS
                        [88]          FUTURE (NEXT 6 HRS FORECAST)
                        [77]          LAST 3 HRS PLUS FUTURE 3 HRS
                        [RETURN]      GO BACK TO PREVIOUS PROMPT
```

- l. Enter "99" AND push "ENTER" key.

- m. The following prompt will appear on the screen:

```
NRC DATES ARE 99 127 315 TO 99 127 9 0
MET DATA IS CURRENT
CURRENT DATE TIME = .....9901270917
LAST DATA COLLECTED = .....9901270900
```

- n. Press the "RETURN" key to continue.

- o. The following prompt will appear on the screen:

```
SITE: INDIAN POINT      UNIT: CON ED UNIT2...
CONSOLIDATED EDISON CO...
INDIAN POINT SITE / 122 METER OR BACKUP TOWER...
```

ENTER: [RETURN] CONTINUE, [SO] START OVER, [EX] TO EXIT

- p. Press the "RETURN" key to continue.

- q. The following prompt will appear on the screen:

```
SITE: INDIAN POINT      UNIT: CON ED UNIT2...

YYJJJHHMM WDU WDI WDL WSU WSI WSL...
...see Addendum 8.1...
ENTER: [RETURN] CONTINUE
```

- r. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.1.

- s. To obtain a printout of data perform the following:

- 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen

- 2) Use the scroll bar on the right of the screen to display the data on the screen.
 - 3) Use click and drag technique with your mouse to highlight the data.
 - 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.
- t. To Exit press enter "ZZ" AND push "ENTER" key.
 - u. To disconnect click on the disconnect button on the tool bar at the top of the screen.
 - v. To reconnect click on the connect button on the tool bar at the top of the screen.

5.9.11 To obtain data from the HP-9000 double click on the HP-9000 hyper terminal icon.



5.9.12 Dial the HP-9000 by clicking on "DIAL".

5.9.13 AFTER the system dials the HP-9000, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

5.9.14 To obtain data from the HP-9000 perform the following:

- a. Push the "RETURN" key (approximately 3-4 times) until the following display appears:

New York Power Authority IP#3
[Software Release 8.0]
login:

- b. Enter ccr AND push "RETURN" KEY

- c. The following display will appear:

New York Power Authority
Indian Point #3 Nuclear Station
Meteorological Data System
CCR Report...

Meteorological data...

...see Addendum 8.7...

- d. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.7.
- e. To obtain a printout of data perform the following:
- 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen
 - 2) Use the scroll bar on the right of the screen to display the data on the screen.
 - 3) Use click and drag technique with your mouse to highlight the data.
 - 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.

- 5.9.15 To obtain data from the Primary Met Tower Data Logger double click on the Primary Datalogger hyper terminal icon.



MET TOWER (PRIMARY).ht

- 5.9.16 Dial the Primary Datalogger by clicking on "DIAL".

- 5.9.17 AFTER the system dials the Primary Datalogger, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

- 5.9.18 Perform the following:

- a. Push the "RETURN" key until an asterisk "*" appears (approximately 3-4 times).

- b. Enter "4b" AND push "RETURN" KEY. (This selects the four most recent 15 minute records,"B")
- c. The following display will appear:

A1 L+23419. C0842...
- d. Enter "4d" AND push "RETURN" KEY. (This selects the four most recent 15 minute records,"D")
- e. The following prompt will appear:

01+0181...
...see Addendum 8.2...

See Addendum 8.2 for an example of the report.
- f. To obtain a printout of data perform the following:
 - 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen
 - 2) Use the scroll bar on the right of the screen to display the data on the screen.
 - 3) Use click and drag technique with your mouse to highlight the data.
 - 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.
- g. To Exit press type "bye" AND push "ENTER" key.
- h. To disconnect click on the disconnect button on the tool bar at the top of the screen.

5.9.19 To obtain data from the Backup Met Tower Data Logger double click on the Backup Datalogger hyper terminal icon.



MET TOWER (BACKUP).htm

5.9.20 Dial the Backup Datalogger by clicking on "DIAL".

5.9.21 AFTER the system dials the Backup Datalogger, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

5.9.22 Perform the following:

a. Push the "RETURN" key until an asterisk "*" appears (approximately 3-4 times).

b. Enter "4b" AND push "RETURN" KEY. (This selects the four most recent 15 minute records,"B")

c. The following display will appear:

A1 L+23419. C0842...

d. Enter "4d" AND push "RETURN" KEY. (This selects the four most recent 15 minute records,"D")

e. The following prompt will appear:

01+0181...

...see Addendum 8.3...

See Addendum 8.2 for an example of the report.

f. To obtain a printout of data perform the following:

1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen

2) Use the scroll bar on the right of the screen to display the data on the screen.

3) Use click and drag technique with your mouse to highlight the data.

4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.

g. To Exit press type "bye" AND push "ENTER" key.

h. To disconnect click on the disconnect button on the tool bar at the top of the screen.

- 5.9.23 To obtain data from Accu-Weather double click on the Accu-Weather hyper terminal icon.



- 5.9.24 Dial Accu-Weather by clicking on "DIAL".

- 5.9.25 AFTER the system dials Accu-Weather, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

- a. After a 5 second delay a series of slashes(////...) will be displayed. Press the "RETURN" key to continue.

NOTE:

IF "PLEASE SIGN ON--" IS NOT DISPLAYED, PRESS "RETURN" AND WAIT. IF UNSUCCESSFUL, REPEAT THEN RETURN TO STEP 5.1.12.a.

- b. The following display will appear:

PLEASE SIGN ON--

- c. Type "EDISON" THEN press the "RTN" key.

- d. When PASSWORD is displayed enter "INDIAN".

- e. The following display will appear:

WELCOME TO ACCU-WEATHER'S INTERACTIVE DATABASE...
...One moment please while we prepare your account for you.
?

- f. Type "POINT" THEN press the "RTN" key.

- g. The following display will appear:

\$ HRP HPN 7
MOST RECENT DATA: [time] est...

...see Addendum 8.6...

*** END OF REPORT ***
?

- h. To obtain a printout of data perform the following:
 - 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen
 - 2) Use the scroll bar on the right of the screen to display the data on the screen.
 - 3) Use click and drag technique with your mouse to highlight the data.
 - 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.
- i. To Exit press type "bye" AND push "ENTER" key.
- j. To exit type "bye" THEN press the "RTN" key.
- k. To disconnect click on the disconnect button on the tool bar at the top of the screen.

6.0 REFERENCES

- 6.1 Emergency Procedures Document, Indian Point Unit Nos. 1 and 2, Book 2.

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

- 8.1 MIDAS
- 8.2 Primary Met Tower Data Logger
- 8.3 Backup Met Tower Data Logger
- 8.4 Pasquill Category From Measured Data
- 8.5 Pasquill Category From Observed Data
- 8.6 Contractor Report
- 8.7 IP-#3HP-9000 Met Data

ADDENDUM 8.1

Page 1 of 2

MIDAS

MEASURED METEOROLOGICAL DATA
(NRCMET)

NOTE:

ALL "...9s" IN A DATA FIELD INDICATES MISSING DATA.

SITE: INDIAN POINT UNIT: CON ED UNIT2 01/27/99 09:19

*** CONSOLIDATED EDISON CO OF NY NEW YORK POWER AUTHORITY *
INDIAN POINT SITE / 122 METER OR BACKUP TOWER

LAT-CON LON-CON EL-TWR (FT)

41.25999 73.95001 117.

WIND HTS-U,I,L DT1-U DT1-L DT2-U DT2-I DT3-I DT3-L TMP DP PCP
122.0 60.0 10.0 122.0 10.0 122.0 60.0 60.0 10.0 10.0 10.0 1

NOTES: (1) LATITUDE AND LONGITUDE OF ALL RELEASE POINTS AT SUPERHTR STACK.

(2) DATA FORMAT AND UNITS PER NUREG 0654, APP 2, 1/80.

(3) LATEST CALIBRATION 10/22/98

WD(DEG), WS(M/S), ST(DEG), DT(C/100M), T_L(C), PCP(MM), S(1-7/A-G)

ENTER: [RETURN] CONTINUE, [SO] START OVER, [EX] TO EXIT

SITE: INDIAN POINT UNIT: CON ED UNIT2 01/27/99 09:25

YYJJJHHMM WDU WDI WDL WSU WSI WSL STU STI STL DTUL DTUI DTIL TAL TDL PCP

990270315	166.	146.	187.	1.3	1.7	1.0	29	29	63	.8	-4	2.2	-1.1	-4.9	.06
990270330	170.	142.	4.	1.0	1.3	1.2	63	43	47	1.4	1.3	1.6	-1.2	-4.7	.06
990270345	152.	139.	356.	1.8	1.7	.8	14	18	57	.9	.7	1.2	-1.1	-4.9	.05
990270400	187.	222.	347.	1.7	1.4	1.2	10	55	29	1.5	.9	2.2	-1.7	-5.1	.06
990270415	175.	126.	354.	1.2	.8	1.2	17	96	21	1.6	.9	2.6	-1.9	-5.5	.06
990270430	197.	269.	3.	1.2	.7	1.2	19	65	13	1.2	.5	2.1	-1.6	-5.4	.06
990270445	173.	244.	6.	1.3	.9	.8	10	28	26	1.3	.1	2.8	-1.8	-5.4	.06
990270500	174.	285.	353.	.9	1.0	1.1	14	42	15	1.5	.2	3.2	-1.9	-5.4	.06
990270515	263.	346.	18.	.8	1.1	1.3	47	16	34	2.0	1.1	3.1	-1.8	-5.5	.06
990270530	319.	348.	18.	1.3	1.6	.8	20	13	60	2.2	1.5	3.1	-2.2	-5.7	.06
990270545	312.	23.	45.	1.8	1.7	.8	19	14	37	1.9	2.1	1.8	-2.2	-5.9	.06
990270600	55.	38.	25.	1.5	1.8	1.1	52	12	47	.9	.2	1.8	-2.1	-5.9	.06
990270615	98.	17.	360.	.8	1.2	.9	54	17	86	1.5	1.2	1.9	-2.3	-6.1	.06
990270630	260.	12.	217.	.9	1.1	.5	23	31	54	1.9	2.5	1.2	-2.7	-6.1	.05
990270645	249.	19.	352.	1.7	.8	.8	17	47	35	1.3	1.5	1.1	-2.5	-5.8	.05
990270700	263.	275.	29.	2.4	.5	1.0	18	20	36	1.7	1.3	2.1	-2.5	-5.9	.06

ENTER: [RETURN] CONTINUE, [SO] START OVER, [EX] TO EXIT

LEGEND:

WDL = WIND DIRECTION IN DEGREES @ 10 METER HEIGHT
WSL = WIND SPEED IN M/S @ 10 METER HEIGHT

ADDENDUM 8.1

Page 2 of 2

MIDAS
FORECAST METEOROLOGICAL DATA
(NRCFC)

SITE: INDIAN POINT UNIT: CON ED UNIT2 02/04/99 09:11

METEOROLOGICAL FORECAST DATA

YYDDHHMM (UNITS)	SPEED (m/sec)	CD	DIRECTION (DEG)	CD	RAIN (INCHES)	CD	CLASS (PASQUILL)
99 3510 0	5.5	0	170.	0	.00	0	D
99 3511 0	6.0	0	190.	0	.00	0	D
99 3512 0	6.5	0	200.	0	.00	0	D
99 3513 0	7.0	0	200.	0	.01	0	D
99 3514 0	7.5	0	220.	0	.01	0	D
99 3515 0	8.0	0	240.	0	.00	0	D
99 3516 0	8.0	0	270.	0	.01	0	D
99 3517 0	8.0	0	300.	0	.02	0	D
99 3518 0	8.5	0	310.	0	.01	0	D
99 3519 0	8.5	0	310.	0	.00	0	D
99 3520 0	9.0	0	310.	0	.00	0	D
99 3521 0	9.0	0	320.	0	.00	0	D

ENTER: [RETURN] CONTINUE

ADDENDUM 8.2

page 1 of 1

PRIMARY MET TOWER DATA LOGGER

NOTE:

ALL "...9s" IN A DATA FIELD INDICATES MISSING DATA.

*4B

A1 L+23419. C0842

*4D

01+0181.	02+1999.	03+25.00	04+1245.	05+308.4	06+12.19	07+306.4	08+13.52
09+298.7	10+31.72	11+16.04	12+13.73	13+6.292	14-2.458	15-1.274	16-1.184
17+37.22	18+23.95	19+0.000	20+4.000	21+4.000			
01+0181.	02+1999.	03+25.00	04+1300.	05+320.9	06+12.32	07+322.7	08+11.65
09+325.6	10+24.55	11+14.86	12+12.94	13+6.185	14-2.230	15-1.121	16-1.110
17+36.06	18+24.87	19+0.000	20+4.000	21+4.000			
01+0181.	02+1999.	03+25.00	04+1315.	05+325.2	06+16.45	07+320.6	08+18.55
09+323.3	10+33.05	11+10.63	12+09.32	13+5.332	14-2.267	15-1.175	16-1.092
17+35.61	18+25.91	19+0.000	20+4.000	21+4.000			
01+0181.	02+1999.	03+25.00	04+1330.	05+333.6	06+18.35	07+336.2	08+21.57
09+337.9	10+31.32	11+08.28	12+6.856	13+3.843	14-2.123	15-0.922	16-1.201
17+35.03	18+26.83	19+0.000	20+4.000	21+4.000			

A1 L+23503. C6616

LEGEND:

01	IDENTIFICATION NUMBER (0181)
02	YEAR
03	JULIAN DATE
04	TIME (EST)
05	AVERAGE WIND DIRECTION 122M (Degrees)
06	STANDARD DEVIATION (Sigma Theta) OF WIND DIRECTION 122M (Degrees)
07	AVERAGE WIND DIRECTION 60M (Degrees)
08	STANDARD DEVIATION (Sigma Theta) OF WIND DIRECTION 60M (Degrees)
09	AVERAGE WIND DIRECTION 10M (Degrees)
10	STANDARD DEVIATION (Sigma Theta) OF WIND DIRECTION 10M (Degrees)
11	AVERAGE WIND SPEED 122M (MPH)
12	AVERAGE WIND SPEED 60M (MPH)
13	AVERAGE WIND SPEED 10M (MPH)
14	AVERAGE DELTA TEMPERATURE 122-10M (Degrees F)
15	AVERAGE DELTA TEMPERATURE 122-60M (Degrees F)
16	AVERAGE DELTA TEMPERATURE 60-10M (Degrees F)
17	AVERAGE TEMPERATURE 10M (Degrees F)
18	AVERAGE DEW POINT 10M (Degrees F)
19	PRECIPITATION (Inches)
20	PASQUILL CATEGORY (GROUND; 1-7 = A-G)
21	PASQUILL CATEGORY (ELEVATED; 1-7 = A-G)

ADDENDUM 8.3

Page 1 of 1

BACKUP MET TOWER DATA LOGGER

NOTE:

PASQUILL CATEGORY IS BASED ON THE STANDARD DEVIATION (SIGMA THETA)
FOR THE HORIZONTAL WIND DIRECTION.

*

*4B

A1 L+10760.0 C0837

*4D

01+0001. 02+1999. 03+35.00 04+0845. 05+117.5 06+17.15 07+2.229 08+2.000
09+0.000

01+0001. 02+1999. 03+35.00 04+0900. 05+128.2 06+57.61 07+1.860 08+1.000
09+4.000

01+0001. 02+1999. 03+35.00 04+0915. 05+27.53 06+54.73 07+0.416 08+1.000
09+0.000

01+0001. 02+1999. 03+35.00 04+0930. 05+120.3 06+18.53 07+1.295 08+2.000
09+0.000

A1 L+6846.0 C0956

*

LEGEND:

01	IDENTIFICATION NUMBER (0001)
02	YEAR
03	JULIAN DATE
04	TIME (EST)
05	AVERAGE WIND DIRECTION 10 (Degrees)
06	STANDARD DEVIATION (Sigma Theta) OF WIND DIRECTION 10 (Degrees)
07	AVERAGE WIND SPEED 10M (Meters/Second)
08	PASQUILL CATEGORY (GROUND; 1-7 = A-G)
09	CALM WIND SPEED FLAG 10M (0.000 = OK/ 4.000 = CALM)

ADDENDUM 8.4
page 1 of 2

PASQUILL CATEGORY FROM MEASURED DATA

Table 1

Pasquill Category vs. MIDAS Report (NRCMET) "Temperature Change w/height (DT)" and "Sigma Theta (ST)" is illustrated in Addendum 8.1.

PASQUILL CATEGORY (S) ltr./no.	TEMPERATURE CHANGE W/HEIGHT (DT__) °C/100m	SIGMA THETA (ST_) degrees
A (1)	<-1.9	>22.5
B (2)	-1.9 to <-1.7	17.5 to <22.5
C (3)	-1.7 to <-1.5	12.5 to <17.5
D (4)	-1.5 to <-0.5	7.5 to <12.5
E (5)	-0.5 to <+1.5	3.8 to < 7.5
F (6)	+1.5 to <+4.0	2.1 to < 3.8
G (7)	>+4.0	0.0 to < 2.1

ADDENDUM 8.4
page 2 of 2

PASQUILL CATEGORY FROM MEASURED DATA

Table 2

Pasquill Category vs. Primary or Backup Met Tower Logger "Delta-Ts" and Sigma Theta" illustrated in Addenda 8.2 and 8.3 respectively.

PASQUILL CATEGORY (CH 20 & 21) ltr./no.	60-10 M DELTA-T (CH 16) °F	122-10 M DELTA-T (CH 14) °F	SIGMA THETA (CH 06, 08 & 10) degrees
A (1)	<-1.74	<-3.82	>22.5
B (2)	-1.74 to <-1.56	-3.82 to <-3.42	17.5 to <22.5
C (3)	-1.56 to <-1.37	-3.42 to <-3.02	12.5 to <17.5
D (4)	-1.37 to <-0.46	-3.02 to <-1.01	7.5 to <12.5
E (5)	-0.46 to <+1.37	-1.01 to <+3.02	3.8 to < 7.5
F (6)	+1.37 to <+3.66	+3.02 to <+8.05	2.1 to < 3.8
G (7)	≥+3.66	≥+8.05	0.0 to < 2.1

ADDENDUM 8.5

Page 1 of 1

PASQUILL CATEGORY FROM OBSERVED DATA

NOTE:

USE THIS ADDENDUM IF THE MEASURED DATA REQUIRED TO USE ADDENDUM 8.4 IS UNAVAILABLE. IF IN DOUBT ABOUT THE CATEGORY, SELECT ONE WITH GREATER STABILITY.

Pasquill categories represent a range of stability between unstable (Category A) AND stable (Category G) extremes. Letters A through G are used to distinguish the categories:

PASQUILL CATEGORY

A
B
C
D
E
F
G

STABILITY

Extremely unstable
Moderately unstable
Slightly unstable
Neutral
Slightly stable
Moderately stable
Extremely stable

Pasquill category is derived preferably from measured vertical temperature differences OR the standard deviation (sigma theta) for horizontal wind direction. However, in the absence of specific measurements, stability categories can be estimated from observations of cloud cover, wind speed and time of day, using the following table:

Surface Wind Speed (m/s)	<u>DAYTIME</u>			<u>NIGHTTIME</u>	
	<u>Clear Sky</u>	<u>Partly Cloudy</u>	<u>Over- cast</u>	<u>Partly Cloudy to Overcast</u>	<u>Clear Sky to Partly Cloudy</u>
0-2	A	A-B	B	E-F	G
2-3	A-B	B	C	E	F
4-5	B	B-C	C	D	E
5-6	C	C-D	D	D	D
> 6	C	D	D	D	D

NOTES:

1. Daytime = one hour after sunrise to one hour before sunset.
2. Clear sky - less than 20 percent cloud cover
Partly cloudy - 20 to 80 percent cloud cover
Overcast - 80 to 100 percent cloud cover
3. Windspeed (m/s) X 2.237 = windspeed (mph)

ADDENDUM 8.6
page 1 of 1

CONTRACTOR REPORT

- a. After login the most recent AND the previous six hours of data from the NWS Station at White Plains Airport are printed.
- b. Reports are local eastern standard time (est) OR daylight saving time (dst). Temperature is reported in °F AND relative humidity in percent. Wind direction is reported in the 16 cardinal directions (N=360, E=90, S=180, W=270 degrees). The wind blow from these directions. Wind speed is in miles per hour (mph) (i.e. mph X .447 = m/s, knots X .514 = m/s, knots X 1.15 = mph). Pressure is reported in inches of mercury. Visibility is in miles. Reports include sky condition OR precipitation.
- c. Graphic maps illustrate the weather parameters for the geographic area surrounding Indian Point during the last hour.
 1. Wind direction is reported in degrees (N=360).
 2. Wind speed is in knots.
 3. Pasquill stability is numeric (1=A, 2=B, 3=C, 4=D, 5=E, 6=F, 7=G)
 4. Weather is described by an alphabetic character: R = Rain, F = fog, S = snow, H = haze, L = drizzle, TRW = thunderstorm, FR = freezing rain, A = hail, IP = ice pellets, K = smoke. A plus (+) or minus (-) sign indicates intensity.
- d. NWS forecasts for surrounding areas are followed by upper air data from Albany AND Atlantic City. Albany data is more representative of Indian Point. Atlantic City could be used as a backup for air movement south of Indian Point.
- e. Special weather reports on hurricanes, thunderstorms, tornadoes, OR travel advisories are also printed. A line stating "**** END OF REPORT****" completes the output sequence.

ADDENDUM 8.7
page 1 of 1

IP-#3 HP-9000 DATA

Meteorological data

TIME (EST)	10mWS (MPH)	10mWD (From)	60mWS (MPH)	60mWD (From)	122mWS (MPH)	122mWD (From)	E PAS CAT	G PAS CAT
945	6.3	322	14.6	327	16.7	328	4	4
1000	6.6	324	12.5	323	13.2	323	4	4
1015	4.0	319	9.8	314	12.1	317	4	4
1030	6.7	322	14.2	324	16.4	325	4	4
1045	7.3	309	14.1	314	15.3	314	4	3
1100	4.7	324	11.2	305	15.2	302	4	2

NOTE: Pasquill +1 = A, +2 = B, +3 = C, +4 = D, +5 = E, +6 = F, +7 = G

Would you like to run this Again {Y,N} [Default is NO] n

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1017
Rev. 9

ISSUANCE AND USE OF RADIOLOGICAL EQUIPMENT
STORED IN THE COMMAND GUARD HOUSE

Prepared by: JBurn 1/29/99 Technical Reviewer: Tommy Fennell 8/1/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Tommy Fennell 1st Lt. Col. 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

ISSUANCE AND USE OF RADIOLOGICAL EQUIPMENT STORED IN THE COMMAND GUARD HOUSE

1.0 PURPOSE

- 1.1 To describe the use of radiological equipment stored in the Command Guard House (CGH) during an Alert, Site Area or General Emergency.

2.0 DISCUSSION

- 2.1 Radiological equipment consisting of TLD badges, dosimeters, dosimeter charger, charcoal filter respirators AND potassium iodide (KI) is stored in the CGH for use by the Security Force during emergencies at Indian Point Station. This equipment is under the direct supervision of the Lieutenant Shift Supervisor AND shall be issued ONLY to qualified personnel AND used only WHEN directed by him.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 KI shall NOT dispensed by the Lieutenant Shift Supervisor UNLESS directed by the Shift Manager (SM), Plant Operations Manager (POM) AND Emergency Director (ED).
- 3.2 ALL equipment AND KI shall be distributed by the Lieutenant Shift supervisor with appropriate instruction AND direction.
- 3.3 Ensure EACH calibration is not overdue, the dosimeter is zeroed AND the initial reading recorded on FORM 11 WHEN the dosimeter is issued.
- 3.4 WHEN the dosimeter is returned record the final reading on FORM 11 BEFORE zeroing AND reissuing the dosimeter.

4.0 EQUIPMENT AND MATERIALS

4.1 TLD Badges

- 4.1.1 A TLD badge, WHEN issued to an individual, is used to record the individual's whole body radiation exposure. It should be worn, WHEN practical, outside the clothing in the chest area. In certain instances wearing it beneath outer clothing shall protect the badge from getting wet.

4.2 Dosimeters

4.2.1 A self-reading dosimeter is issued to an individual so that EACH individual can keep track of their own whole body exposure. The dosimeter is to be worn next to the TLD badge so both devices are exposed to the same radiation levels. Dosimeters should be read frequently. WHEN the reading reaches APPROXIMATELY 75% of full scale record the reading on FORM 11 AND "zero" the dosimeter. Dosimeters have many ranges, WITH the most common being the low ranges of 0-200 mR AND 0-500 mR. Dosimeters should be checked AND zeroed BEFORE issue. Zeroing is charging the dosimeter WITH a dosimeter charger UNTIL the indicator reads APPROXIMATELY zero.

4.3 Dosimeter Charger

4.3.1 The dosimeter charger, charges (zeroes) the dosimeter using the battery contained WITHIN the charger. There is an internal light that illuminates the dosimeter scale while it is being charged. A weak light OR inability to charge dosimeters is indicative of a weak battery AND it should be replaced.

4.4 Respirators

4.4.1 The respirator WHEN worn properly, (tight fitting at the edges), filters radioiodines AND particulate matter from the air before it is breathed. The cartridges (filters) that are screwed into the face piece are designed to trap radioiodines and particulate matter. The straps on the respirator should be pulled tight while the respirator is in place on the face to facilitate good sealing of the respirator to the face. Covering up the cartridges WITH both hands, while inhaling, checks this seal. The respirators should be stored in a controlled cabinet WITH a current list of Security personnel qualified to use a respirator. ONLY designated emergency equipment should be stored in the cabinet.

4.5 Potassium Iodide (KI)

4.5.1 KI is a compound that contains stable (non-radioactive) iodine which, WHEN ingested BEFORE OR at the beginning of a radiological emergency, insures that the individual exposed to a radioactive cloud receives MINIMAL exposure to the thyroid gland from the radioiodine. The bottle containing the KI has the dosage instructions written on it.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C AND D OF EPD BOOK NO. 2.

5.1 Fire Department Responding to Fire in Radiation Area

NOTE:

THE NAME OF THE INDIVIDUAL, SOCIAL SECURITY NUMBER AND TLD BADGE NUMBER SHALL BE RECORDED BY THE HEALTH PHYSICS TECHNICIAN AFTER THE FIRE HAS BEEN EXTINGUISHED.

5.1.1 At the entrance to the Protected Area, issue a low range dosimeter AND TLD badge to EACH fireman WITH instructions to wear them underneath the raincoat to protect them from water damage.

5.1.2 Allow the firemen to enter the Radiologically Controlled Area WITHOUT wearing anti-C clothing.

5.2 Actuation of Site Emergency Assembly Alarm

5.2.1 Upon hearing the site emergency alarm (rapid pulsing sound of AT LEAST 30 seconds duration) OR upon notification of a Site Area OR General Emergency from Control Room personnel, the Lieutenant Shift Supervisor shall issue ALL Security Force personnel a TLD badge AND a zeroed low range dosimeter IF they have not already been issued a dosimeter for that day.

5.2.2 On FORM 11, record the individual's name, TLD badge number, date, time, initial reading AND supervisor's initials. Use a separate form for EACH individual.

5.2.3 Request instructions from the SM, POM AND ED on the need for KI, respirators OR the use of the 0-5000 mR dosimeters.

- a. The SM, POM AND ED should consider the use of KI WHEN it appears that individuals could receive a dose to the thyroid of GREATER THAN 25 Rem for the duration of the accident.

- b. The Rad Protection Coordinator/Health Physics Technician should determine whether respiratory protection is required AND whether it is necessary to wear it OR just carry it in case of need. The Health Physics Technician should determine whether respiratory protection is required as per Reference 6.1. Record on FORM 11 the issuance of KI AND respirators by indicating YES OR NO on the appropriate line.

5.2.4 Instruct ALL Security personnel to read their dosimeters frequently AND to report in WHEN they are approaching 75% of full scale.

5.2.5 At EACH dosimeters readout, tabulate the running total mR. Notify the SM, POM AND ED WHEN any member of the Security Force reaches a whole body exposure of 1000 mR as measured by the dosimeter.

5.2.6 Notify the SM, POM AND ED WHEN any member of the Security Force has their dosimeter go off-scale AND record in Remarks column of FORM 11.

5.2.7 Turn in ALL completed forms to the ED.

6.0 REFERENCES

6.1 RS-10.001, "Issuance of Respiratory Devices"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

MEDIA RELATIONS MOBILIZATION DURING EMERGENCIES

Prepared by: B. Burns 8/20/98 Technical Reviewer: Terry Fenner 9/1/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Terry Fenner / Acting EP by 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

MEDIA RELATIONS MOBILIZATION DURING EMERGENCIES

1.0 PURPOSE

- 1.1 To describe the mobilization of the Media Relations Organization during emergencies.

2.0 DISCUSSION

- 2.1 Media Relations mobilizes personnel for the Joint News Center (JNC), organization, which is responsible for providing information to the news media in a timely and accurate manner.
- 2.2 The JNC is located at the Westchester County Airport. WHEN activated, the JNC provides a location for coordinating the dissemination of information intended to reach the public. Facilities for representatives from Con Edison, New York State, the counties of Westchester, Rockland, Orange and Putnam, NRC and FEMA are located within the JNC.
- 2.3 To facilitate the timely movement of information from the site Emergency Response Organization to the JNC, an Information Liaison person is located at the Emergency Operations Facility (EOF) along with a dedicated Technical Advisor (TA).
- 2.4 Con Edison Media Relations maintains, under separate cover, an Emergency Response Plan and Implementing Procedure which contains procedures related to the functioning of the JNC as well as listings of Media Relations Emergency Personnel. Media Relations is responsible for scheduling training for personnel in the JNC organization. Nuclear Power supports Media Relations in training by providing systems AND emergency plan training.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D IN EPD BOOK NO. 2.

5.1 Notification of Unusual Event (NUE)

5.1.1 Notification

- a. The Central Control Room (CCR) notifies Central Information Group (CIG).
- b. UNTIL the EOF is activated, the CCR shall notify Media Relations: Manager, Nuclear Information, Director, Media Relations OR Media Relations Duty Officer.
- c. CIG notifies Media Relations as follows:
 1. DURING normal working hours the Director, Media Relations, Manager, Nuclear Information OR Media Relations Duty Officer.
 2. DURING offhours the Media Relations Duty Officer who then notifies the Director, Media Relations AND Manager, Nuclear Information.

5.1.2 Actions

The Director, Media Relations consults with appropriate company officials BEFORE issuing any press releases OR other statements to the media in accordance with standard company practices.

5.2 Alert

5.2.1 Notification

- a. The Central Control Room (CCR) shall notify Central Information Group (CIG).

- b. UNTIL the EOF is activated, the CCR shall notify Media Relations: Manager, Nuclear Information, Director, Media Relations OR Media Relations Duty Officer.
- c. CIG notifies Media Relations as follows:
 - 1. DURING normal working hours the Director, Media Relations, Manager, Nuclear Information OR Media Relations Duty Officer.
 - 2. DURING offhours the Media Relations Duty Officer. who then notifies the Director, Media Relations AND Manager, Nuclear Information.
- d. The EOF Information Liaison shall be notified in the following manner:
 - 1. Onsite by the Emergency Assembly Alarm OR by telephone.
 - 2. Offsite/offhours by the radio pager activated by CIG OR by telephone.

5.2.2 Actions

- a. Director, Media Relations

Confer with APPROPRIATE company officials AND based on the emergency prognosis determine WHETHER the JNC should be staffed.

- b. EOF Information Liaison

- 1. IF onsite, INSIDE the "Protected Area" report to the SFS office AND obtain briefing from the Plant Operations Manager (POM).

NOTE:

FOLLOWING SOUNDING OF THE EMERGENCY ASSEMBLY ALARM INGRESS/EGRESS FROM THE PLANT WILL BE STOPPED.

2. IF onsite, OUTSIDE the "Protected Area" report to the Command Guard House AND request the guard to contact the POM in the Control Room for permission to access the plant. The guard shall have to provide the Control Room with: your name, emergency title (EOF Information Liaison) AND desired reporting location SFS office. Proceed to the SFS office AND obtain briefing from the POM.

NOTE:

ALL PERSONNEL OFFSITE RESPOND TO THE EOF.

3. IF offsite, report to the Emergency Operation Facility (EOF) in accordance with the notification message AND contact POM/ED.

NOTE:

ALL INFORMATION RELEASES SHALL BE REVIEWED FOR TECHNICAL ACCURACY BY APPROPRIATE COMPANY OFFICIALS PRIOR TO RELEASE.

- 5.2.3 IF the JNC is NOT activated at the ALERT, Media Relations shall act as it does under NUE.

5.3 Site Area and General Emergencies

Emergencies in these classifications may be an upgrade from the NUE OR ALERT classification BUT it is possible for the emergency to start WITH EITHER of these classifications.

5.3.1 Notification

- a. The Central Control Room (CCR) shall notify Central Information Group (CIG) IF the emergency starts with this classification.

- b. UNTIL the EOF is activated, the CCR shall notify Media Relations: Manager, Nuclear Information, Director, Media Relations OR Media Relations Duty Officer IF the emergency starts with this classification.
- c. The EOF shall notify the CIG AND JNC IF it has already been staffed DURING an ALERT.
- d. The CIG shall notify Media Relations as follows IF the JNC organization has NOT been activated PRIOR to this time:
 - 1. DURING normal working hours the Director, Media Relations, Manager, Nuclear Information OR Media Relations Duty Officer.
 - 2. DURING offhours the Media Relations Duty Officer.
- e. The EOF Information Liaison shall be notified in the following manner IF NOT already notified DURING an ALERT.
 - 1. Onsite by the Emergency Assembly Alarm OR by telephone.
 - 2. Offsite/offhours by the radio pager activated by CIG OR by telephone.

5.3.2 Actions

a. Director, Media Relations

Confer with APPROPRIATE company officials AND based on the emergency prognosis determine WHETHER the JNC should be staffed.

b. EOF Information Liaison

- 1. IF onsite, INSIDE the "Protected Area" report to the SFS office AND obtain briefing from the Plant Operations Manager (POM). WHEN the EOF is being manned, report to the EOF AND contact the Emergency Director (ED).

NOTE:

FOLLOWING SOUNDING OF THE EMERGENCY ASSEMBLY ALARM INGRESS/ EGRESS FROM THE PLANT IS STOPPED.

2. IF onsite, OUTSIDE the "Protected Area" report to the Command Guard House AND request the guard to contact the POM in the Control Room for permission to access the plant. The guard shall have to provide the Control Room with: your name, emergency title (EOF Information Liaison) AND desired reporting location SFS office. PROCEED to the SFS office AND obtain briefing from the POM. WHEN the EOF is being activated, report to the EOF AND contact the ED.

NOTE:

ALL PERSONNEL OFFSITE RESPOND TO THE EOF.

NOTE:

ALL NEWS RELEASES SHALL BE APPROVED FOR TECHNICAL CONTENT BY THE EMERGENCY DIRECTOR PRIOR TO RELEASE.

3. IF offsite, report to the EOF in accordance with the notification message, AND contact the POM/ED.

5.4 Job Functions And Duties

5.4.1 EOF Information Liaison Organization

a. EOF Information Liaison

1. Gather information at the EOF AND communicate it to the Information Gatherer at the Joint News Center.
2. Interface with the ED AND the Joint News Center Director DURING the preparation of press releases.

b. Technical Advisor to the EOF Information Liaison

1. Interface with the Information Liaison to assist in the interpretation of plant status data.

5.4.2 Further Response and Joint News Center Activation

Coordination among utility, state, and county representatives is paramount to providing timely and accurate information to the media. If, after consultation with the Senior Vice President, Public Affairs, the Director of Media Relations determines that emergency conditions warrant, he shall call the Assistant Director of Media Relations to activate the phone tree for notifications to Joint News Center staff. Once the JNC is staffed, the EOF Liaison should speak primarily to the Information Gatherer. Until the arrival of the News Release Writer, the Director of Media Relations shall draft news releases as necessary.

As soon as the state and counties are adequately represented at the Joint News Center, the Director, Media Relations, after consultation with State and County officials, shall declare the News Center activated and operational. A media advisory shall be issued by the utility informing the media that the Joint News Center is operational and is the only official source of information to the public.

5.4.3 Government Liaison

A Government Liaison Manager, located at the Joint News Center, shall respond to questions from the Con Edison, State, Federal, and City Government representatives. The Manager shall interface with State and County Public Information Officers, ensure that news releases are distributed to them, maintain up-to-date status boards, and sign off on EBS messages and non-utility news releases. Sign-offs acknowledge receipt of EBS messages and news releases and are not intended to imply agreement with their contents.

The Government Liaison Manager shall inform the Con Edison, State, Federal, and City Government representatives promptly of any change in emergency level classification and provide a copy of all news releases and EBS messages to the JNC Director and Documenter.

5.4.4 Rumor Control

The rumor control function is a cooperative state, county, and utility program which provides for the monitoring of the broadcast and print media for news report accuracy. It also provides the public with clarification on information that may be in conflict with official announcements. Audio-visual equipment shall be used to monitor and record news broadcasts and bulletins carried by major radio and television stations. These broadcasts, as well as news reports in the

media for news report accuracy. It also provides the public with clarification on information that may be in conflict with official announcements. Audio-visual equipment shall be used to monitor and record news broadcasts and bulletins carried by major radio and television stations. These broadcasts, as well as news reports in the print media, shall be reviewed for accuracy. This off-air monitoring and recording capability shall enable the prompt identifications of inaccurate or incorrect information. Corrections shall be made during briefings at the Joint News Center or by contacts directly with the responsible station or publications.

Rumor Control telephone lines have been installed at the Joint News Center. The Public Rumor Control number shall be announced at the first news briefing. This number is intended to provide the public with clarification of information that may be in conflict with official announcements. The number shall be passed through the appropriate communications chains to the State and County Emergency Operation Centers and the utility switchboard for public inquiry referral. The rumor control team member (a state, county, or utility representative) would then respond to the specific inquiry of the caller. The call can be referred, OR a call back made if necessary.

5.4.5 Media Monitoring

Media monitoring is the function whereby trained staff follow media coverage of an event to identify inaccurate media reports. Media monitoring supports Rumor Control in its function to correct misinformation. A bank of radios and televisions with recording equipment is located at the Joint News Center to provide a source of off-air reception. Detailed media monitoring procedures are contained in Appendix 9 to the Indian Point Media Relations Emergency Response Plan and Implementing Procedure.

5.4.6 News Releases

News releases are developed from facts obtained from the EOF Information Liaison. Draft releases are reviewed by the News Center Director and checked for accuracy by the Technical and Radiological Advisors. The release is then faxed to the EOF for the Emergency Director's review and approval. The News Center Director shall then approve and issue the final news release which is faxed to the EOF. Sufficient copies are also distributed throughout the different workrooms and the media briefing room at the News Center. For further information refer to Appendix 11 of the Public Information Emergency Response and Implementing Procedure.

5.4.7 News Briefings

News briefings shall be held as events warrant but the time between briefings shall not exceed one and a half hours. State and utility briefers shall meet immediately prior to a briefing to discuss content of briefings. Briefings shall include the emergency classification and reason for the classification, general plant conditions, actions to mitigate the emergency, history of the emergency, any known radiological conditions, answers to any outstanding questions from previous briefings, and the public Rumor Control number. The Joint News Center Director shall oversee news briefings. The utility corporate spokesperson shall outline plant conditions while state and county representatives shall address offsite actions, including any protective action recommendations. Additional information on news briefings is contained in Appendix 12 of the Indian Point Media Relations Emergency Response Plan and Implementing Procedure.

6.0 REFERENCES

- 6.1 Indian Point Media Relations Emergency Response Plan and Implementing Procedure.

7.0 ATTACHMENTS

- 7.1 NONE

8.0 ADDENDUM

- 8.1 NONE

CORPORATE RESPONSE CENTER

Prepared by: Burn 1/29/99 Technical Reviewer: Tony Kinner 9/1/99
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
SNSC Review: Donna Turner #2627 8/19/99 Reviewer: _____
Meeting No./Date QA
Approval: Tony Kinner / Acting 8/16/99 9/1/99
Signature/Title Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. Date

CONTROLLED
FOR CONTINUOUS USE

CORPORATE RESPONSE CENTER

1.0 PURPOSE

- 1.1 To describe the activation and operation of the Corporate Response Center (CRC) as well as delineating the responsibilities and actions of the Administration and Logistics Manager and Engineering and Construction Support Manager.

2.0 DISCUSSION

- 2.1 The CRC is located on the 14th floor of Corporate Headquarters in Room 1425 at 4 Irving Place, New York City and is intended to be the central location through which the Emergency Director, TSC Manager and the Recovery Manager shall be able to obtain assistance from Corporate organizations. The Administration and Logistics Manager (ALM) and the Engineering and Construction Support Manager (ECSM) shall be located at the CRC where they shall receive requests and arrange for assistance by contacting the appropriate Con Edison organization.
- 2.2 The CRC Managers shall make the determination whether the communications lines shall continue through the CRC (e.g., Commissary's report of when food supplies shall be delivered to Indian Point) or may bypass the CRC (e.g., Engineering Staff contacts the Technical Advisors, etc., directly at Indian Point).

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 NONE

4.0 EQUIPMENT AND MATERIAL

- 4.1 Keys for the CRC (Room 1425) AND the two-drawer file cabinets are available at the Security Desk at Irving Place.
- 4.2 The following equipment is located in the CRC.
- 4.2.1 Tables AND chairs.
 - 4.2.2 Easel pad.
 - 4.2.3 Two file cabinets on wheels, each containing;
 - a. Two multi-button phone sets.

- b. Three colored marking pens for easel pad.
- c. Procedure IP-1019 - latest revision as contained in the Controlled Copy of the Emergency Procedures Document, Book No. 2, located in the Emergency Control Center, Room 1450-S.
- d. Appendix A, Emergency Procedures Document Book No. 2.
- e. Appendix C, Emergency Procedures Document Book No. 2.
- f. Log Book.
- g. Six 8½ X11 lined pads.
- h. Box of scripto pencils.
- i. Box of ball point pens.
- j. Con Edison Telephone Directory.
- k. Con Edison Special Telephone Directory (home numbers).

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 ALERT

5.1.1 Notification

- a. Control Room (CR) notifies Central Information Group (CIG).
- b. CIG, as per Reference 6.1, notifies the following:
 - 1. Administration and Logistics Manager (ALM).
 - 2. Engineering and Construction Support Manager (ECSM).

3. Security Desk at Irving Place with directions to give the keys for the CRC (Room 1425) to the ALM or ECSM.

5.1.2 Actions

- a. The ALM OR the ECSM PROCEED TO the Security Desk at Irving Place, where they obtain the keys to the CRC (Room 1425) AND the two-drawer file cabinets. They THEN PROCEED TO the CRC where they;
 1. Set up two tables AND chairs as indicated in Addendum 8.1.
 2. Move the two-drawer file cabinets AND the easel pad to the table area. Cabinets AND easel pad are located in the right front closet (See Addendum 8.1).
 3. Obtain the four phone sets from the two-drawer cabinets AND set them on the tables. The phone numbers are listed in Appendix C.
 4. Run the long telephone cables from the right front closet to the tables. The cables are coiled AND hanging on the closet wall.
 5. Connect the phone sets to the cables AND verify the operability of the phones.
 6. Activate the CRC by notifying the following. See Appendix C for phone numbers.
 - a. Central Information Group (CIG).
 - b. Emergency Operations Facility (EOF).
 - c. Technical Support Center (TSC).
 7. The ALM AND ECSM notify ONE individual for EACH of their organizational disciplines listed in Appendix A that an ALERT has been declared AND inform them to remain on stand-by UNTIL further notice.

5.2 Site Area AND General Emergencies (SAE AND GE)

NOTE:

EMERGENCIES IN THESE CLASSIFICATIONS SHALL NORMALLY BE AN UPGRADE FROM THE ALERT CLASSIFICATION BUT IT IS POSSIBLE FOR THE EMERGENCY TO START WITH EITHER OF THESE CLASSIFICATIONS.

5.2.1 Notification

- a. Control Room (CR) notifies Central Information Group (CIG) IF the emergency starts with this classification.
- b. EOF notifies CIG AND the CRC IF it has already been activated during an ALERT.
- c. CIG, as per Reference 6.1, notifies the following IF the CRC has NOT been activated PRIOR TO this time.
 1. Administration and Logistics Manager (ALM).
 2. Engineering and Construction Support Manager (ECSM).
 3. Security Desk at Irving Place with directions to give the keys for the CRC (Room 1425) to the ALM OR ECSM.

5.2.2 Actions

- a. IF NOT already at the CRC, the ALM OR ECSM PROCEED TO the Security Desk at Irving Place where they obtain keys to the CRC (Room 1425) AND the two-drawer file cabinets. They THEN PROCEED TO the CRC where they;
 1. Set up two tables and chairs as indicated in Addendum 8.1.
 2. Move the two-drawer file cabinets AND the easel pad to the table area. Cabinets AND easel pad are located in the right front closet.
 3. Obtain four phone sets from the two-drawer cabinets AND place on the tables so that there are two phones with the same extension numbers on EACH table.

4. Run the long telephone cables from the right front closet to the tables. The cables are coiled AND hanging on the closet wall.
5. Connect the phone sets to the cables AND verify the operability of the phones.
6. Activate the CRC by notifying the following. See Appendix C for phone numbers.
 - a. Central Information Group (CIG).
 - b. Emergency Operations Facility (EOF).
 - c. Technical Support Center (TSC).
7. The ALM AND ECSM notify ONE individual for EACH of their organizational disciplines listed in Appendix A to stand by (normal work hours) OR to report to their office (off hours) AND institute organizational staffing to cover 24 hour extended coverage.

5.3 Job Functions And Duties - Full Mobilization (SAE AND GE)

5.3.1 The job functions listed below for ALM AND ECSM are special positions created for the handling of an emergency at Indian Point AND DO NOT have a counter-part in the normal Con Edison Corporate Organization. These job functions provide an interface BETWEEN the emergency organization AND Corporate Headquarters allowing for the utilization of the facilities of Con Edison. The functions of the Con Edison groups mentioned in this section fall under their normal expertise.

5.3.2 Administration and Logistics Manager (ALM) coordinates requests for administrative AND logistics activities through the normal Con Edison organizations listed below.

- a. The Security group provides security coverage for the Emergency Operations Facility, Emergency News Center, Corporate Headquarters AND other areas deemed necessary by the Emergency Director.
- b. The Communications group supplies the engineering AND maintenance support for the Con Edison Communications System.

- c. The Building Services/Commissary group provides food service, building maintenance AND equipment repair AND arranges for general housekeeping services AND portable sanitary facilities.
- d. The Office Services group provides general office services such as: typing (machines and personnel), reproduction (photostats and drawings), telephone dictation, office supplies, office furniture, mail delivery, photography services, facility AND area maps, audio visual aids, graphics printing, AND distribution service as required.
- e. The Finance group prepares payroll, controls accounts payable, administers cash disbursements AND expense accounts.
- f. The Accommodations group provides lodging IF necessary for emergency workers AND makes arrangements for rental cars AND travel on commercial and charter carriers.
- g. The Human Resources group provides for the human resource needs using existing Con Edison personnel AND non Con Edison personnel obtained through the New York Power Pool AND the Institute of Nuclear Power Operations.
- h. The Purchasing group, acts as purchasing agent to obtain the materials AND services required by the Emergency Director.
- i. The Transportation group provides for transporting supplies from the Con Edison stores facilities, trash removal from the Indian Point Site AND Emergency facilities, transportation of material AND personnel in support of the Emergency Director, AND the repair AND maintenance of the transportation fleet.
- j. The Risk Management group handles personnel AND public claims against Con Edison, interfaces with the nuclear liability insurance carrier, AND provides advice on insurance coverage to Purchasing.
- k. The Law group provides advice to the Emergency Director as to actions which may violate federal, state OR local statutory AND regulatory requirements concerning the operation of the Indian Point Station, OR jeopardize coverage of the insurance policies AND indemnity agreements. The group also provides legal counsel to Con Edison employees involved in the emergency.

l. The System And Information Processing group provides assistance to develop AND maintain computerized information processing systems.

m. The Central Stores group helps provide class/stock material.

5.3.3 Engineering and Construction Support Manager (ECSM) coordinates requests for advisory support from Corporate Engineering AND Construction Department heads as well as non Con Edison organizations.

5.4 Maintenance Of Preparedness

5.4.1 Chief Planning and Technical Analysis Engineer of Fossil Power shall appoint a member of the staff to perform a quarterly inspection of the Corporate Response Center to determine the availability of the keys, equipment AND materials listed in Section 4.0.

5.4.2 Coordinating with Indian Point Emergency Planning personnel, the F.P. staff member shall remove the phones from the two-drawer file cabinets, plug in ALL phones AND perform an operational check. Phones shall be returned to the file cabinets.

5.4.3 The Fossil Power staff member shall send a memorandum stating that the inspection indicated in Section 5.4 has been completed satisfactorily to:

Anthony Ferraro
Manager, Site Protection
Indian Point Station

6.0 REFERENCE

6.1 IP-1002, "Emergency Notification And Communication"

7.0 ATTACHMENTS

NONE

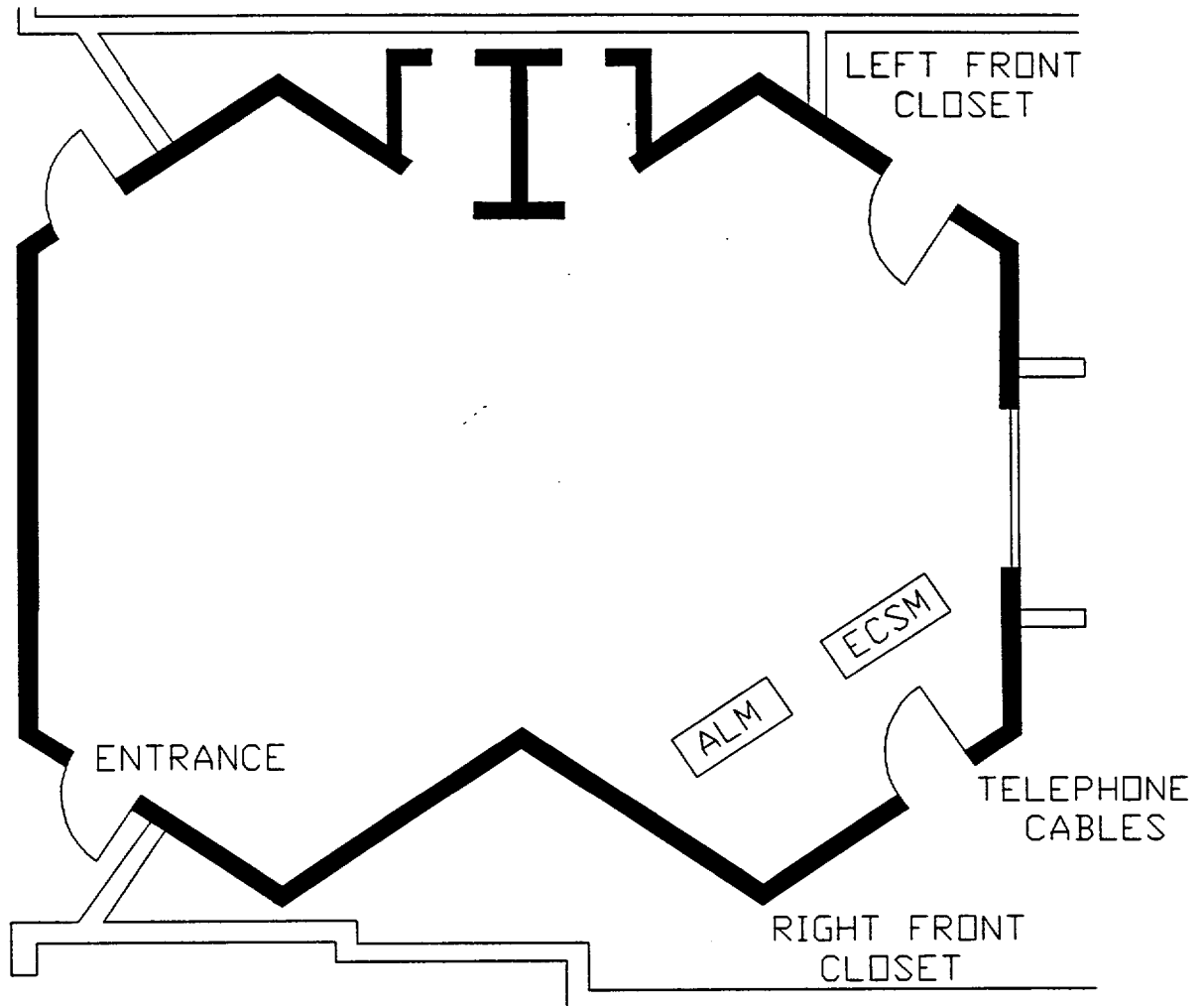
8.0 ADDENDUM

8.1 Corporate Response Center Suggested Layout

ADDENDUM 8.1
Page 1 of 1

CORPORATE RESPONSE CENTER

SUGGESTED LAYOUT



CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1020
Rev. 7

AIRBORNE ACTIVITY DETERMINATION

Prepared by: Beane 9/3/98 Date 9/3/98 Technical Reviewer: Tony Kerner 9/1/99 Date 9/1/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____

Approval: Tony Kerner / Acting EP Manager 9/1/99 Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

AIRBORNE ACTIVITY DETERMINATION

1.0 PURPOSE

- 1.1 To describe the procedure for air sampling and filter counting when determining radioiodine and particulate concentrations in the presence of noble gas and when counting is performed with other than a multichannel analyzer.

2.0 DISCUSSION

- 2.1 The MS-2/SPA-3 system with lead shield is a complete gamma scintillation counting system which may be used as a single channel analyzer or to provide a measurement of gross gamma activity.
- 2.2 The SPA-3 is a gamma scintillation detector consisting of a 2 x 2 sodium iodide crystal, a 2-inch diameter 10 stage photo multiplier tube and a magnetic shield, all sealed inside an aluminum cylinder, which is mounted inside a lead shield.
- 2.3 The MS-2 is an instrument consisting of a single-channel pulse height analyzer, a variable high voltage supply, a six decade digital scaler, a four range linear rate meter covering the range of 0-500K CPM and a timer.
- 2.4 The E-140N OR Rm-14/HP-210 is basically a beta counter that shall count beta particles emitted, with the exception of very low energies, from ALL isotopes contained on the filters.
- 2.5 Charcoal filter cartridges are designed to efficiently collect radioiodines BUT they also collect noble gases such as xenon and krypton along with the iodine. WHEN counting these filters with the E-140N OR RM-14/HP-210, BOTH the iodines AND noble gases contribute to the count rate.
- 2.6 Silver zeolite filter cartridges are designed to efficiently collect radioiodines as the charcoal filters do BUT they are inefficient collectors of noble gases. Manufacturer's literature gives silver zeolite a retention of 1/15,000 that of the charcoal for noble gases.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 The instrument has a current calibration sticker valid for the SPA-3 probe AND has source range.
- 3.2 Ensure a daily two minute background and two minute source check is performed. Record results on Form 20.

- 3.3 The daily response check using the Ba-133 source should have the threshold set on "3.56". WHEN the response check is completed, the threshold setting shall be adjusted to "3.64", which is the I-131 peak.
- 3.4 WHEN counting iodine cartridges, saran wrap OR other thin clinging material with a negligible attenuation for gamma radiation shall be used to wrap the cartridges IF it is suspected that the sample is contaminated.
- 3.5 ALWAYS leave the shield door closed when not in use.
- 3.6 Count samples where background is LESS THAN 300 CPM.

4.0 EQUIPMENT AND MATERIALS

- 4.1 Eberline SPA-3/MS-2 WITH lead shield.
- 4.2 E-140N OR RM-14/HP-210 WITH holders.
- 4.3 Air sampler AND filter holder.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Sampling

- 5.1.1 Place particulate filter in the first inlet filter holder.
- 5.1.2 Place charcoal OR silver zeolite cartridge in the second inlet filter holder (closest to the pump). Use silver/zeolite filters WHEN the beta field survey indicates GREATER THAN 50 mRad/hr OR WHEN the indicated radioiodine activity on a charcoal filter is GREATER THAN 10^{-8} $\mu\text{Ci/cc}$. Align the arrow on the cartridge in the direction of air flow through the holder.
- 5.1.3 Record sampler manufacturer, I.D. number, starting air flow indication in LPM AND the time on Form 21.
- 5.1.4 Run the sampler for a time sufficient to obtain APPROXIMATELY 300 liters (L) (10 ft^3).
- 5.1.5 Record on FORM 21 the ending air flow indication in LPM AND the time.

5.1.6 Obtain the total sample volume AND record on Form 21 by adding the starting rate AND the ending rate, divide by two AND THEN multiply by sample time in minutes.

5.1.7 Purge charcoal filter cartridges for 30 seconds WITH clean air.

5.1.8 Remove the filters from their respective holders. Use gloves WHEN handling samples taken in the radioactive plume. Replace WITH new filters AND restart the pump WHEN a second sample is required.

5.2 Sampling Count Using the MS-2/SPA-3

5.2.1 Enclose the cartridge in petri dish OR plastic wrap. Place the enclosed sample in the detector shield on the shelf closest to the detector.

5.2.2 Set the controls on the MS-2 as follows:

- a. POWER switch - "ON"
- b. CPM RANGE switch - appropriate multiplier setting to register expected sample count rate.
- c. COUNTING TIME IN MINUTES control - set to desired counting time. (normally one minute)
- d. Window IN/OUT switch - "IN"
- e. TEST switch - "OFF"
- f. TIMED/STOP/MAN. switch - "TIMED"
- g. WINDOW, THRESHOLD AND HV ADJUST dials - set to values posted on the instrument.

5.2.3 Momentarily depress the RESET-START push-button.

5.2.4 WHEN the sample has finished counting, record the digital display value on FORM 21 in the "TOTAL COUNTS".

- 5.2.5 Calculate the sample activity using the appropriate correction factor, as per Reference 6.3, using the following formula:

$$uCi/cc = \frac{(SampleCPM - BkgdCPM) \times (1E-9)}{2.2 \times EFF \times Volume(L) \times CCF}$$

EFF - Efficiency (as given on the instrument OR as directed by ORAD OR Health Physics Supervisor).

$$Volume(L) = 28.32 \frac{L}{ft^3} \times Volume(ft^3)$$

CCF - Charcoal Correction Factor (.95 OR as directed by ORAD OR Health Physics Supervisor).

- 5.2.6 Remove the cartridge from the detector chamber AND store OR dispose of it properly, as appropriate.
- 5.2.7 PRIOR to inserting a new filter perform a one minute background verification count to verify it has NOT changed AND the counter is NOT contaminated.

5.3 Sample Counting Using the E-140N OR RM-14/HP-210

- 5.3.1 Connect the HP-210 detector, using the coaxial cable, to the terminal on the instrument marked "detector" OR "probe".
- 5.3.2 WHEN using the RM-14 on AC, connect it to a 120 VAC supply using the power cord which connects at the back of the instrument chassis.
- 5.3.3 WHEN using the RM-14 on AC, place the rotary switch in the X10 position, operate the toggle "Test on" switch at the chassis rear AND see that the indication on the meter is APPROXIMATELY 3600 CPM ($\pm 10\%$). Turn the toggle switch off. Record this AND subsequent data on FORM 21.
- 5.3.4 WHEN using the instrument on battery, battery condition shall be checked by placing the rotary switch in "Batt" position. Record on FORM 21.
- 5.3.5 Energize the instrument by turning the five position rotary switch from "off" to one of the three counting ranges, X1, X10, OR X100.
- 5.3.6 Check the operability of the counter by placing the detector in contact with the Ba-133 check source (located in the kit next to the meter). Read AND record source CPM above background on FORM 21. Compare to count rate labeled on the source.

- 5.3.7 Place the detector on the sample holder (SH-4 OR 4a OR equivalent) AND check the background. Record the background CPM on FORM 21. Use lead bricks as shielding to reduce the background CPM to read on the XI scale IF at all possible.
- 5.3.8 ONE at a time, place the particulate filters to be counted face up in the counting chamber.
- 5.3.9 Read AND record sample CPM on FORM 21.
- 5.3.10 Calculate the filter activity as follows:

$$uCi/cc = \frac{(SampleCPM - BkgdCPM) \times (1E-9)}{2.2 \times EFF \times Volume(L)}$$

EFF-Efficiency = 0.1

NOTE:

IF SAMPLE HOLDERS ARE NOT AVAILABLE, THE FILTERS MAY BE COUNTED BY PLACING THE DETECTORS WITHIN HALF INCH OF THE FILTER.

- 5.3.11 To count the iodine filter cartridges in the sample holders, modify the holders as follows:
- For the SH-4, remove the sample holder slide AND place the charcoal cartridge (lip up) OR the silver zeolite cartridge face up in the cavity created by removing the sample holder slide. Place the detector on the cartridge AND obtain the count rate.
 - For the SH-4a, pull out the slide, remove the insert AND push the slide back in. Place the cartridge in the cavity as indicated above. Place the detector on the cartridge AND obtain the count rate.

- 5.3.12 Calculate the cartridge activity as follows:

$$uCi/cc = \frac{(SampleCPM - BkgdCPM) \times (1E-9)}{2.2 \times EFF \times Volume(L) \times CCF}$$

EFF-Efficiency = 0.0015

CCF -Charcoal Correction Factor = 0.95

- 5.3.13 Perform background AND source checks APPROXIMATELY every hour OR at the filter counting periods as outlined in Steps 5.3.6 AND 5.3.7 respectively.

- 5.4 Use a label, tag OR grease pencil to identify the filters date, time, volume, location, place them in a container AND save them for later isotopic determination.
- 5.5 Turn in ALL completed FORMS to the ORAD OR Radiation Protection Coordinator as appropriate.

6.0 REFERENCES

- 6.1 Instruction Manual for the Eberline Model SPA-3 scintillation probe.
- 6.2 Instruction Manual for the Eberline Model MS-2 Scaler.
- 6.3 HP-3.701, "Radiation Protection Count Room Standard Practices".

7.0 ATTACHMENTS

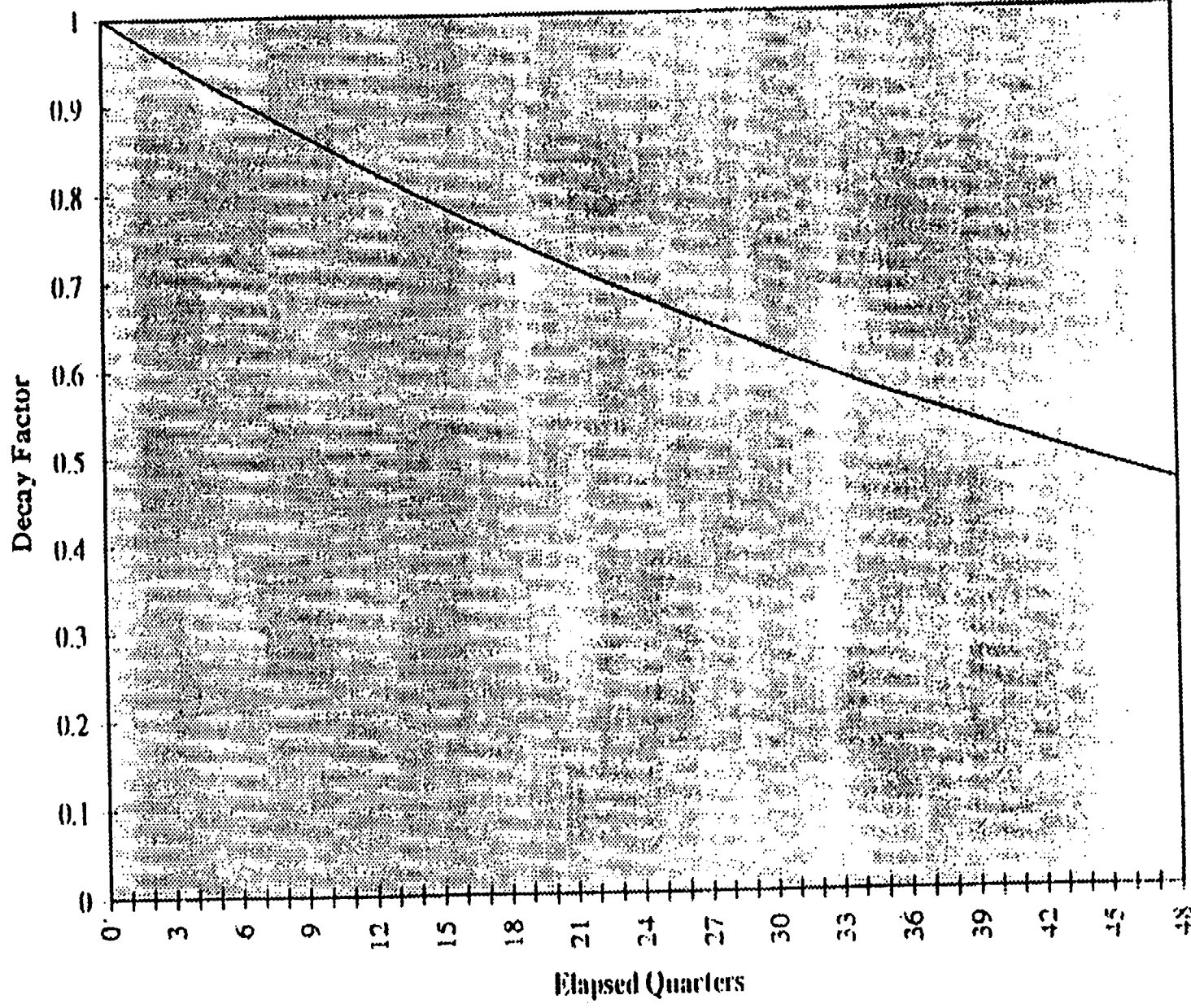
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8.0 ADDENDUM

- 8.1 Barium-133 Source Decay Curve
- 8.2 SPA-3 Detector/Sample Holder Setup
- 8.3 Use of Lead Bricks to Shield Detector

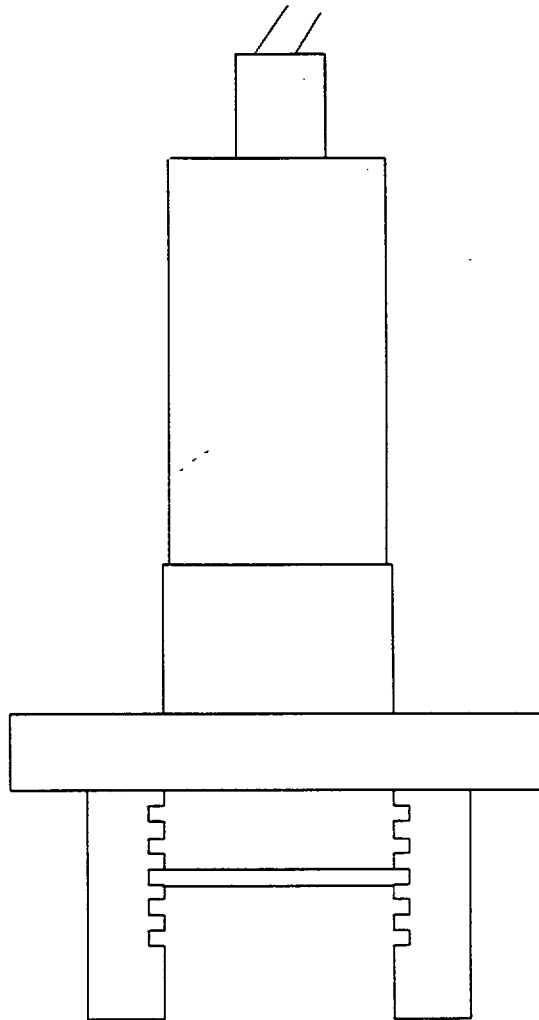
ADDENDUM 8.1
Page 1 of 1

BARIUM-133 SOURCE DECAY CURVE



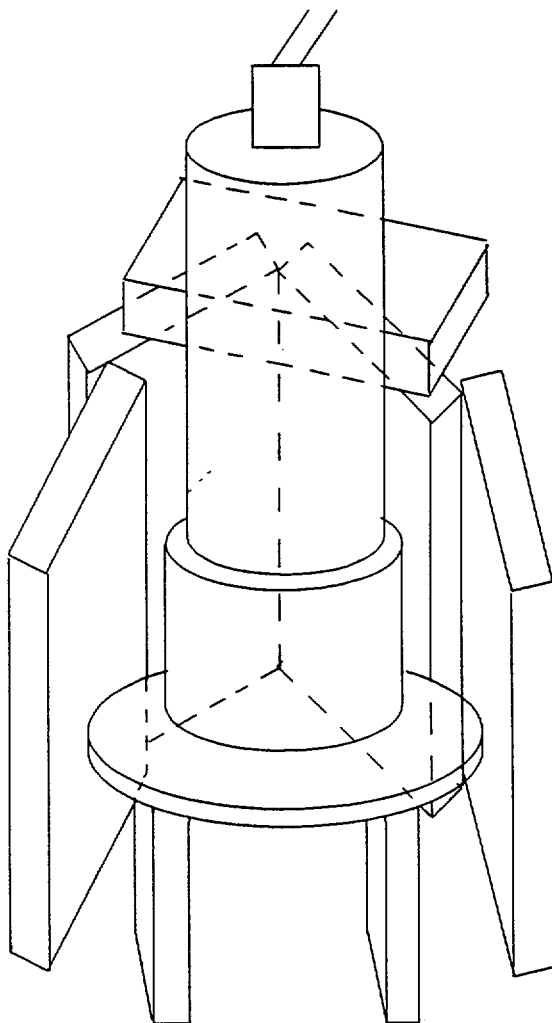
ADDENDUM 8.2
Page 1 of 1

SPA-3 DETECTOR/SAMPLE HOLDER SETUP



ADDENDUM 8.3
Page 1 of 1

USE OF LEAD BRICKS TO SHIELD DETECTOR



Use 6-7 blocks to construct the wall

Use 3-4 blocks to construct the roof

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1021
Rev. 5

MANUAL UPDATE, READOUT AND PRINTOUT OF PROTEUS
PLANT PARAMETER DATA

Prepared by: ABurn 8/18/98 Date 8/18/98 Technical Reviewer: Terry Kellan 9/1/99 Date 9/1/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Donna Syner 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____

Approval: Terry Kellan / Adam E. by 8/16/99 Date 9/1/99 /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

MANUAL UPDATE, READOUT AND PRINTOUT OF PROTEUS PLANT PARAMETER DATA

1.0 PURPOSE

- 1.1 To describe the method of manual entry of plant parameter data into the Proteus computer terminal and the subsequent retrieval of data at the Emergency Operations Facility (EOF) and Technical Support Center (TSC) terminals.

2.0 DISCUSSION

- 2.1 There are six data points on the Plant Status Log (Groups 68 and 72) that are not continually monitored by the Proteus computer and hence are not available at the EOF or TSC. Therefore, it is necessary to manually input the data periodically (approximately 10 minute intervals).
- 2.2 The manual input may be accomplished using any Control Room or TSC Proteus terminal. The TSC member assigned to collect data will input this data.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C AND D IN EPD BOOK NO. 2.

NOTE:

SEE ADDENDUM 8.1 FOR TYPICAL KEYBOARD LAYOUT.

5.1 Manual Update of Plant Parameters in Proteus Computer

5.1.1 Enable the display CRT by pressing the (yellow) CRT enable button

CRT 1	CRT 2	CRT 3	Technical Support Center Terminal
TSC CRT 4	TSC CRT 5	TSC CRT 6	Control Room Terminal
ALM CRT	OPCON CRT		Control Room Terminal

5.1.2 Direct the cursor to the CRT selected above by pressing the (white) CRT button.

TSC CRT 1	TSC CRT 2	TSC CRT 3	Technical Support Center Terminal
TSC CRT 4	TSC CRT 5	TSC CRT 6	Control Room Terminal
ALM CRT	OPCON CRT		Control Room Terminal

5.1.3 Select your OPCON Access

- a. Select the Miscellaneous Function Menu by pressing the (blue) "MISC FUNCT" button.
Miscellaneous Function Menu Appears.
- b. Select the OPCON Access Screen by entering "1" (tan) and then press "EXECUTE".
OPCON ACCESS appears on screen.
- c. Check Present Level. IF GREATER THAN 3, THEN continue at Step 5.1.4.
- d. Contact the Reactor Operator.
- e. Identify yourself and your emergency function (TSC Data Processor).
- f. Ask for access code word that shall allow you to raise level to 4.

- g. Press "TAB FWD" as necessary to move the cursor to Access Code entry field.
- h. Enter the password in space for access code.
- i. Press "TAB FWD" to move the cursor to the next entry field.
- j. Enter "4" and then press "EXECUTE"
Confirm that Present Level has changed to 4.

5.1.4 Select the Point Detail Screen by pressing "POINT DETAIL" (blue).
IF the purple entry screen does not appear press "CLEAR SCREEN". THEN
perform the following:

- a. Repeat Steps 5.1.1 AND 5.1.2.
- b. Re-select the Point Detail Screen again.

5.1.5 Enter the computer address for the parameter data that you wish to enter:

<u>PARAMETER</u>	<u>UNITS</u>	<u>GROUP</u>	<u>ADDRESS</u>
VC Temp.	°F	68	KT001
R-27 Vent Flow Rate	CFM	72	KR027
R-27 Vent Monitor	μCi/cc	72	KR028
Vent Flow Rate ¹	CFM	72	KF001
Main Stm. Exh. ²	LBS/HR	72	KF002
Air Ejector ³	CFM	72	KF003

Press "EXECUTE".

¹This value (obtained from the Fan Building) is NOT required when R-27 flow rate (KR027) is available.

²This value is ONLY required if there is a radioactive release from the secondary side of a Steam Generator.

³This value is ONLY required if there is a radioactive release from the secondary side of a Steam Generator.

- 5.1.6 Enter value desired by pressing numerical keys .
Enter HHHHH for offscale high values.
Enter XXXXX for invalid values.
Press "EXECUTE".
Confirm that number entered appears in green on the screen.
- 5.1.7 To go to the next entry press "CLEAR SCREEN" AND repeat steps 5.1.1 AND 5.1.2.
- 5.1.8 REPEAT Steps 5.1.4 THROUGH 5.1.7 until all parameter data has been entered.

5.2 Initializing TSC Proteus Terminal

5.2.1 Energize terminal if necessary.

5.2.2 Select your OPCON Access

- a. Select the Miscellaneous Function Menu by pressing the (blue) "MISC FUNCT" button.
Miscellaneous Function Menu Appears.
- b. Select the OPCON Access Screen by entering "1" (tan) and then press "EXECUTE".
OPCON ACCESS appears on screen.
- c. Check Present Level. IF GREATER THAN 3, THEN the terminal is initialized.
- d. IF OPCON Access level needs to be increased THEN contact the Reactor Operator.
- e. Identify yourself and your emergency function.
- f. Ask for access code word that shall allow you to raise level to 4.
- g. Press "TAB FWD" as necessary to move the cursor to Access Code entry field.
- h. Enter the password in space for access code.
- i. Press "TAB FWD" to move the cursor to the next entry field.
- j. Enter "4" and then press "EXECUTE"
Confirm that Present Level has changed to 4.

5.3 Initializing EOF Proteus Terminal

- 5.3.1 Turn on power for CRT and Keyboard. Adjust monitor brightness as necessary.
- 5.3.2 Press the "SHIFT RIGHT" key AND the "CLEAR" key (red) at the same time.
- 5.3.3 Direct the TSC Data logger/SAS Proteus operator to enable the EOF terminal from the computer room (Refer to section 5.7).
- 5.3.4 Press the "CRT ENABLE" key (yellow).

5.4 Display and Printout of Individual Groups

- 5.4.1 Select the Trends Logs Groups Menu by pressing the (blue) "TRENDS/LOGS/GROUPS" button.
Menu appears.
- 5.4.2 Press "TAB FWD" as necessary to move the cursor to the Function Number entry field.
- 5.4.3 Select the GROUP DISPLAY/ASSIGN/REVIEW option by entering "4" (tan) in the entry field and press "EXECUTE".
- 5.4.4 Select appropriate page/group for viewing/printing.

Group 66	Plant Status Form 42(a)T
Group 67	Plant Status Form 42(a)C
Group 68	Plant Status Form 42(a)B
Group 70	Plant Status Form 42(c)T
Group 71	Plant Status Form 42(c)C
Group 72	Plant Status Form 42(c)B
- 5.4.5 Press "TAB FWD" as necessary to move the cursor to the Group entry field.
Enter the group number that you wish to display/print.
- 5.4.6 Press "TAB FWD" to move the cursor to the Action entry field.
Enter 1 to Display/Print
- 5.4.7 Press "TAB FWD" to move the cursor to the Device entry field.
Enter 1 to Display group on selected CRT.
Enter 2 to Print group on COMP ROOM printer
Enter 3 to Print group on TSC printer.
Enter 8 to Print group on EOF printer.
Press "EXECUTE".

Group either appears on screen or on line printer.

- 5.4.8 To display another group press "PREV PAGE" OR "NEXT PAGE" as necessary.
- 5.4.9 To select another group for printout press "TAB FWD" as necessary to place the cursor in Group entry field.
Enter the group number that you wish to print.
Press "EXECUTE".

NOTE:

IF THE TSC LINE PRINTER FAILS, THE PRINTOUT IS AUTOMATICALLY TRANSFERRED TO THE COMPUTER ROOM LINE PRINTER. TO RESTORE PRINTER REFER TO SECTION 5.8.

5.5 TSC Automatic Recurring Printout on Line Printer

- 5.5.1 Select the Trends Logs Groups Menu by pressing the (blue) "TRENDS/LOGS/GROUPS" button.
Menu appears.
- 5.5.2 Press "TAB FWD" as necessary to move the cursor to the option entry field.
- 5.5.3 Select the GROUP LOGS option by entering "6" (tan) in the entry field and Press "EXECUTE".
- 5.5.4 Enable the Group Log as follows:
 - a. Press "TAB FWD" as necessary to move the cursor to the LOG entry field.
 - b. Enter the Group Log number into the entry field that you wish to Enable.

LOG "23" (tan)
LOG "24" (tan)
 - c. Press "TAB FWD" to move the cursor to the Action entry field.
 - d. Enter "4" (tan) to enable the Log AND press "EXECUTE".

5.5.5 Enter data collection and printout information as follows:

- a. Press "TAB FWD" as necessary to move the cursor to the Collection Action entry field.
- b. Enter "1" (tan) to entry field.
- c. Press "TAB FWD" to move the cursor to the Maximum Collection entry field.
- d. Enter "05" to select maximum number of collections before printout.
- e. Press "TAB FWD" to move the cursor to the hour entry field.
- f. Enter "0" in the hour entry field.
- g. Press "TAB FWD" to move the cursor to the minute entry field.
- h. Enter "01" in the minute entry field.
- i. Press "TAB FWD" to move the cursor to the seconds entry field.
- j. Enter "0" in the seconds entry field.
- k. Press "TAB FWD" to move the cursor to the Printout Action entry field.
- l. Enter "1" to the option field to enable printout.
- m. Press "TAB FWD" to move cursor to the next entry field.
- n. Enter "3" (tan) to the option field to enable printout.
Press "EXECUTE".
- o. IF CRT indicates "Execution of this form forbidden at current access level" THEN raise the OPCON Access level as per Step 5.2.2 and repeat Steps 5.5.1 to 5.5.5.

5.5.6 After data collection is finished, disable the data collection and printout as follows:

- a. Press "TAB FWD" as necessary to move the cursor to the Collection Action entry field.
- b. Enter "2" to the entry field to disable data collection.

- c. Press "TAB FWD" to move the cursor to the Printout Action entry field.
- d. Enter "2" (tan) to disable the Log printout.
- e. Press "EXECUTE".

NOTE:

IF THE EOF LINE PRINTER FAILS, THE PRINTOUT IS AUTOMATICALLY TRANSFERRED TO THE COMPUTER ROOM LINE PRINTER. TO RESTORE PRINTER REFER TO SECTION 5.9.

5.6 EOF Automatic Recurring Printout on Line Printer

- 5.6.1 Select the Trends Logs Groups Menu by pressing the (blue) "TRENDS/LOGS/GROUPS" button.
Menu appears.
- 5.6.2 Press "TAB FWD" as necessary to move the cursor to the Function Number entry field.
- 5.6.3 Select the GROUP LOGS option by entering "6" (tan) in the entry field and Press "'Execute'".
Press "NEXT PAGE".
- 5.6.4 Enable the Group Log as follows:
 - a. Press "TAB FWD" as necessary to move the cursor to the LOG entry field.
 - b. Enter the Group Log number into the entry field that you wish to Enable.

LOG "25" (tan)
LOG "26" (tan)
 - c. Press "TAB FWD" to move the cursor to the Action entry field.
 - d. Enter "4" (tan) to enable the Log AND press "EXECUTE".

5.6.5 Enter Data Collection and Printout information as follows:

- a. Press "TAB FWD" as necessary to move the cursor to the Collection Action entry field.
- b. Enter "1" (tan) to the Action entry field.
- c. Press "TAB FWD" to move the cursor to the Max Collection entry field.
- d. Enter "05" to select maximum number of collections before printout.
- e. Press "TAB FWD" to move the cursor to the hour entry field.
- f. Enter "0" in the hour entry field.
- g. Press "TAB FWD" to move the cursor to the minute entry field.
- h. Enter "01" in the minute entry field.
- i. Press "TAB FWD" to move the cursor to the seconds entry field.
- j. Enter "0" in the seconds entry field.
- k. Press "TAB FWD" as necessary to move the cursor to the Printout Action entry field.
- l. Enter "1" to the option field to enable printout.
- m. Press "TAB FWD" to move cursor to the next entry field.
- n. Enter "8" (tan) to the option field to enable printout.
Press "EXECUTE".
- o. IF CRT indicates "Execution of this form forbidden at current access level" THEN raise the access level as per Step 5.3.3 and repeat Steps 5.6.1 to 5.6.5.

5.6.6 After data collection is finished, disable the data collection and printout as follows:

- a. Press "TAB FWD" as necessary to move the cursor to the Collection Action entry field.
- b. Enter "2" to the entry field to disable data collection.

- c. Press "TAB FWD" to move the cursor to the printout Action entry field.
- d. Enter "2" (tan) to disable the Log
- e. Press "EXECUTE".

5.7 Enabling EOF Terminal for Computer Room

5.7.1 Select your OPCON Access on the Computer Room Proteus terminal

- a. Select the Miscellaneous Function Menu by pressing the (blue) "MISC FUNCT" button.
Miscellaneous Function Menu Appears.
- b. Select the OPCON Access Screen by entering "1" (tan) and then press "EXECUTE".
OPCON ACCESS appears on screen.
- c. Check Present Level. IF the Level is set at 8, THEN continue at Step 5.7.2.
- d. Press "TAB FWD" as necessary to move the cursor to Access Code entry field.
- e. Enter the password⁴ in space for access code.
- f. Press "TAB FWD" to move the cursor to the next entry field.
- g. Enter "8" and then press "EXECUTE"
Confirm that Present Level has changed to 8.

5.7.2 Enable EOF terminal as follows:

- a. Press the "Batch" key. (Key is unmarked on function keypad at the top of the keyboard, the 6th key from the right on the third row).
- b. The screen output will display the following prompt:
THE PROTEUS BATCH SYSTEM
:
- c. Type the following:
IM,DO,KEYLOCK{7}=8

⁴Password is issued to the SAS - Proteus Operator by the IPCA Administrator.

- d. Press the "SHIFT RIGHT" key and the "XMIT" key (red) at the same time.
- e. The screen output will display the following :
KEYLOCK (7)=8
- f. Exit the Batch Mode by typing XT
- g. Press the "SHIFT RIGHT" key and the "XMIT" key (red) at the same time.

5.8 Restoring TSC and Computer Room Proteus Line Printers

- 5.8.1 Identify cause of printer failure by opening printer and observing which red LED lights are lit and take actions as necessary to correct cause of failure.
- 5.8.2 Toggle the reset button to extinguish red LED lights.
- 5.8.3 Press the yellow button to reset the printer alarm.
- 5.8.4 Press the red & white button to place printer back on line.
- 5.8.5 At a Proteus Terminal select the Miscellaneous Function Menu by pressing the (blue) "MISC FUNCT" button.
Miscellaneous Function Menu Appears.
- 5.8.6 Select the Device RESTORE/FAIL/TRANSFER Screen by entering "2" (tan) and then press "EXECUTE".
OPCON ACCESS appears on screen
- 5.8.7 Press "PAGE FWD" as necessary to display page 4 of 5.
- 5.8.8 Enter Device Number that you wish to restore
Device 46 COMP RM Printer
Device 47 TSC Printer
- 5.8.9 Press "EXECUTE".

5.9 Restoring EOF Printer

- 5.8.1 At a Proteus Terminal select the Miscellaneous Function Menu by pressing the (blue) "MISC FUNCT" button.
Miscellaneous Function Menu Appears.

5.8.2 Select the Device RESTORE/FAIL/TRANSFER Screen by entering "2" (tan) and then press "EXECUTE".
OPCON ACCESS appears on screen

5.8.3 Press "PAGE FWD" as necessary to display page 4 of 5.

5.8.4 Enter Device Number 41

5.8.5 Press "EXECUTE".

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

8.1 Typical Proteus Keyboard Layout

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1021
Rev. 5

ADDENDUM 8.1

Page 1 of 1

TYPICAL PROTEUS KEYBOARD LAYOUT

SELECT	UTL CRT 1	UTL CRT 2	OPCON CRT	ALARM CRT					CRT TO CRT			ALARM DELETE	ALARM COMPACT	ALARM ACK	SELECT					
	REACTOR	REACTOR COOLANT	CVCS	STEAM GEN	FEED WATER	COND ENSATE	TURBINE	GENERATOR	ELEC SYS		LAST ALARM		STEP NEXT POINT	STACK IT		PICK	UTL CRT 1	UTL CRT 2		
	SYSTEM MENU		DISPLAY LIST	DIAGRAM	STATUS		VALUE BARS	ANALOG TRENDS	PICKED POINT DISP	BATCH		TRENDS LOGS GROUPS	POINT REVIEW	POINT DETAIL		MISC FUNCT				

MISC FUNCT	CLEAR	ERASE PAGE	ERASE LINE	ERASE WORD	LOW VIDEO NOR	WHITE	GREEN	YELLOW	ORANGE	MAGENTA	RED	CYAN	BLUE	REV BKGD NOR	VERT RPT	DN PROT OFF	<div style="text-align: center;">↑</div> <div style="display: flex; justify-content: space-around;">← HOME →</div> <div style="text-align: center;">↓</div>
	XMIT PAGE	XMIT LINE	XMIT PAR PAGE	XMIT CURSOR	LARGE CHAR NOR	ON BLINK OFF	DLETE LINE INSRT	DLETE COL INSRT	DLETE CHAR INSRT	SET ALARM OFF	ROTATE DISPLAY NORM	START XMIT END	TAB SET	BACK TAB FWD	FAST MODE		

!	"	#	\$	%	&	'	()	_	=	⌈	⌋	CR	⌋	⌋	CR	⌋
1	2	3	4	5	6	7	8	9	0	-	⌈	⌋	⌋	⌋	⌋	⌋	⌋
←		→	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Q		W	E	R	T	Y	U	I	O	P	Δ	μ	∅	BS	LF		
SHIFT LOCK	I	Y	↓	↑	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
	A	S	D	F	G	H	J	K	L	;	:	*	CUR EPT	CR	LF		
SHIFT LEFT			ψ	=	⌈	+ SBT	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈	⌈
SHIFT RIGHT																	

NEXT PAGE	CLEAR SCREEN	NEXT FIELD
PREV PAGE	CANCEL	PREV FIELD
RECALL	REPORT	ROLL STOP/START
TAB BACK	EXECUTE	TAB FWD

OBTAINING METEOROLOGICAL AND DOSE ASSESSMENT
DATA FROM MIDAS

Prepared by: CBurns 9/24/98 Technical Reviewer: Tony Fuller 9/1/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Tony Fuller AKing 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

OBTAINING METEOROLOGICAL AND DOSE ASSESSMENT DATA FROM MIDAS

1.0 PURPOSE

- 1.1 Access the Meteorological Information and Dose Assessment System (MIDAS) meteorological data, radiological data, plant parameter data AND dose calculation tasks in the Emergency Operations Facility (EOF).

2.0 DISCUSSION

- 2.1 The MIDAS collects and makes available to authorized users current:
 - 2.1.1 Meteorological data from the Primary AND Backup meteorology towers on the site.
 - 2.1.2 Radiological data from the Senti System monitors in each sector around the site.
 - 2.1.3 Weather service contractor forecast meteorological data for the site.
 - 2.1.4 A limited set of plant parameter data.
- 2.2 Some of the collected data is used in a dose calculation task which is also available to authorized users.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 The appropriate login name (userid) AND password shall be available to the user.

4.0 EQUIPMENT AND MATERIALS

- 4.1 IBM, RISC System 6000 Station, 3151 Display w/ keyboard.
- 4.2 IBM, RISC System 6000 Station, 2391 IPPSII Printer.
- 4.3 Tektronix, Graphics Netstation, 4211 Graphics Module.
- 4.4 Tektronix, Graphics Netstation, 15 inch Display.
- 4.5 Tektronix, Graphics Netstation VT200 Keyboard w/ mouse.
- 4.6 Tektronix, RGBIII Printer w/ personal control unit.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Graphics Station and Printer Check

5.1.1 Check the Graphics Station Display and Keyboard:

- a. At the lower right of the Display, the red power switch "I" is down.
- b. The green light is on.
- c. The green "TEK" key light on the keyboard is on.
- d. Press the "Return" key to de-activate the screen saver.
- e. The prompt "IBM AIX...1990.login" is displayed on the screen.

5.1.2 Check that the Printer is ready:

- a. The power switch "I" is depressed.
- b. The "POWER" light is on.
- c. The "READY" light is on.
- d. "Make Print?, Print 1" appears on the personal control unit.

5.2 IBM Station and Printer Check

5.2.1 Check the IBM Station Display and keyboard:

- a. At the lower right of the Display, the black power switch handle is in the "I" position.
- b. Press the "Return" key to de-activate the screen saver.
- c. The prompt "IBM AIX...1990. Console login" is displayed on the screen.

5.2.2 Check that the Printer is ready:

- a. At the back right sidepanel, the power switch "I" is depressed.
- b. The "POWER" light is on.
- c. The "READY" light is on.

5.3 Obtaining Data

- 5.3.1 Login to MIDAS at the Graphics Station display monitor by typing "eof" (use lower case) at the login prompt AND press the "Return" key.
- 5.3.2 At the password prompt type "color" (use lower case) AND press the "Return" key.

NOTE:

THE SCREEN SAVER IS ACTIVATED AFTER 30 SECONDS. MOVE THE MOUSE TO RESTORE THE SCREEN.

- 5.3.3 AT the RUN SELECTION MENU use the mouse to move the cross hair to the **EMERGENCY OR DRILL** selection AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once. This will display the UNIT SELECTION MENU.
- 5.3.4 AT the UNIT SELECTION MENU move the cross hair to **CON ED UNIT2** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once. This will display the FUNCTION SELECTION MENU.
- 5.3.5 AT the FUNCTION SELECTION MENU move the cross hair to **ACCIDENT REPORTS FOR NRC (NR)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.
- 5.3.6 To print the Met data move the cross hair on the **ACCIDENT REPORTS FOR NRC MENU** to **PRINT MET DATA (NRCMET)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.

- a. The following prompt will be displayed:

ENTER:	[JU]	JULIAN DATE
	[MO]	MONTH/DAY
	[RETURN]	EXIT

- b. Type "mo" (use lower case) AND press "Return".

- c. The following prompt will be displayed:

```

ENTER:  [YMMDDHHMM YMMDDHHMM] START AND END DATES
        [99]                      LAST 6 HRS
        [88]                      FUTURE (NEXT 6 HRS FORECAST)
        [77]                      LAST 3 HRS PLUS FUTURE 3 HRS.
        [RETURN]                   GO BACK TO PREVIOUS PROMPT

```

- d. Type "99" AND press "Return".
- e. Press "Return" to continue.
- f. Press the print button on the personal control unit to print the data displayed on the screen
- g. Press "Return" to continue.

5.3.7 To print the offsite monitor data move the cross hair on the ACCIDENT REPORTS FOR NRC MENU to PRINT OFFSITE MONITOR DATA (NROAD) AND click once to highlight the selection. Move the cross hair to CONFIRM AND click once.

- a. The following prompt will be displayed:

```

ENTER:  [AL]          ALL 15 MINUTE PERIODS
        [NN]          ONE 15 MINUTE PERIOD ( 00,15,30,45)
        [RETURN]      EXIT

```

- b. Type "al" (use lower case) AND press "Return".
- c. The following prompt will be displayed:

```

ENTER:  [YRMODAHRMNYRMODAHRMN] START AND END DATES
        [RETURN]                   GO BACK TO PREVIOUS PROMPT

```

YR = Year
 MO = Month
 DA = DAY
 HR = Hour
 MN = Minute

- d. Type in the start and stop times for the data that you want to print out (example 94070409009407041000) AND press "Return".

- e. Two hours of data is displayed at a time. Use the up/down arrow keys to scroll the screen display.
- f. Press the print button on the personal control unit to print the data displayed on the screen. Multiple screen printouts may be necessary.
- g. Press "Return" to display the next two hours of data.
- h. When all the data has been displayed/printed press "Return" to exit.

5.3.8 To print the plant parameters move the cross hair on the ACCIDENT REPORTS FOR NRC MENU to **PRINT U2 & U3 PLANT PARAMETER (NRRPAR)** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.

- a. The following prompt will be displayed:

ENTER: [YRMODAHRMN] START DATA (MIN)
 [99] LAST 3.5 HOURS
 [RETURN] EXIT

- b. Type "99" AND press "Return".
- c. Press the print button on the personal control unit to print the data displayed on the screen.
- d. To exit type "ex" (use lower case) AND press "Return".

5.3.9 To perform dose assessment calculation perform the following:

- a. Move the cross hair to **RESET** and click as necessary to return to the FUNCTION SELECTION MENU.
- b. Move the cross hair to **ACCIDENT DOSE MENU** AND click once to highlight the selection. Move the cross hair to **CONFIRM** AND click once.
- c. Move the cross hair to **UNIT2 CR DOSE CALCULATIONS (ZCRISA)** AND click once. Move the cross hair to **CONFIRM** AND click once.
- d. The following prompt will appear on the screen:

ENTER: [ST] STANDARD TIME OR
 [DT] DAYLIGHT SAVING TIME

e. Choose either standard OR daylight saving time. Standard time is preferred because meteorological data from MIDAS, the MET Display Panel, and data loggers are reported for standard time.

f. Enter st OR dt (use lower case) AND push "Return" key.

g. The following prompt will appear:

ENTER TIME OF REACTOR SHUTDOWN ON 24 HOUR CLOCK
(HRMN)... PRESS RETURN KEY

h. Enter the time of the reactor shutdown (HRMN) AND push "Return" key.

i. The time of reactor shutdown will then be displayed in the following format: (YRMODAHRMN)

YR = Year
MO = Month
DA = DAY
HR = Hour
MN = Minute

j. IF the time of shutdown is correct THEN push "Return" key. To change the time of shutdown enter the correct time AND press "Return" key.

k. The following prompt will appear:

ENTER: [YRMODAHRMN] TIME RELEASE STARTS
[RETURN] STARTS AT OR BEFORE CURRENT TIME

l. Since the release has started press "Return" key to accept default time.

NOTE:

THIS PROGRAM REQUIRES ENTRY OF VALUES FOR CPM (COUNTS /MINUTE), MR/HR, CFM (CU.FT./MIN), LBS/HR, ETC. NUMBERS CAN BE ENTERED DIRECTLY OR IN ENGINEERING NOTATION. EXAMPLES OF THE NOTATION TO BE ENTER IS AS FOLLOWS:

- 1) $1,400,000 = 1.4 \times 10^6 = 1.4E6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E6
- 2) $.0000014 = 1.4 \times 10^{-6} = 1.4E-6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E-6

- m. Select the accident release path AND press "Return" at the following prompt:

SELECT THE ACCIDENT RELEASE PATH

1. PLNTVNT R-44
2. PLNTVNT R-27
3. PLNTVNT CONTACT
4. R EJTR R-45
5. T LNST MSL

ENTER: [N] (1-5) AND PRESS RETURN KEY OR
[EX] TO EXIT

- n. Select units which will be inputted AND press "Return" at the following prompt:

SELECT UNITS WHICH WILL BE INPUTTED FROM...

- 1 = CPM
2 = UCI/SEC
3 = UCI/CC

ENTER (1-3) AND PRESS RETURN KEY

- o. Enter CPM, Noble Gas release rate OR effluent activity AND press "Return".
- p. Enter the required effluent flow rate (CFM, Lbs/hr., GPM) AND press "Return".
- q. IF Meteorological data is unavailable, THEN the following message is displayed:

TIME OF MET: YRMODAHRMN

SOME OR ALL MET DATA ARE BAD FOR
RELEASE POINT 1 GROUND RELEASE

- r. Manually enter the wind direction (DIR), wind speed (SPD) and delta temperature (DT) AND press "Return". Refer to Reference 6.2 for other sources of data and conversions to the correct units. Wind speed must be meters/sec. (MS). Use the lower or ground delta temperature. The current values will then be displayed. To accept current values press "Return". To correct current values re-enter values AND press "Return".
- s. Check that the display continues with radiation monitor AND meteorological data is correct. To restart press "S" AND press "Return". To continue press "Return".

- t. Check that the display continues with radiological data. Use the up/down arrow keys to scroll the screen display.
- u. Press the print button on the personal control unit to print the data displayed on the screen. Multiple screen printouts may be necessary.
- v. Enter remaining duration of release (IF unknown, THEN enter the default value 4 hours) AND press "Return" to obtain dose projections. Use the up/down arrow keys to scroll the screen display.
- w. Press the print button on the personal control unit to print the data displayed on the screen. Multiple screen printouts may be necessary.
- x. Press "Return" to continue.
- y. When requested to transfer report to broadcast file enter "no" AND press "Return".
- z. Enter "s" (use lower case) to stop dose projection program AND press "Return".

5.3.6 To exit MIDAS move the cross hair to **RESET** and click as necessary to return to the **FUNCTION SELECTION MENU**. Move the cross hair to **EXIT** AND double click.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

OPERATIONS SUPPORT CENTER

Prepared by:	<u>Allen Lee</u> Print Name	<u>[Signature]</u> Signature	<u>3/6/00</u> Date
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Reviewer:	_____ Print Name	_____ Signature	_____ Date
SNSC Review:	<u>2706</u> Meeting Number	<u>[Signature]</u> Signature Secretary	<u>3/14/00</u> Date
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Effective Date: 3/28/00

Extensively Revised

_____	Biennial Review _____
Reviewer/Date	Reviewer/Date

[CONTROLLED]

**Reference
Use**

Table of Contents

1.0	PURPOSE	4
2.0	DISCUSSION	4
3.0	PRECAUTIONS AND LIMITATIONS	4
4.0	EQUIPMENT AND MATERIALS	4
5.0	INSTRUCTIONS	5
5.1	The OSC Manager	5
5.2	The Radiation Protection Coordinator	5
5.3	The Maintenance Coordinator	5
5.4	The I&C Coordinator	5
5.5	The Team Coordinator	5
5.6	The Operations Coordinator	5
5.7	The Accountability Clerk	5
6.0	REFERENCES	5
7.0	ATTACHMENTS	
7.1	Attachment 1, OSC Manager Checklist	7
7.2	Attachment 2, Rad Protection Coordinator Checklist	15
7.3	Attachment 3, Maintenance Coordinator Checklist	22
7.4	Attachment 4, I&C Coordinator Checklist	25
7.5	Attachment 5, Team Coordinator Checklist	28
7.6	Attachment 6, Operations Coordinator Checklist	32
7.7	Attachment 7, Accountability Clerk Checklist	35

Table Of Contents (cont.)

8.0 ADDENDUM

8.1	OSC / TSC Complex Layout	37
8.2	OSC / TSC Radiological Set Up	38
8.3	Task Assignment Log (Form IP-1023-1)	39
8.4	Emergency Team Briefing Form Log (Form IP-1023-2)	40
8.5	Individual Exposure Tracking Log Log (Form IP-1023-3)	41
8.6	ERO Log Sheet Log (Form IP-1023-4)	42
8.7	Emergency Radiation Work Permit Log (Form IP-1023-5)	43
8.8	Emergency Exposure Authorization Log (Form IP-1023-6)	44
8.9	Normal OSC Staffing Log (Form IP-1023-7)	45
8.10	ERO Tracking Log Log (Form IP-1023-8)	46
8.11	ERO Shift Rosters Log (Form IP-1023-9)	47

OPERATIONS SUPPORT CENTER (OSC)

1.0 PURPOSE

To describe the activation and operation of the Operations Support Center (OSC)

2.0 DISCUSSION

None

3.0 PRECAUTIONS AND LIMITATIONS

None

4.0 EQUIPMENT AND MATERIALS

4.1 The following type of equipment and materials are kept in the emergency lockers located in the stairwell at 53" elevation:

4.1.1 Protective Clothing

4.1.2 Respirators

4.1.3 KI Tablets

4.2 Portable radios and some radiation monitoring equipment is located in the TSC Lockers.

4.3 Keys for TSC Cabinets are contained in the TSC key locker. The key to the key locker is kept in the FSS Office. A backup key is located in a break glass container in the TSC.

5.0 INSTRUCTIONS

- 5.1 The OSC Manager shall follow the instructions outlined in Attachment 1, OSC Manager Checklist.
- 5.2 The Radiation Protection Coordinator shall follow the instructions outlined in Attachment 2, RP Coordinator Checklist.
- 5.3 The Maintenance Coordinator shall follow the instructions outlined in Attachment 3, Maintenance Coordinator Checklist.
- 5.4 The I&C Coordinator shall follow the instructions outlined in Attachment 4, I&C Coordinator Checklist.
- 5.5 The Team Coordinator shall follow the instructions outlined in Attachment 5, Team Coordinator Checklist.
- 5.6 The Operations Coordinator shall follow the instructions outlined in Attachment 6, Operations Coordinator Checklist.
- 5.7 The Accountability Clerk shall follow the instructions outlined in Attachment 7, Accountability Clerk Checklist.

6.0 REFERENCES

- 6.1 IP-1027, "Site Personnel Accountability and Evacuation"
- 6.2 IP-1035, "Technical Support Center"
- 6.3 IP-1041, "Use of the Triton to Monitor Radiogas"
- 6.4 IP-1020, "Airborne Iodine-131 Determination"
- 6.5 System Operating Procedure 11.1, Ventilation System Operation

7.0 ATTACHMENTS

- 7.1 Attachment 1, OSC Manager Checklist.
- 7.2 Attachment 2, Rad Protection Coordinator Checklist.
- 7.3 Attachment 3, Maintenance Coordinator Checklist.
- 7.4 Attachment 4, I&C Coordinator Checklist.
- 7.5 Attachment 5, Team Coordinator Checklist.
- 7.6 Attachment 6, Operations Coordinator Checklist
- 7.7 Attachment 7, Accountability Clerk Checklist

8.0 ADDENDUM

- 8.1 Addendum 1, OSC / TSC Complex Layout
- 8.2 Addendum 2, OSC / TSC Radiological Set Up
- 8.3 Addendum 3, Task Assignment Log (Form IP-1023-1)
- 8.4 Addendum 4, Emergency Team Briefing Form (Form IP-1023-2)
- 8.5 Addendum 5, Individual Exposure Tracking Log (Form IP-1023-3)
- 8.6 Addendum 6, ERO Log Sheet (Form IP-1023-4)
- 8.7 Addendum 7, Emergency Radiation Work Permit (Form IP-1023-5)
- 8.8 Addendum 8, Emergency Exposure Authorization (Form IP-1023-6)
- 8.9 Addendum 9, Normal OSC Staffing (Form IP-1023-7)
- 8.10 Addendum 10, Non-Exposure Tracking Form (Form IP-1023-8)
- 8.11 Addendum 11, ERO Shift Rosters (Form IP-1023-9)

Attachment 1
OSC Manager Checklist
 Sheet 1 of 8

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the duties of OSC Manager</p> <p><u>IF</u> Initial Accountability has not been performed <u>THEN</u> perform accountability in accordance with IP-1027, Personnel Accountability and Evacuation</p>	
<p>2.0 Continue the duties of the OSC Manager.</p> <p>2.1 Sign in on the facility organization chart.</p> <p>2.2 Review TSC/OSC status boards if available</p> <p>2.3 <u>IF</u> the OSC has not yet been activated <u>THEN</u> activate the OSC as follows:</p> <p style="margin-left: 20px;">A. Receive a briefing from the EPM or the Shift Manager in the CCR on plant conditions and any Repair/Operations personnel currently in the field.</p> <p style="margin-left: 20px;">B. Verify that the following minimum staffing is available before activating:</p> <p style="margin-left: 40px;">1. OSC Manager</p> <p style="margin-left: 40px;">2. Team Coordinator</p> <p style="margin-left: 40px;">3. Rad Protection Coordinator</p> <p style="margin-left: 40px;">4. 1 HP Technician (may be in field at time of activation)</p> <p style="margin-left: 20px;">C. <u>IF</u> the Team Coordinator is not present <u>THEN</u> assume the duties of the Team Coordinator per Attachment 5.</p> <p style="margin-left: 20px;">D. <u>IF</u> additional personnel are required <u>THEN</u>:</p> <p style="margin-left: 40px;">1. <u>IF</u> it is during normal working hours <u>THEN</u> call or assign someone to call the Assembly Areas for additional personnel</p> <p style="margin-left: 40px;">2. <u>IF</u> it is <u>NOT</u> during normal working hours <u>THEN</u> assign someone to call the EOF or AEOF for needed personnel.</p>	

Attachment 1
OSC Manager Checklist
 Sheet 2 of 8

<u>Initial Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>3. IF needed individuals are not available onsite THEN assign someone to call individuals at home using the Emergency Telephone Directory (Appendix A of Emergency Plan Implementing Procedures, Emergency Roster.)</p> <p>E. Determine when the OSC staff is prepared to assume primary functions of OSC (dispatching and accounting of operations, HP, maintenance Teams into the plant).</p> <p>F. When ready to activate the OSC, formally relieve the CCR of the responsibilities to track inplant teams as follows:</p> <ol style="list-style-type: none"> 1. Call the Shift Manager and request a complete listing of personnel currently performing tasks outside the CCR. 2. Inform the Shift Manager that you are now activating the OSC and assuming responsibility for accountability of all personnel inside the Protected Area and outside the CCR. 3. Inform the EPM that the OSC has been activated. 4. Make an announcement to the OSC, TSC, and inform the EOF that the OSC has been activated. <p>G. Augment the OSC staff as necessary:</p> <ol style="list-style-type: none"> 1. IF OSC staffing is less than that shown on Form IP-1023-7, Normal OSC Staffing THEN call for additional personnel per above steps. 2. Call in as many additional resources (in addition to that called for normal staffing) as needed for the event in progress. <p>H. Direct Accountability Clerk to contact warehouse personnel to be available by:</p> <ol style="list-style-type: none"> 1. IF during normal working hours THEN call the Material Control Storekeeper at Indian Point Stores and notify him/her of the emergency and direct him/her to arrange for continuous staffing of the warehouse until the emergency is terminated. 	

Attachment 1
OSC Manager Checklist
 Sheet 3 of 8

<u>Initial Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>2. <u>IF</u> during off-hours <u>THEN</u> call in a Material Control Storekeeper and/or contact the Astoria Warehouse.</p> <p>I. Brief OSC technicians on event and OSC Operations as follows:</p> <ol style="list-style-type: none"> 1. Provide brief explanation of event which caused the emergency. 2. Inform them not to leave the TSC/OSC Complex without checking out with the OSC Team Coordinator. 3. Inform them that they will be briefed by one of the OSC Coordinators prior to being send into the field to perform a task. 4. When briefed and dispatched by a coordinator they <u>MUST</u> check out with the OSC Team Coordinator before they leave the TSC/OSC Complex. 5. When returning from a mission they <u>MUST</u> check in with the OSC Team Coordinator and report any radiation exposure received while dispatched. <p>2.4 <u>IF</u> relieving another OSC Manager <u>THEN</u> perform a formal turnover with current OSC Manager.</p> <ol style="list-style-type: none"> A. Review the OSC Manager's activity log B. Obtain a briefing on the emergency and any actions that have been completed or are in progress. C. Make a formal announcement to OSC/TSC when the turnover takes place. <p>2.5 <u>IF</u> relieving another OSC Manager <u>AND</u> there has been a shift change of OSC Technicians <u>THEN</u> brief the OSC Technicians per step 1.3.I above.</p>	

Attachment 1
OSC Manager Checklist
 Sheet 4 of 8

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>3.0 Inform EPM and OSC Coordinators when temporarily leaving the work area.</p> <p>3.1 Direct the TSC Communicator or Clerk to answer your phone while you are away.</p> <p>3.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from the EPM on any events which have occurred while away.</p>	
<p>4.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log</p> <p>4.1 Log when OSC is activated or when there is a manager change.</p> <p>4.2 Log major decisions and any important details of actions taken</p>	
<p>5.0 Supervise the activities of the OSC Coordinators and team personnel.</p> <p>5.1 The EPM is responsible for overall control of the onsite emergency response. Obtain EPM concurrence prior to directing any actions which may affect the operability of a plant system.</p> <p>5.2 Coordinate activities of operations personnel in the OSC with the Operations Coordinator and the Central Control Room.</p> <p>5.3 Inform the EPM immediately of any operations teams requested to be dispatched from the OSC by the CCR.</p> <p>5.4 Maintain adequate personnel and material resources for the onsite response.</p> <p>5.5 <u>IF</u> any necessary materials or supplies are not available on site <u>THEN</u> request assistance in obtaining items from the Material Control Storekeeper and/or the Administrative and Logistics Director at the corporate offices.</p>	

Attachment 1
OSC Manager Checklist
Sheet 5 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.6 Ensure that priorities are consistent with the priorities established by the EPM</p> <p>A. High (H): The task is necessary to protect the immediate health and safety of the public. Plant conditions are allowing the rapid deterioration of safety barriers, or barriers have already been broken such that a release is either occurring or is imminent.</p> <p>B. Medium (M): Any task that requires action by the OSC and should be worked on at the immediate time period, but does not fit the criteria of a health and safety of the public related mission (for example, there is a leak, or there is a secondary plant problem, and so forth).</p> <p>C. Low (L): Any task which can be worked on when resources permit (for example, getting meals).</p> <p>5.7 Assign task to OSC Coordinators and maintain the OSC Manager's Task Assignment Log (Form IP-1023-1).</p> <p>5.8 Keep the Coordinators, Team Leaders, and Team Members informed of the overall focus of the emergency, task priorities and existing radiological conditions.</p> <p>5.9 Remind the Coordinators to maintain an awareness of the activities and concerns of OSC team members and team leaders.</p> <p>5.10 Verify that the Mission Status Board is updated as new tasks are assigned, old tasks are completed, and as priorities are changed.</p> <p>5.11 Obtain approval from the EPM prior to deviating from any existing plant procedure or prior to performing an action for which no procedure exists, but would normally require a procedure.</p>	

Attachment 1
OSC Manager Checklist
 Sheet 6 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>6.0 Maintain ongoing accountability for TSC/OSC personnel.</p> <p style="text-align: center;"><u>NOTE</u></p> <p>Ongoing Accountability is required at the Site Area Emergency Level, may be relaxed by Emergency Plant Manager at Alert.</p> <p>6.1 Direct OSC Staff to maintain accountability of all OSC personnel through the use of status boards, team assignments, Form IP-1023-3, Individual Exposure Tracking Log and Form IP-1023-8, Non-Exposure Tracking Log.</p> <p>6.2 Inform the EPM immediately of any missing personnel.</p> <p style="text-align: center;"><u>NOTE</u></p> <p>Security and Operations personnel trained in first aid should be used on search and rescue teams if possible.</p> <p>6.3 IF anyone is unaccounted for <u>THEN</u></p> <p>A. Commence search and rescue operations using OSC task and team assignment procedures.</p> <p>B. Instruct search and rescue teams not to move an incapacitated victim without a Medical Representative or qualified first responder UNLESS the potential harm from radiation or other hazards out weights the potential harm of moving the victim.</p>	
<p>7.0 Inform the EPM of changing situations in the plant based on information received from teams out in the field.</p>	
<p>8.0 Participate in periodic briefings of TSC/OSC staff.</p> <p>8.1 Update the Material Control Storekeeper on briefing items</p> <p>8.2 Ensure personnel in the field are updated.</p>	
<p>9.0 Assist EPM and TSC Staff in developing ad hoc procedures and defining tasks to mitigate the emergency.</p>	

Attachment 1
OSC Manager Checklist
Sheet 7 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>10.0 Evaluate the need to evacuate the TSC/OSC and evacuate as necessary.</p> <p style="text-align: center;"><u>NOTE:</u></p> <p>An organized evacuation of the TSC/OSC Complex should be started when the following radiological conditions occur:</p> <ul style="list-style-type: none"> • Exposure rates > 80 mRem/Hr TEDE <u>OR</u> 500mRem/Hr TODE • Projected Whole Body Dose for a 12 hour period is > 1 Rem TEDE <u>OR</u> Thyroid Dose >5 Rem TODE • Airborne concentrations which may result in exceeding occupational limits for inhalation specified in 10CFR20, Appendix B, Table 1. <p>Evacuation may be performed at rates below those listed based on plant conditions and response needs.</p> <p>10.1 Determine a suitable alternate location should the recommendation to relocate the OSC be made by the RP Coordinator.</p> <p>10.2 Determine the speed at which the relocation of personnel should occur giving consideration to the following items:</p> <ul style="list-style-type: none"> A. Consider the impact of immediate relocation vs. projects in progress. B. Current radiological conditions within the TSC/OSC C. Radiological conditions at the proposed relocated TSC/OSC. D. Radiological conditions en route. E. The adequacy of response from the alternate location. <p>10.3 Coordinate evacuation of the TSC/OSC with the EPM and TSC Manager.</p> <p>10.4 Request that the EPM announce the decision to evacuate, times and new location over the Station PA system.</p> <p>10.5 Inform the CCR and Material Control Storekeeper of the change in location of the OSC.</p>	

Attachment 1
OSC Manager Checklist
 Sheet 8 of 8

<u>Continuous Responsibility/Activity (cont.)</u>		
10.6	Notify Security to instruct incoming personnel to report to the alternate TSC/OSC.	
10.7	Direct that all equipment and materials needed for the alternate OSC be packaged and delivered to the new location.	
11.0	Set up second shift of Emergency Response Organization	
11.1	Direct the Accountability Clerk to complete an ERO Shift Roster (Form IP-1023-9).	
11.2	Review the completed form with the TSC Manager to ensure all required individuals are identified.	
11.3	Request the EPM to establish a shift turnover time with the ED	
11.4	Direct Accountability Clerk to use the Emergency Telephone Directory to call a 2 nd shift and notify them when to report to their assigned facility.	
<u>Closeout Responsibility/Activity</u>		<u>Notes</u>
12.0	Direct OSC personnel to return all equipment to proper storage locations.	
13.0	Review all documentation:	
13.1	Verify that logs, forms and other documentation are complete	
13.2	Verify that all repairs performed by OSC Teams that deviated from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or plant recovery operations.	
14.0	Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 1 of 7

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
1.0 Assume the position of Rad Protection Coordinator.	
1.1 Sign in on the facility organization chart.	
1.2 <u>IF</u> the OSC has not yet been activated <u>THEN</u> perform the following: <ul style="list-style-type: none"> A. Contact the Watch HP and receive a briefing of radiological conditions and status of any ongoing jobs. B. Determine if any personnel are currently in the field. C. Request the CCR to align the TSC/OSC ventilation system for incident operation per procedure SOP 11.1, Ventilation System Operation. D. Direct a TSC/OSC habitability survey and that radiological controls be set up as shown in Addendum 2 if necessary. E. Establish contamination controls for the CCR if necessary. F. Assign an HP Technician to obtain TLDs and dosimeters from the Control Point for all OSC/TSC personnel. G. <u>IF</u> individuals have not been previously issued TLDs <u>THEN</u> have TLDs issued to them. 	
1.3 Report readiness status to the OSC Manager when prepared to assume the Rad Protection Coordinator position.	
1.4 <u>IF</u> relieving another Rad Protection Coordinator <u>THEN</u> , perform a formal turnover: <ul style="list-style-type: none"> A. Review the RP Coordinator's activity log. B. Obtain a briefing on the emergency, radiological conditions and any actions that have been completed or are in progress. C. Relieve current Rad Protection Coordinator 	
1.5 Inform OSC staff that you are now the Rad Protection Coordinator.	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 2 of 7

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Establish and Maintain radiological habitability.</p> <p>2.1 Direct periodic monitoring of Emergency Response Facilities within the Protected Area and other occupied areas as necessary, particularly when a release of radioactive material into plant environments is in progress or suspected.</p> <p>A. At a minimum, verify habitability in the Main Control Room, TSC, OSC, and Security Building.</p> <p>B. <u>IF</u> the following conditions exist in the TSC/OSC or CCR <u>THEN</u> inform the EPM to implement restrictions on eating and drinking in the effected areas.</p> <ul style="list-style-type: none"> • Contamination Levels above background • Airborne contamination levels above background <p>C. Insure TSC/OSC personnel are aware of any restrictions in place.</p> <p>D. <u>IF</u> any of the following conditions exist <u>THEN</u> Inform the OSC Manager immediately to consider a planned evacuation of the TSC/OSC Complex:</p> <ul style="list-style-type: none"> • TSC/OSC (or other occupied area) Dose rates > 80 mRem/Hr TEDE or 500 mRem/hr TODE. • Projected doses > 1 Rem TEDE or 5 Rem TODE over a 12 hour period • Airborne concentrations which may result in exceeding occupational limits for inhalation specified in 10CFR20, Appendix B, Table 1. <p>2.2 <u>IF</u> any of the above limits are reached <u>THEN</u> Coordinate with the OSC/TSC Managers to survey alternate locations for habitability prior to relocation if possible.</p> <p>2.3 <u>IF</u> a chemical release is detected <u>THEN</u> direct Chemistry Technician or individual qualified in hazardous material response to assist in establishing chemical habitability prior to sending individuals into affected area.</p>	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 3 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>3.0 Inform another OSC Coordinator and the OSC Manager when temporarily leaving the work area.</p> <p>3.1 Request another OSC Coordinator to answer your phone while you are away.</p> <p>3.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>3.3 Upon return, obtain a briefing from another coordinator on any events which have occurred while away.</p>	
<p>4.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log</p> <p>4.1 Record the time you assume position of Rad Protection Coordinator.</p> <p>4.2 Record any significant and unusual indications from the Plant RMS.</p> <p>4.3 Record any significant changes in radiological conditions reported from field teams.</p> <p>4.4 Record any communications outside the Protected Area Fence or significant communications to facilities outside the OSC</p>	
<p style="text-align: center;">NOTE:</p> <p>Documentation on ERWPs and Team Briefing Forms may be deferred when immediate action is necessary to mitigate a situation that severely threatens plant or personnel safety. Documentation shall be finished as soon as possible after team dispatch.</p> <p>The HP Technician accompanying the team becomes a "Walking ERWP" and may determine what radiological precautions are appropriate for the situation.</p> <p>5.0 Suspend normal RWP requirements for performing work in radiological controlled areas if necessary. Emergency Radiation Work Permits (ERWP) will then be used for team dispatch.</p>	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 4 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
6.0 Suspend radiological posting requirements, if necessary, for areas outside the RCA that are affected by the accident until the Recover Phase is entered.	
7.0 Document radiological readings taken by HP Technicians or other meter qualified individuals in the field on survey maps.	
8.0 Establish and maintain dosimetry, protective clothing, and other protective equipment requirements for onsite ERO personnel. 8.1 Use ERWPs (Form IP-1023-2) to control radiological requirements for personnel sent into the plant. 8.2 Start ERWPs for anticipated activities in various plant areas. 8.3 If possible, based on your judgement, use normal criteria when establishing requirements for dosimetry, protective clothing, and respiratory protection equipment. 8.4 Verify the Team Coordinator is tracking individual exposure data on Individual Exposure Tracking Log (Form IP-1023-3) 8.5 Direct radiological control personnel to read TLDs for personnel whose exposure limits are approached.	
9.0 Direct Health Physics Personnel in the following activities: 9.1 Assign Radiation Control personnel to assist in emergency response support activities. 9.2 Use Form IP-1023-2, Emergency Team Briefing Form to prepare and document team assignments. 9.3 Assign personnel to conduct in-plant radiological surveys as required to support ERO activities. 9.4 Assign HP Technicians to accompany Damage Control Teams requiring radiological support.	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 5 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>10.0 IF there are contaminated injured personnel THEN perform the following:</p> <p>10.1 Provide radiological support for the assessment, treatment, and transportation of contaminated injured personnel.</p> <p>10.2 Monitor patients for contamination and decontaminate as appropriate.</p> <p>10.3 Make arrangements to pick up RP personnel at the hospital.</p> <p>10.4 Follow proper procedures to retrieve radioactive waste from offsite treatment locations.</p> <p>10.5 Obtain concurrence from the EPM prior to releasing the hospital's Radiological Emergency Room or the ambulance for uncontrolled use.</p>	
<p style="text-align: center;">NOTE</p> <p>Team Briefing Forms may be completed after team dispatch if time does not allow. Briefings shall still take place.</p> <p>11.0 Ensure emergency team receive proper briefs on radiological conditions and requirements.</p> <p>11.1 Depending on conditions the ERWP should state who will give radiological brief to emergency teams</p> <p>11.2 Request that the Team Coordinator attend briefings to ensure continuous accountability of dispatched Team personnel.</p> <p>11.3 Use the ERWP to discuss dose limits, expected and maximum dose rates, and stay times. Advise team members to immediately contact or return to the OSC when dose rates or stay times approach the established limits.</p> <p>11.4 Discuss dosimetry requirements.</p> <p>11.5 Discuss protective clothing and respiratory protection requirements.</p> <p>11.6 Discuss travel route requirements and if there are any releases in progress.</p> <p>11.7 Advise team members on monitoring and decontamination procedures following mission completion.</p>	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 6 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p style="text-align: center;">NOTE:</p> <p>For events that do involve an increase in plant radiation levels above those found during normal plant operations, normal exposure controls may be used vs. implementation of emergency exposure controls.</p> <p>12.0 Maintain onsite emergency exposure controls as follows:</p> <p>12.1 IF emergency exposure controls are implemented THEN Maintain individual emergency exposures as follows:</p> <ul style="list-style-type: none"> A. Request the EPM to authorize emergency exposures up to 1 Rem TEDE for all OSC and Operations Personnel. B. Track individuals doses to ensure no one receives more than 1 Rem TEDE during the emergency unless further exposure is authorized. C. Request the EPM to authorize additional exposure 1 Rem at a time, up to 5 Rem. D. Notify and ensure the EPM authorizes any emergency radiation exposures expected to exceed 5 Rem TEDE or when entry into areas where exposure rates > 25 Rem/Hr may be encountered. E. With EPM authorization volunteers may receive up to 10 REM TEDE to protect valuable property OR 25 REM TEDE to save a life or protect large populations. <p>12.2 An HP Technician escort or qualified self-monitor is required for any team to be sent into an area where any of the following conditions present:</p> <ul style="list-style-type: none"> A. Radiological conditions are unknown. Surveys or ARMs may be used to predict radiological conditions. B. Radiation field in excess of 1 R/hr are expected. <p>12.3 Clearly state exposure limits on ERWPs</p>	

Attachment 2
Rad Protection Coordinator Checklist
 Sheet 7 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>13.0 IF individuals receive or are expected to receive large Radioiodine Uptakes (~25REM) THEN:</p> <p>13.1 Control the specified issuance of KI to onsite emergency workers as follows:</p> <ul style="list-style-type: none"> A. Get approval of the EPM for issuance of KI B. Direct team members to read Patient Leaflet prior to taking KI. C. Administer KI D. Record KI issuance information on Individual Exposure Tracking Log <p>13.2 Evaluate iodine uptakes for persons issued KI.</p>	
<p>14.0 Direct the decontamination efforts of personnel, equipment, and onsite areas as appropriate.</p>	
<p>15.0 Ensure adequate materials and supplies are available for assigned missions.</p> <p>15.1 Obtain needed materials from normal station supply locations.</p> <p>15.2 IF additional supplies are needed THEN request any materials, supplies, or personnel needs from the OSC Manager.</p>	
<u>Closeout Responsibility/Activity</u>	<u>Notes</u>
<p>16.0 IF radiological conditions allow THEN Direct HP Technicians:</p> <p>16.1 To return emergency equipment to proper storage areas and restock supplies as needed.</p> <p>16.2 Review radiological conditions in the plant and update postings as required.</p> <p>16.3 Review any open RWPs to ensure conditions have not changed which may effect their use.</p>	
<p>17.0 Provide all logs and records to the OSC Manager upon termination of the emergency.</p>	

Attachment 3
Maintenance Coordinator Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Maintenance Coordinator.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Report readiness status to the OSC Manager when prepared to assume the Maintenance Coordinator position.</p> <p>1.3 <u>IF</u> relieving another Maintenance Coordinator <u>THEN</u>. perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review the activity log.</p> <p style="padding-left: 40px;">B. Obtain a briefing on the emergency, radiological conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">C. Relieve current Maintenance Coordinator</p> <p>1.4 Inform OSC staff that you are now the Maintenance Coordinator.</p>	

Attachment 3
Maintenance Coordinator Checklist
 Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform another OSC Coordinator and the OSC Manager when temporarily leaving the work area.</p> <p>2.1 Request another OSC Coordinator to answer your phone while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from another coordinator on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log of activities:</p> <p>3.1 Record the time you assume position of Maintenance Coordinator</p> <p>3.2 Record Maintenance Team activities undertaken with information on repairs performed and pending actions to ensure repairs are completed. (need not repeat items on team briefing forms)</p> <p>3.3 Record all communications outside the Protected Area Fence.</p>	
<p>4.0 Assist OSC Manager is planning and preparing for any mechanical and/ or electrical maintenance activities needed to return the plant to a safe condition.</p>	

Attachment 3
Maintenance Coordinator Checklist
Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.0 Participate in Team dispatch and field operations:</p> <p>5.1 Choose maintenance personnel who are best qualified to conduct assigned tasks(s).</p> <p>5.2 Use Form IP-1023-2, Emergency Team Briefing Form to prepare and document team assignments.</p> <p>5.3 Ensure Team is properly equipped to conduct repairs, including procedures, drawings, tools and repair parts.</p> <p>5.4 Participate in Team briefings to ensure team members properly understand assigned task.</p> <p>5.5 Work with the Team Coordinator while the team is in the field to answer any questions that may arise concerning task.</p> <p>5.6 Debrief mechanical and electrical maintenance team members when they return and ensure actions are properly documented.</p>	
<u>Closeout Responsibility/Activity</u>	<u>Notes</u>
<p>6.0 Assist OSC personnel to return all equipment to proper storage locations.</p>	
<p>7.0 Review all documentation the Maintenance Coordinators maintained during the emergency:</p> <p>7.1 Ensure logs, forms and other documentation are complete</p> <p>7.2 Ensure all repairs performed by OSC Teams that deviated from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations and/or plant recovery operations.</p>	
<p>8.0 Provide all logs and records to the OSC Manager upon termination of the emergency and entry into the Recovery Phase.</p>	

Attachment 4
I&C Coordinator Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of I&C Coordinator.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Report readiness status to the OSC Manager when prepared to assume the I&C Coordinator position.</p> <p>1.3 <u>IF</u> relieving another I&C Coordinator <u>THEN</u>. perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review the activity log.</p> <p style="padding-left: 40px;">B. Obtain a briefing on the emergency, radiological conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">C. Relieve current I&C Coordinator</p> <p>1.4 Inform OSC staff that you are now the I&C Coordinator.</p>	

Attachment 4
I&C Coordinator Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform another OSC Coordinator and the OSC Manager when temporarily leaving the work area.</p> <p>2.1 Request another OSC Coordinator to answer your phone while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from another coordinator on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log of activities.</p> <p>3.1 Record the time you assume position of I&C Coordinator</p> <p>3.2 Record I&C Team activities undertaken with information on repairs performed and pending actions to ensure repairs are completed. (you need not repeat information on team briefing forms.)</p> <p>3.3 Record all communications outside the Protected Area Fence.</p>	
<p>4.0 Assist OSC Manager in planning and preparing for any I&C maintenance activities needed to return the plant to a safe condition.</p>	

Attachment 4
I&C Coordinator Checklist
Sheet 3 of 3

<u>Continuous Responsibility/Activity</u>		<u>Notes</u>
5.0	Participate in Team dispatch and field operations:	
5.1	Choose I&C personnel who are best qualified to conduct assigned task(s)	
5.2	Use Form IP-1023-2, Emergency Team Briefing Form to prepare and document team assignments.	
5.3	Ensure Team is properly equipped to conduct repairs, including procedures, drawings, tools and repair parts.	
5.4	Participate in Team briefings to ensure team members properly understand assigned task	
5.5	Work with the Team Coordinator while the team is in the field to answer any questions that may arise concerning task	
5.6	Debrief I&C maintenance team members when they return and ensure actions are properly documented.	
<u>Closeout Responsibility/Activity</u>		<u>Notes</u>
6.0	Assist OSC personnel to return all equipment to proper storage locations.	
7.0	Review all documentation the I&C Coordinators maintained during the emergency:	
7.1	Ensure logs, forms and other documentation are complete	
7.2	Ensure all repairs performed by OSC Teams that deviated from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or recovery operations.	
8.0	Provide all logs and records to the OSC Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 5
Team Coordinator Checklist
Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p style="text-align: center;"><u>NOTE</u></p> <p>If there is no OSC Manager present perform the steps in Attachment 1, OSC Manager Checklist in conjunction with this checklist.</p> <p>1.0 Assume the position of Team Coordinator.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review TSC/OSC status boards if available</p> <p>1.3 Inform the OSC Manager that you are ready to activate and assist in OSC activation as needed.</p> <p>1.4 Obtain a briefing from the OSC Manager on the status of any personnel or teams currently in the field.</p> <p>1.5 Coordinate taking control of personnel and/or teams by establishing communications with field personnel and informing them that they are now under the control of the OSC.</p> <p>1.6 <u>IF</u> relieving another Team Coordinator <u>THEN</u> perform a formal turnover with current Team Coordinator.</p> <p>A. Review the Team Coordinator activity log.</p> <p>B. Obtain a briefing on the emergency and any actions that have been completed or are in progress.</p> <p>C. Review field operations and take control of accountability for personnel in the field.</p> <p>D. Inform the TSC Manager you are now the Team Coordinator.</p> <p>E. Make a formal announcement to OSC Staff when relief takes place.</p>	

Attachment 5
Team Coordinator Checklist
Sheet 2 of 4

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform another OSC Coordinator and the OSC Manager when temporarily leaving the work area.</p> <p>2.1 Request another OSC Coordinator to assume the Team Coordinator duties while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from acting Team Coordinator on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log of significant activities not documented on other OSC Tracking Logs</p> <p>3.1 Log when you assume the duties of Team Coordinator.</p> <p>3.2 Log significant communications to individuals outside the TSC/OSC complex, including communications with field teams.</p> <p>3.3 Log major decisions and any important details of team movements or actions.</p>	
<p>4.0 Ensure ongoing accountability (unless directed otherwise) for TSC and OSC personnel.</p> <p>4.1 Track all individuals leaving TSC/OSC Complex on the ERO Tracking Log (Form IP-1023-8)</p> <p>4.2 <u>IF</u> individuals are going to be receiving emergency radiation exposure <u>THEN</u> track radiation exposures on Individual Exposure Tracking Log (Form IP-1023-3).</p> <p>4.3 Inform the OSC Manager immediately of any missing personnel.</p> <p>4.4 <u>IF</u> anyone is unaccounted for <u>THEN</u> assist in search and rescue operations utilizing teams</p>	

Attachment 5
Team Coordinator Checklist
Sheet 3 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.0 Monitor the activities of the team personnel in the field.</p> <p>5.1 Keep informed on team mission priorities</p> <p>A. High (H): The mission is necessary to protect the immediate health and safety of the public. Plant conditions are allowing the rapid deterioration of safety barriers, or barriers have already been broken such that a release is either occurring or is imminent.</p> <p>B. Medium (M): Any task that requires action by the OSC and should be worked on at the immediate time period, but does not fit the criteria of a health and safety of the public related mission</p> <p>C. Low (L): Any mission which can be worked on when resources permit (for example, get meals).</p> <p>5.2 <u>IF</u> team tracking task allows the time <u>THEN</u> participate in team briefings to ensure you are aware of the teams assigned task and expected hazards.</p> <p>5.3 Maintain the Mission Status Board. Update as tasks are assigned, old tasks are completed, and as priorities are changed.</p> <p>5.4 Maintain communications with teams once they are dispatched from the OSC.</p> <p>5.5 Keep track of team radiation exposure while they are in the field on Individual Exposure Tracking Log (Form IP-1023-3).</p> <p>5.6 <u>IF</u> team tracking task allows the time <u>THEN</u> participate in Team Debriefings when they return to the OSC to keep informed on field conditions.</p> <p>5.7 Immediately update teams of any change in emergency classifications or changing conditions which may affect their safety, such as the start of a release.</p> <p>5.8 Immediately update RP Coordinator of any changing or unexpected conditions reported by teams in the field.</p>	
<p>6.0 Direct the Accountability Clerk to assist you in maintaining records as necessary.</p>	

Attachment 5
Team Coordinator Checklist
Sheet 4 of 4

<u>Continuous Responsibility/Activity (cont.)</u>		<u>Notes</u>
7.0	Inform the OSC Manager and other OSC Coordinators of changing situations in the plant based on information received from dispatched teams.	
7.1	Unexpected radiation levels.	
7.2	Unreported hazardous conditions.	
7.3	Important equipment status.	
<u>Closeout Responsibility/Activity</u>		<u>Notes</u>
8.0	Assist OSC personnel to return all equipment to proper storage locations.	
9.0	Review all documentation the OSC Team Coordinators maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure all repairs performed by OSC Teams that deviated from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or recovery operations.	
10.0	Provide all logs and records to the OSC Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 6
Operations Coordinator Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Operations Coordinator.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Report readiness status to the Shift Manager and the OSC Manager when prepared to assume the Operations Coordinator position.</p> <p>1.3 <u>IF</u> relieving another Operations Coordinator <u>THEN</u>, perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review the Operations Coordinator activity log.</p> <p style="padding-left: 40px;">B. Obtain a briefing on the emergency, radiological conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">C. Relieve the current Operations Coordinator</p> <p>1.4 Inform Shift Manager and OSC staff that you are now the Operations Coordinator.</p>	

Attachment 6
Operations Coordinator Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform another OSC Coordinator and the OSC Manager when temporarily leaving the work area.</p> <p>2.1 Request another OSC Coordinator to answer your phone while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from another coordinator on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log of activities.</p> <p>3.1 Record the time you assume position of Operations Coordinator.</p> <p>3.2 Record Operations Team activities undertaken with information on plant operations performed and repairs performed.</p> <p>3.3 Communications outside the OSC.</p>	
<p>4.0 Assist Control Room and OSC Manager in planning and preparing for any operations maintenance activities needed to return the plant to a safe condition.</p> <p>4.1 Establish communications with the CCR. Keep the CCR informed of field team activities currently underway or that are planned.</p> <p>4.2 Coordinate operations and repair activities with the CCR.</p> <p>4.3 Provide operational guidance to other OSC Staff and inplant teams.</p>	

Attachment 6
Operations Coordinator Checklist
Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.0 Participate in Team dispatch and field operations:</p> <p>5.1 Choose Operations personnel who are best qualified to conduct assigned task(s).</p> <p style="text-align: center;">NOTE</p> <p>For urgent operations requirements – the Emergency Team Briefing Form may be completed after team dispatch.</p> <p>5.2 IF you are the Lead Coordinator for a team THEN complete an Emergency Team Briefing Form (Form IP-1023-2) for the team dispatched from the OSC.</p> <p style="padding-left: 20px;">A Ensure Team is properly equipped to conduct assigned task, including procedures, drawings and tools.</p> <p style="padding-left: 20px;">B Participate in Team briefings to ensure team members properly understand assigned task.</p> <p>5.3 Keep the control room staff aware of all teams progress.</p> <p>5.4 Work with the Team Coordinator while the team is in the field to answer any questions that may arise concerning task(s).</p> <p>5.5 Debrief operations team members when they return and ensure actions are properly documented.</p>	
<u>Closeout Responsibility/Activity</u>	<u>Notes</u>
<p>6.0 Assist OSC personnel in returning all equipment to proper storage locations.</p>	
<p>7.0 Review all documentation the Operations Coordinators maintained during the emergency:</p> <p style="padding-left: 20px;">A. Ensure logs, forms and other documentation are complete</p> <p style="padding-left: 20px;">B. Ensure all activities performed by OSC Teams that deviated from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or plant recovery operations.</p>	
<p>8.0 Provide all logs and records to the OSC Manager upon termination of the emergency and entry into the Recovery Phase.</p>	

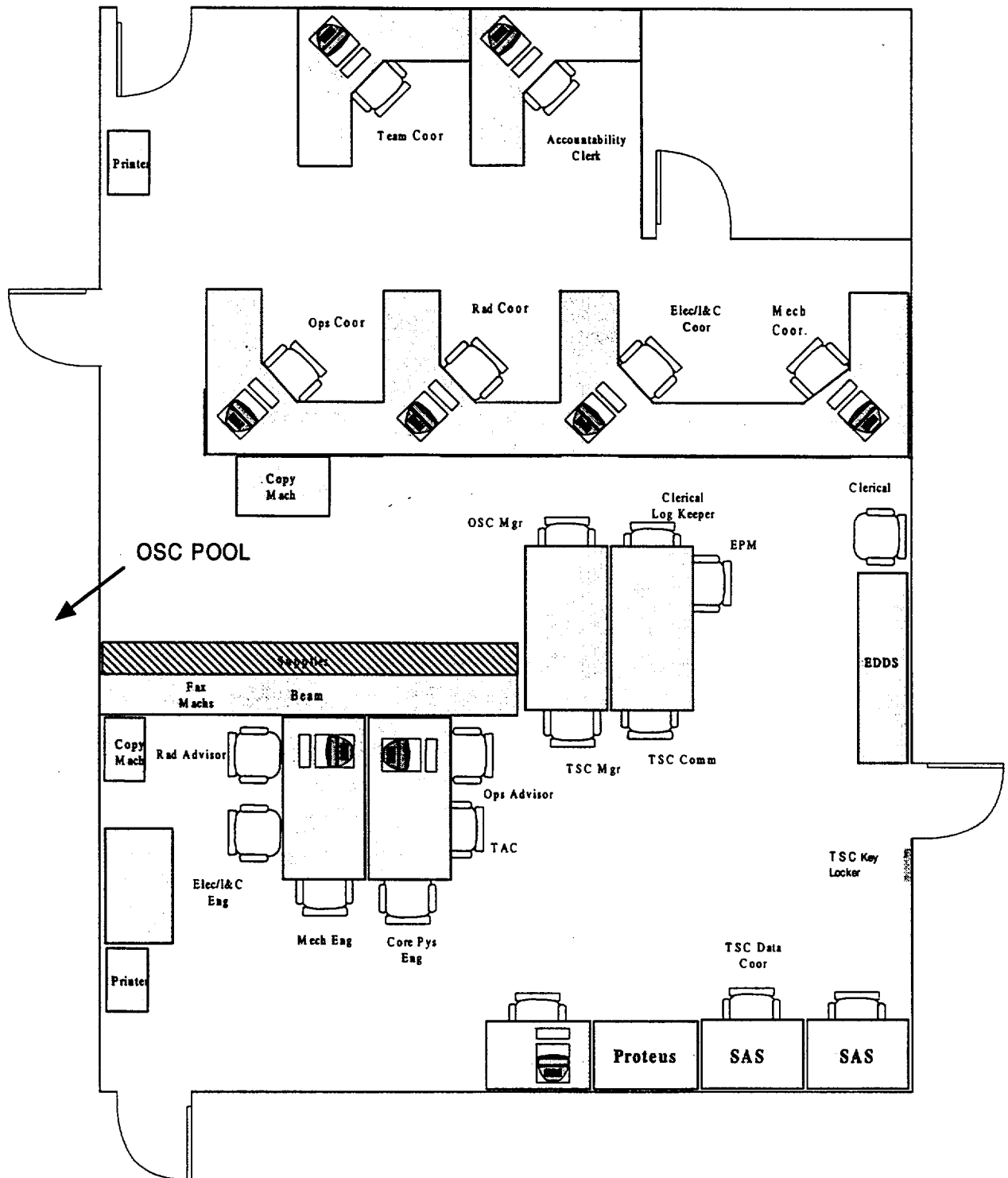
Attachment 7
Accountability Clerk Checklist
 Sheet 1 of 2

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Accountability Clerk.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Report readiness to assume position to the OSC Manager.</p> <p>1.3 <u>IF</u> relieving another Accountability Clerk <u>THEN</u>, perform a formal turnover:</p> <p style="padding-left: 20px;">A. Review the Team Coordinator's activity log.</p> <p style="padding-left: 20px;">B. Obtain a briefing on the emergency, radiological conditions and current status of personnel accountability.</p> <p style="padding-left: 20px;">C. Relieve the current Accountability Clerk.</p> <p>1.4 Inform OSC Manager that you are now the Accountability Clerk.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform an OSC Coordinator when temporarily leaving the work area.</p> <p>2.1 Request another OSC Coordinator to answer your phone while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 20px;">A Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes).</p> <p style="padding-left: 20px;">B Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from an coordinator on any events which have occurred while away.</p>	
<p>3.0 When directed by the OSC Manager assist in performance of initial Accountability</p> <p>3.1 Follow steps in procedure IP-1027, Site Personnel Accountability and Evacuation.</p> <p>3.2 Report completion of accountability and any missing persons to the OSC Manager.</p>	

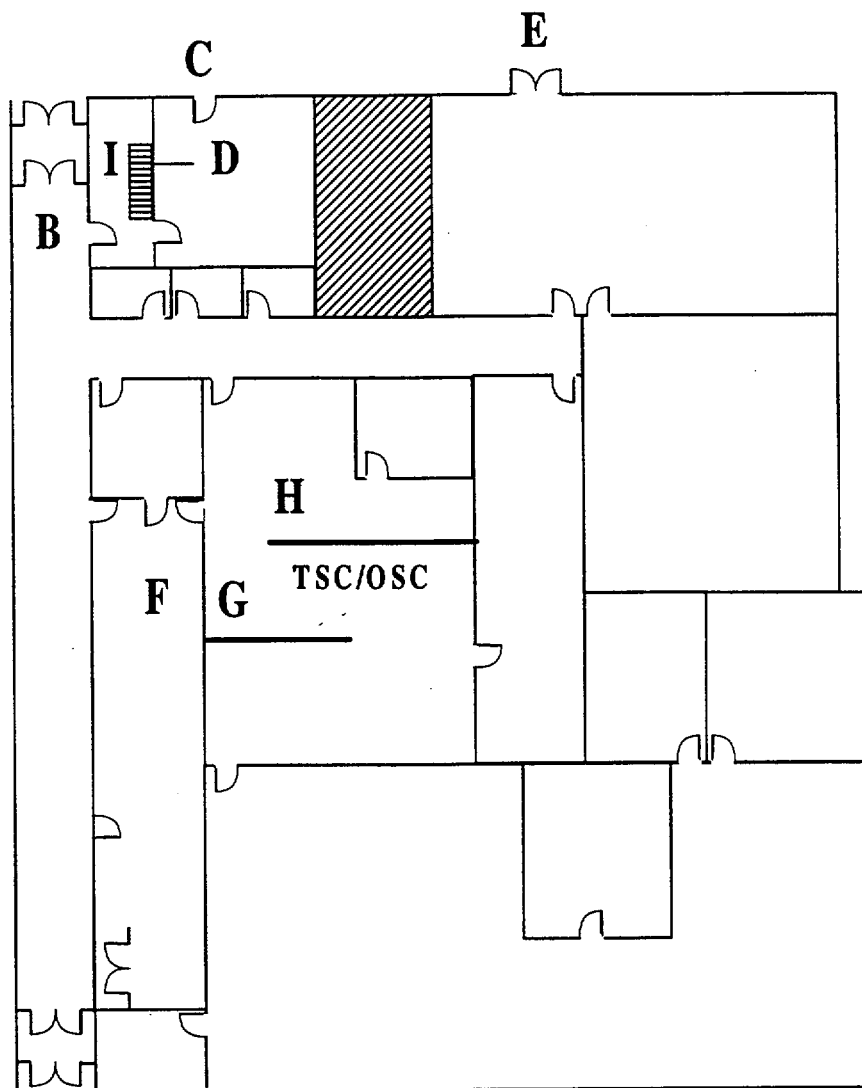
Attachment 7
Accountability Clerk Checklist
 Sheet 2 of 2

<u>Continuous Responsibility/Activity (cont.)</u>		<u>Notes</u>
4.0	Work with the OSC Coordinators to maintain Continuing Accountability	
4.1	Assist Team Coordinator in maintaining Individual Exposure Tracking Logs (Form IP-1023-3) and Non-Exposure Tracking Log (Form IP-1023-8).	
4.2	Assist Team Coordinators in maintaining OSC Status boards.	
5.0	Develop Second Shift Rosters for ERO and contact second shift	
5.1	Use ERO Shift Rosters (Form 1023-9) to list individuals currently on the first shift in the TSC and OSC.	
5.2	Request EOF Clerical Staff to identify the current EOF personnel.	
5.3	Work with TSC and OSC Managers to identify personnel to fill second shift and ensure all needed positions are identified and establish time second shift is to be called in.	
5.4	Use Emergency Telephone Directory to identify and contact individuals to fill positions on second shift. TSC and EOF Clerical Staff may be used to assist in notifications.	
5.5	Inform the OSC Manager when notifications are completed and if there are any problems filling required positions.	
<u>Closeout Responsibility/Activity</u>		<u>Notes</u>
6.0	Assist OSC personnel to return all equipment to proper storage locations.	

Addendum 1
TSC & OSC Layout
Sheet 1 of 1



Addendum 2
TSC / OSC Complex Radiological Setup
Sheet 1 of 1



A

If there is no indication of contamination outside the normal RCA the TSC/OSC Complex set up may be only the restricting of access and egress through point A and E.

If hallway contamination < 1000 dpm/100cm²

- A - No Entry / No Exit
- B - Exit Only
- C - Entry to TSC/OSC, No Exit, White Step Off Pad & Frisk shoes before stepping here sign
- D - Nothing is installed here
- E - No Entry / No Exit
- F - HPT Station
- G - Equipment Cabinet
- H - OSC Coordinators
- I - Place sign at top of the stairway no entry / no exit without permission from RPC

If hallway contamination > 1000 dpm/100cm²

- A - No Entry / No Exit
- B - Exit Only
- C - Entry to TSC/OSC, No Exit, White Step Off Pad & Frisk shoes before stepping here sign
- D - White Step Off Pad & Frisk shoes before stepping here sign
- E - No Entry / No Exit
- F - HPT Station
- G - Equipment Cabinet
- H - OSC Coordinators
- I - Place sign at top of the stairway no entry / no exit without permission from RPC

Addendum 3
Task Assignment Log (Form IP-1023-1)
Sheet 1 of 1

OSC Manager's Task Assignment Log

Task Description / Lead Coordinator		Date/ Time Assigned	Date/ Time Completed
<hr/> <hr/> <hr/>			
Priority	Lead Coordinator		
<hr/> <hr/> <hr/>			
Priority	Lead Coordinator		
<hr/> <hr/> <hr/>			
Priority	Lead Coordinator		
<hr/> <hr/> <hr/>			
Priority	Lead Coordinator		
<hr/> <hr/> <hr/>			
Priority	Lead Coordinator		

Priorities:

High (H): The mission is necessary to protect the immediate health and safety of the public.

Medium (M): Any task that requires action by the OSC and should be worked on at the immediate time period, but does not fit the criteria of a health and safety of the public related mission.

Low (L): Any mission which can be worked on when resources permit.

Form IP-1023-1 Rev 0

Addendum 4
Emergency Team Briefing (Form IP-1023-2)
Sheet 1 of 1

Emergency Team Briefing Form

Team Number: _____ <small>Assigned by Team Coord.</small>	Team Briefed By: _____
Date / Time: ____/____/____	Location of Work: _____
Task: _____ _____ _____ _____ _____ _____	
Tools, Equipment and Supplies: _____ _____ _____	
Team Members: ☆ _____ _____ _____	
☆ Designate one member as the Team Leader	
ERWP #: _____ <input type="checkbox"/> None, If time does not allow writing an ERWP, RP Tech must be sent with team	
Brief team on radiological requirements using ERWP Dose for Task: _____ mrem	
Method of Communications: _____	
Recommended Route to Work: _____ _____	
Status / Debrief Items: <input type="checkbox"/> Completed _____ _____	

Form IP-1023-2 Rev 0

Addendum 5
Individual Exposure Tracking Log (Form IP-1023-3)
 Sheet 1 of 1

Individual Exposure Tracking Log

Name: _____		TLD # _____ Employee # _____		
Location / Team / Times	Available Exposure (mrem)	Time of Reading	Dosimeter Reading	Emergency Exposure (mrem)

Team #: _____				
Time Out: _____				
Time In: _____				

Team #: _____				
Time Out: _____				
Time In: _____				

Team #: _____				
Time Out: _____				
Time In: _____				

Team #: _____				
Time Out: _____				
Time In: _____				

NOTES:

1. Use this form along with Team Briefing Form to account for ERO members dispatched from OSC/TSC and track individual's exposure
2. Initial Exposure Limit will be 1000 mrem for duration of emergency. EPM may authorized more exposure.
3. If Form is filled transfer Name, TLD # and remaining available exposure to new form and staple this completed form to it.

Form IP-1023-3 Rev 0

Addendum 6
ERO Log Sheet (Form IP-1023-4)
Sheet 1 of 1

ERO Log Sheet

[illegible]

Signature: _____

Form IP-1023-4 Rev 0

Addendum 7
Emergency Radiation Work Permit (Form IP-1023-5)
Sheet 1 of 1

Emergency Radiation Work Permit	
ERWP Number: _____ Date: _____	Written By: _____ Approved By: _____ <div style="text-align: right; font-size: small;">(RP Coordinator)</div>
Work Area: _____ _____	
Radiation Readings: <input type="checkbox"/> Based on recent survey (post emergency) Survey Time: _____ <input type="checkbox"/> Based on Old Surveys & Plant Conditions (update as soon as possible)	
High General Area Reading: _____ mR/Hr Updates: _____ mR/Hr _____ mR/Hr	
High Equipment Contact Readings: _____ / _____ mR/Hr On: _____	
Surface Contamination Levels: _____ DPM/100CM ² _____ DPM/100CM ²	
Internal System Contamination Expected: <input type="checkbox"/> Yes <input type="checkbox"/> No Airborne Levels*: <input type="checkbox"/> Yes <input type="checkbox"/> No	
* Attach Sample Results -- Consider giving KI prior to dispatching teams <u>IF</u> thyroid dose is expected to be > 25 Rem	
Recommended Respirator Protection: _____	
To be Worn When: _____	
Dosimetry Required: <input type="checkbox"/> TLD <input type="checkbox"/> SRD Range(s) <input type="checkbox"/> Alarming Set At: _____	
Recommended Protective Clothing: _____ _____	
Hold Radiation Limit: _____ mR/Hr _____ mrem	
Turn Back Radiation Limit: _____ mR/Hr _____ mrem	
RP Technician Required: <input type="checkbox"/> No <input type="checkbox"/> Until on location (survey)	
<input type="checkbox"/> Self Monitoring <input type="checkbox"/> Continuously <input type="checkbox"/> To Open System	
Other Instructions: _____ _____	

Form IP-1023-5 Rev 0

Addendum 8

Emergency Exposure Authorization (Form IP-1023-6)

Sheet 1 of 1

Emergency Exposure Authorization

Emergency Exposure Guidelines:

1. All Emergency Exposures shall be authorized by the Emergency Director or Emergency Plant Manager.
2. All individuals may be authorized up to 5 Rem emergency exposure for a given emergency event. Historical occupational exposure is not totaled into this limit.
3. Procedures allow for the Emergency Plant Manager to give a blanket authorization of up to 5 Rem emergency exposure for Alert or higher classifications.
4. Any emergency exposure greater than 5 Rem Whole Body, 50 Rem Extremities or 50 Rem Skin of Whole Body, shall be authorized on an individual basis for a specific task.
5. All emergency exposures are voluntary. - For higher doses individuals over the age of 45 are preferable. - Fertile women shall not be used, - Individuals should be briefed that these exposures may increase their chances of cancer during their lifetime.
6. Volunteers may be authorized up to 10 Rem to protect valuable property.
7. Volunteers may normally be authorized up to 25 Rem for life saving or the protection of large populations.
8. Individuals may volunteer to receive greater than 25 Rem to save a life.
9. For any expected or actual Thyroid Exposure > 25 Rem CDE, the issuance of KI should be considered.

Task: _____ _____	Date: _____ Time: _____
-----------------------------	--

The following personnel have volunteered to perform the above task(s)

They are authorized to receive up to _____ Rem

Name	SSN	Received Briefing Signature

Approval Signature: _____
Emergency Director or Emergency Plant Manager

Form IP-1023-6 Rev 0

Addendum 9
Normal OSC Staffing (Form 1023-7)
 Sheet 1 of 1

Normal OSC Staffing

At least 2 individuals shall be members of the First Aid Team

No.	Positions	Number Present	Number Needed	Called
1	OSC Manager			
1	Team Coordinator			
1	Rad Protection Coordinator			
1	Operations Coordinator			
1	Maintenance Coordinator			
1	I&C Coordinator			
1	I&C Supervisor			
2	I&C Technicians			
1	Chemistry Supervisor			
1	Chemistry Technician			
1	Electrical Supervisor			
2	Electrical Technicians			
1	Mechanical Supervisor			
2	Mechanical Technicians			
1	HP Supervisor			
4	HP Technicians			
-	Operations Personnel			
-	Other			
24	Total number of individuals assigned to OSC			

OSC Manager should enter number of each positions needed based on event.

Form IP-1023-7 Rev 0

Addendum 10
ERO Tracking Log (Form IP-1023-8)
Sheet 1 of 1

ERO Tracking Log

[illegible]

NOTES:

1. Use this form to track individuals located outside the TSC/OSC Complex, CCR or Security Posts.
2. Individuals emergency exposures shall be tracked on Individual Exposure Tracking Logs (IP-1023-3)

Form IP-1023-8 Rev 0

Addendum 11
ERO Shift Rosters (Form IP-1023-9)
 Sheet 1 of 3

ERO Shift Rosters

EOF	POSITION	Shift 1 Individual(s)	Shift 2 Individual(s)
	Emergency Director		
	EOF Manager		
	ORAD		
	Dose Assessment HP		
	ED Technical Advisor		
	MIDAS Operator		
	Information Liaison		
	EOF Communicator #1		
	EOF Communicator #2		
	Offsite Monitoring Teams (4)		
	Onsite Monitoring Team (2 HPs)		
	EOF Clerical Staff (3)		
	Others		
TSC	POSITION	Shift 1 Individual(s)	Shift 2 Individual(s)
	Emergency Plan Manager		
	TSC Manager		
	Technical Assessment Coordinator		
	Operations Advisor		
	Radiological Advisor		
	Core Physics Engineer		
	Mechanical Engineer		
	Elec / I&C Engineer		
	TSC Data Coordinator		
	TSC Communicator		
	TSC Communicator CCR		
	Data Processor CCR		
	Document Controller		
	TSC Clerical Staff (2)		
	Others		

Addendum 11
ERO Shift Rosters (Form IP-1023-9)
Sheet 2 of 3

ERO Shift Rosters

OSC	POSITION	Shift 1 Individual(s)	Shift 2 Individual(s)
	OSC Manager		
	Team Coordinator		
	Operations Coordinator		
	RP Coordinator		
	Maintenance Coordinator		
	I&C Coordinator		
	Accountability Clerk		
	HP Supervisor		
	HP Technicians		
	Chemistry Supervisor		
	Chemistry Technicians		
	I&C Supervisor		
	I&C Technicians		
	Mechanical Supervisor		
	Mechanical Technicians		
	Material Storekeeper		
	Others		

Addendum 11

ERO Shift Rosters (Form IP-1023-9)

Sheet 3 of 3

ERO Rosters

[illegible]

Notes:

1. Call the EOF Clerical Staff to get names of individuals filling EOF positions on the first shift
2. Call individuals filling Misc. positions outside the EOF, TSC or OSC
3. Use Emergency Telephone Book to call in individuals to fill second shift.

EMERGENCY CLASSIFICATION

Prepared by: ASume 9/11/98 Date 9/11/98 Technical Reviewer: Tony Fuman 8/6/99 Date 8/6/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Danna Syner 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____
Approval: Tony Fuman / Acting EP Mgr 9/16/99 Date 9/16/99 /Effective Date 9/1/99
Signature/Title _____ Date _____

Biennial Review

Reviewer/Date _____ Reviewer/Date _____

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

EMERGENCY CLASSIFICATION

1.0 PURPOSE

1. To describe the method for classification of emergencies as a Notification of Unusual Event (NUE), ALERT, Site Area Emergency (SAE) or General Emergency (GE).

2.0 DISCUSSION

- 2.1 The symptom, event OR barrier base classification may be made for NUE, ALERT, Site Area OR General Emergency, Addendum 8.5 through 8.9.
- 2.2 IF a symptom, event OR barrier base classification has been declared in a category followed by the same classification in another category THEN the classification continues to apply but an update should be made to offsite authorities in accordance with Reference 6.2.
- 2.3 IF a symptom, event OR barrier base classification has been declared in a category followed by an increased classification THEN the higher classification shall be declared AND offsite authorities shall be notified in accordance with Reference 6.2.
- 2.4 Many of the classification derived from NESP-007 methodology are fission product barrier base. That is a condition based upon loss OR potential loss of one OR more of three fission product barriers. (Fuel cladding, RCS and Containment).
- 2.5 The following criteria serves as bases for event classification related to fission product barrier loss:
 - 2.5.1 Unusual Event - any loss OR potential loss of containment.
 - 2.5.2 Alert - Any loss OR potential loss of fuel clad or RCS.
 - 2.5.3 Site Area Emergency - Any loss of both fuel AND RCS OR any potential loss of either fuel clad OR RCS WITH a loss of any addition barrier.
 - 2.5.4 General Emergency - Loss of any two barriers WITH loss OR potential loss of a third.
- 2.6 Event base classification refers to occurrences WITH potential safety significance such as failure of Safety Injection Pump, Safety Valve failure, OR electric power failure.

- 2.7 The symptom based classification refer to those indicators that are measurable over a continuous spectrum, such as, core temperature coolant levels AND containment pressure.
- 2.8 The Technical Bases Document is to provide an explanation AND rationalize for EACH of the Emergency Action Levels (EALs). This document is also use by individuals who are responsible for the implementation of the EALs as a technical reference and aid in EAL interpretation.
- 2.9 The EALs are grouped into nine categories to simplify their presentation AND promote a rapid understanding by their users. These categories are:

Category 1 CSFST Status

Category 2 Reactor Fuel

Category 3 Reactor Coolant System

Category 4 Containment

Category 5 Radioactivity Release/Area Radiation

Category 6 Electrical Failures

Category 7 Equipment Failures

Category 8 Hazards

Category 9 Other

- 2.10 Categories one through five are primarily symptom based. The symptoms are indicative of actual OR potential degradation of either fission product barriers OR personnel safety.
- 2.11 Categories six, seven and eight are event based. Electrical Failures are those events associated WITH losses of EITHER AC OR vital DC electrical power. Equipment Failures are abnormal and emergency events associated WITH vital plant system failures, while hazards are those non-plant system related events which have affected OR may affect plant safety.
- 2.12 Category nine provides the Emergency Director (Senior Watch Supervisor) the latitude to classify AND declare emergencies based on plant symptoms OR events which in his judgment warrant classification. This judgment includes evaluation of loss OR potential loss of one OR more fission product barriers warranting emergency classification consistent with the NUMARC barrier loss criteria.

- 2.13 Categories are further divided into one OR more subcategories depending on the types AND number of plant conditions that dictate emergency classifications. For example, the Electrical Failures category has two subcategories whose values can be indicative of losses of electrical power sources.
1. Loss of AC power sources AND loss of DC power sources. An EAL may OR may NOT exist for EACH subcategory at all four classification levels. Similarly, more than one EAL may exist for a subcategory in a given emergency classification when appropriate (i.e. no EAL at the General Emergency level but three EALs at the Unusual Event Level).
- 2.14 The operating modes of operation are defined as follows:
- 2.14.1 Power Operations -When the reactor is critical and the neutron flux power range instrumentation indicates greater than 2% of rated power.
 - 2.14.2 Hot Shutdown -When the reactor is subcritical by an amount greater than or equal to the margin as specified in Technical Specification 3.10 and Tavg is greater than 200°F and less than or equal to 555°F.
 - 2.14.3 Cold Shutdown -When the reactor is subcritical by at least 1%Δk/k and Tavg is less than or equal to 200°F.
 - 2.14.4 Refuel -Any operation involving movement of core components when vessel head is completely unbolted.
 - 2.15.5 Defueled - Reactor vessel contains no irradiated fuel.
- 2.15 Plant Emergency Operating Procedures (EOPs) are designed to maintain OR restore a set of critical safety functions which are prioritized for restoration efforts during accident conditions. By monitoring the critical safety functions status, the impact of multiple events can be inherently addressed.
- 2.16 The critical safety functions are monitored through the use of Critical Safety Function Status Trees (CSFSTs). When certain plant parameters exceed threshold values specified by the CSFST, the plant operator is directed to one OR more functional restoration procedure in an attempt to restore those parameters to within acceptable limits. The following CSFSTs are utilized to be indicative of failures OR potential failures of one OR more fission product barriers:
- 2.16.1 Subcriticality - Orange or Red paths in this CSFST indicate losses of reactivity control which may pose a threat to fuel clad and RCS integrity.

- 2.16.2 Core Cooling - Orange OR Red paths in this CSFST indicate losses of core subcooling AND thus pose a direct threat to the integrity of the reactor fuel clad.
- 2.16.3 Heat Sink - The Red path of this CSFST is indicative of a loss of ability to remove decay heat from the core and thus poses a direct threat to fuel clad integrity.
- 2.16.4 Integrity - The Red path of this CSFST is indicative of a direct threat to RCS barrier integrity.
- 2.16.5 Containment - Red path of this CSFST is indicative to a loss of RCS barrier AND direct threat to the containment barrier integrity.

3.0 PRECAUTIONS AND LIMITATIONS

3.1 NONE

4.0 EQUIPMENT AND MATERIALS

4.1 NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D CONTAINED IN EPD BOOK NO. 2.

- 5.1 The Operator is alerted by Initial Event recognition OR Control Room alarms.
- 5.2 The Operator shall notify the Shift Manager (SM) AND Watch Engineer (WE).
- 5.3 The Operator may enter the Emergency Operating Procedures (EOPs) OR Abnormal Operating Instructions (AOIs) while the Watch Engineer, IF APPROPRIATE, monitors the Critical Safety Function Status Trees (CSFST).
- 5.4 The SM shall evaluate addendums 8.1 through 8.9 to determine IF a GE, SAE, ALERT or NUE classification applies, AND, IF so, determine the highest classification and declare it.
- 5.5 Initiate County, State AND NRC notification in accordance with Reference 6.2.

- 5.6 The SM continues, IF APPROPRIATE, to evaluate future events AND potential challenges from information supported by the Operator AND Watch Engineer. AS a condition warrant the Shift Manager shall re-enter Section 5.4.
- 5.7 IF necessary the Shift Manager shall upgrade the emergency classification.
- 5.8 IF no classification applies, the Shift Manager evaluates WHETHER Technical Specifications Limits on LCO reportable under Reference 6.1 applies AND perform the APPROPRIATE notification as per Reference 6.1.

6.0 REFERENCES

- 6.1 SAO-124, Oral Reporting of Non-Emergency Items and Items of Interest and Significant Occurrence Reporting
- 6.2 IP-1002, Emergency Notification and Communication
- 6.3 NUMARC/NESP-007, Methodology for Development of Emergency Action Levels

7.0 ATTACHMENTS

- 7.1 Attachment A Fission Product Barrier Loss & Potential Loss Indicators

8.0 ADDENDUM

- 8.1 Category 1 CSFST Status
- 8.2 Category 2 Reactor Fuel
- 8.3 Category 3 Reactor Coolant System
- 8.4 Category 4 Containment
- 8.5 Category 5 Radioactivity Release/Area Radiation
- 8.6 Category 6 Electrical Failures
- 8.7 Category 7 Equipment Failures
- 8.8 Category 8 Hazards
- 8.9 Category 9 Other

ATTACHMENT A

FISSION PRODUCT BARRIER LOSS & POTENTIAL LOSS INDICATORS

Fission Product Barrier Loss / Potential Loss Matrix

(Those thresholds for which loss or potential loss is determined to be imminent, classify as though the threshold(s) has been exceeded)

Fuel Cladding

Potential Loss
ORANGE path in F-0.2, CORE COOLING
RED path in F-0.3, HEAT SINK
Core Exit Thermocouple Readings > 700°F
RVLIS ≤ 39% w/no RCPs running
Emergency Director's Judgement

Loss
RED path in F-0.2, CORE COOLING
Coolant activity > 300 uCi/cc I-131 equivalent
Core Exit Thermocouple Readings > 1200°F
Containment radiation monitor R-25/R-26 reading > 17 R/hr
Emergency Director's Judgement

RCS

Potential Loss
RED path in F-0.4, INTEGRITY
RED path in F-0.3, HEAT SINK
Primary system leakage exceeding the capacity (> 75 gpm) of a single charging pump
Emergency Director's Judgement

Loss
RCS subcooling < SI initiation setpoint due to RCS leakage
Unisolated faulted (outside VC) ruptured steam generator
>0.17 uCi/cc on R-42 OR > 66 uCi/cc on R-41 due to RCS leakage
Emergency Director's Judgement

Fission Product Barrier Loss / Potential Loss Matrix

(Those thresholds for which loss or potential loss is determined to be imminent, classify as though the threshold(s) has been exceeded)

Containment

Potential Loss	
Red path F-0.5, CONTAINMENT	
EITHER:	
Core exit thermocouples > 1200°F	
OR	
Core exit thermocouples > 700°F with	
RVLIS < 39% with no RCPs	
AND	
Restoration procedures not effective within 15 minutes	
Confirmed phase 'B' isolation signal following a confirmed LOCA with less than minimal containment cooling safeguards equipment operating:	
Fan Cooler Units Oper.	Spray Pumps Req'd
<3	2
3	1
5	0
Containment pressure 47 psig and increasing	
>= 4% hydrogen concentration in containment	
Containment radiation monitor R-25/R-26 reading > 68 R/hr	
Emergency Director's Judgement	

Loss
Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure
EITHER:
Any phase 'A' or phase 'B' or containment ventilation isolation valve(s) not closed when required following a confirmed LOCA
OR
Inability to isolate any primary system discharging outside containment
AND
A radiological release to the environment exists as a result
Both doors open on a VC airlock > 4 hours
OR
Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment
Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > 0.3 gpm in any steam generator
Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions
Emergency Director's Judgement

CATEGORY 1.0 CSFST STATUS

ADDENDUM 8.1
Page 1 of 2

Category	General	Site Area	Alert	Unusual Event
1.1 Subcriticality	<p>[SG2]</p> <p>1.1.3 {1,2}</p> <p>RED path in F-0.1, Subcriticality</p> <p><u>AND</u></p> <p>Actual or imminent entry into either:</p> <p>RED Path in F-0.2, Core Cooling</p> <p><u>OR</u></p> <p>Red Path in F-0.3, Heat Sink</p>	<p>[SS2,SS4]</p> <p>1.1.2 {1,2}</p> <p>RED path in F-0.1 Subcriticality</p> <p><u>AND</u></p> <p>Emergency boration is required</p>	<p>[SA2]</p> <p>1.1.1 {1,2}</p> <p>Any Failure of an automatic trip signal to reduce power range < 5%</p> <p><u>AND</u></p> <p>Manual trip is successful</p>	
1.2 Core Cooling	<p>[fl,rl,cpl] [FC1,PC6,PC6]</p> <p>1.2.2 {1,2}</p> <p>RED path in F-0.2, Core Cooling</p> <p><u>AND</u></p> <p>Functional restoration actions taken and procedures not effective within 15 minutes.</p>	<p>[fpl/fl,rl] [SS4,FC3,FC4]</p> <p>1.2.1 {1,2}</p> <p>ORANGE or RED path in F-0.2, Core Cooling</p>		

{1} = Power Operations {2} = Hot Shutdown {3} = Cold Shutdown {4} = Refuel {5} = Defuel

Table Continued on Next Page

**CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING**

**IP-1024
Rev. 7**

CATEGORY 1.0 CSFST STATUS

**ADDENDUM 8.1
Page 2 of 2**

Category	General	Site Area	Alert	Unusual Event
1.3 Heat Sink		[fpl,rpl] [SS4,RCS1,FC1] 1.3.1 {1,2} RED path in F-0.3, HEAT SINK AND Heat sink is required		
1.4 Integrity			[rpl] [RCS1] 1.4.1 {1,2} RED Path on F-0.4, Integrity	
1.5 Containment	[fl,rl,cpl] [PC1] 1.5.1 {1,2} RED Path F-0.5, Containment resulting from loss of coolant.			

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

CATEGORY 2.0 REACTOR FUEL

**ADDENDUM 8.2
Page 1 of 3**

Category	General	Site Area	Alert	Unusual Event
2.1 Coolant Activity		<p>[fl.rpl/rf] [FC2,RCS1,RCS2,RCS4]</p> <p>2.1.3 {1,2}</p> <p>Coolant activity > 300 $\mu\text{Ci/cc}$ I-131 equivalent and any of the following:</p> <ul style="list-style-type: none"> • RED path on F-0.4, Integrity • Primary system leakage exceeding capacity (> 75 gpm) of single charging pump • RCS subcooling < SI initiation setpoint due to RCS leakage • Rise in R-41 offscale or R-42 > 0.17 $\mu\text{Ci/cc}$ due to RCS leakage 	<p>[rf] [FC2]</p> <p>2.1.2 {1,2}</p> <p>Coolant Activity > 300 $\mu\text{Ci/cc}$ I-131 equivalent</p>	<p>[SU4]</p> <p>2.1.1 {1,2,3,4,5}</p> <p>Coolant sample activity: $\geq 60/(\text{E bar}) \mu\text{Ci/cc}$</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next page

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1024
Rev. 7

CATEGORY 2.0 REACTOR FUEL

ADDENDUM 8.2
Page 2 of 3

Category	General	Site Area	Alert	Unusual Event
2.2 Containment Radiation	[fl,rl,cpl] [PC5] 2.2.3 {1,2} Containment Radiation monitor R-25 or R-26 > 68 R/HR	[fl,rl] [FC5] 2.2.2 {1,2} Containment Radiation monitor R-25 or R-26 > 17 R/HR	[rl] [RCS4] 2.2.1 {1,2} Rise in R-41 offscale or R-42 > 0.17μCi/cc due to RCS leakage	

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next page

CATEGORY 2.0 REACTOR FUEL

ADDENDUM 8.2

Page 3 of 3

Category	General	Site Area	Alert	Unusual Event
2.3 Refueling Accidents or Other Radiation Monitors			<p style="text-align: right;">[AA2]</p> <p>2.3.2 {1,2,3,4,5}</p> <p>Confirmed sustained alarm on ANY of the following radiation monitors resulting from fuel damage caused by an uncontrolled fuel handling process:</p> <ul style="list-style-type: none"> • R-2/R-7 Vapor Containment Area Monitors • R-5 Fuel Storage Building Area Monitor • R-25 or 26 Vapor Containment High Radiation Area Monitors <p style="text-align: right;">[AA2]</p> <p>2.3.3 {1,2,3,4,5}</p> <p>Report of visual observation of irradiated fuel uncovered</p>	<p style="text-align: right;">[AU2]</p> <p>2.3.1 {1,2,3,4,5}</p> <p>Spent fuel pool (reactor cavity during refueling) water level cannot be restored and maintained above Technical Specification minimum water level</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

CATEGORY 3.0 REACTOR COOLANT SYSTEM

ADDENDUM 8.3
PAGE 1 OF 3

Category	General	Site Area	Alert	Unusual Event
3.1 RCS Leakage		<p>[fpl,rl][SS5, SS4,FC4]</p> <p>3.1.3 {1,2,3,4}</p> <p>RVLIS cannot be maintained > 39% with no RCP's running</p> <p><u>OR</u></p> <p>With the reactor vessel head removed, it is reported that water level in the reactor vessel is dropping in an uncontrolled manner and core uncover is likely</p>	<p>[rpl] [RCS2]</p> <p>3.1.2 {1,2}</p> <p>Primary system leakage exceeding capacity (> 75 gpm) of single charging pump</p>	<p>[SU5]</p> <p>3.1.1 {1,2}</p> <p>Unidentified or pressure boundary leakage > 10 gpm</p> <p><u>OR</u></p> <p>Identified leakage > 25 gpm</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 3.0 REACTOR COOLANT SYSTEM

ADDENDUM 8.3
PAGE 2 OF 3

Category	General	Site Area	Alert	Unusual Event
3.2 Primary to Secondary Leakage		<p>[rpl,cl] [PC4,RCS2]</p> <p>3.2.2 {1,2} Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage exceeding capacity (> 75 gpm) of a single charging pump</p> <p>[fl,cl] [PC4,FC2]</p> <p>3.2.3 {1,2} Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > 0.3 gpm in any steam generator</p> <p><u>AND</u></p> <p>Coolant activity > 300 µCi/cc of I-131</p>		<p>[cl] [PC4]</p> <p>3.2.1 {1,2} Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage > 0.3 gpm in any Steam Generator</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 3.0 REACTOR COOLANT SYSTEM

ADDENDUM 8.3
PAGE 3 OF 3

Category	General	Site Area	Alert	Unusual Event
3.3 RCS Subcooling			[rl] [RCS2] 3.3.1 {1,2} RCS subcooling <SI initiation setpoint due to RCS leakage	

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

CATEGORY 4.0 CONTAINMENT

ADDENDUM 8.4
Page 1 of 4

Category	General	Site Area	Alert	Unusual Event
4.1 Containment Integrity Status	<p>[fl,rl,cpl] [PC2,FC2,FC5]</p> <p>4.1.4 {1,2}</p> <p>Confirmed Phase "B" isolation signal following confirmed LOCA with less than minimum containment cooling safeguards equipment operating, Table 4.3</p> <p><u>AND</u></p> <p>Any indicators of fuel clad loss, Table 4.1</p> <p>[fpl/fl,rl,cl] [PC2,FC1,FC2,FC3,FC4,FC5]</p> <p>4.1.5 {1,2}</p> <p>EITHER:</p> <p>Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure</p> <p><u>OR</u></p> <p>Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions</p> <p><u>AND</u></p> <p>Any indications of fuel clad damage, Table 4.2</p>	<p>[rl,cl] [PC2]</p> <p>4.1.2 {1,2}</p> <p>Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure</p> <p><u>OR</u></p> <p>Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions</p>		<p>[cl] [PC7]</p> <p>4.1.1 {1,2}</p> <p>Both doors open on a VC airlock for > 4 hrs.</p> <p><u>OR</u></p> <p>Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment for > 4 hrs.</p> <p><u>OR</u></p> <p>Any Phase "A" or Phase "B" or containment ventilation isolation valve(s) not closed when required which results in a radiological release pathway to the environment</p>

{1} = Power Operations {2} = Hot Shutdown {3} = Cold Shutdown {4} = Refuel {5} = Defuel

Table Continued on Next Page

CATEGORY 4.0 CONTAINMENT

ADDENDUM 8.4

Page 2 of 4

Category	General	Site Area	Alert	Unusual Event
4.1 Containment Integrity Status (Continued)	<p>[fp/fi,rl,cl] [PC3,FC1,FC2,FC3,FC4,FC5]</p> <p>4.1.6 {1,2}</p> <p>EITHER:</p> <p>Any Phase "A" or Phase "B" or CVI valve(s) not closed when required following confirmed LOCA</p> <p><u>OR</u></p> <p>Inability to isolate any primary system discharging outside containment</p> <p><u>AND</u></p> <p>Radiological release to the environment exists as a result</p> <p><u>AND</u></p> <p>Any indicators of fuel clad damage, Table 4.2</p>	<p>[rl,cl] [PC3]</p> <p>4.1.3 {1,2}</p> <p>EITHER:</p> <p>Any Phase "A" or Phase "B" or CVI valve(s) not closed when required following confirmed LOCA</p> <p><u>OR</u></p> <p>Inability to isolate any primary system discharging outside containment</p> <p><u>AND</u></p> <p>Radiological release to the environment exists as a result</p>		

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

**CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING**

**IP-1024
Rev. 7**

CATEGORY 4.0 CONTAINMENT

**ADDENDUM 8.4
Page 3 of 4**

Category	General	Site Area	Alert	Unusual Event
4.2 SG Tube Rupture w/Secondary Release	<p>[fp/fl,rl,cl] [RCS3,FC1,FC2,FC3,FC4,FC5]</p> <p>4.2.2 {1,2}</p> <p>Unisolable faulted (outside VC) ruptured steam generator</p> <p>AND</p> <p>Any indicators of fuel clad damage, Table 4.2</p>	<p>[rl,cl] [RCS3]</p> <p>4.2.1 {1,2}</p> <p>Unisolable faulted (outside VC) ruptured steam generator</p>		
4.3 Combustible Gas Concentrations	<p>[fl,rl,cpl] [PC2]</p> <p>4.3.1 {1,2}</p> <p>≥4% Hydrogen concentration in containment</p>			

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 4.0 CONTAINMENT

**ADDENDUM 8.4
Page 4 of 4**

Table 4.1 Fuel Clad Loss Indicators	
1.	Coolant activity > 300 $\mu\text{Ci/cc}$ of I-131
2.	Containment radiation monitor R-25/R-26 reading > 17 R/hr
3.	RED path in F-0.2, CORE COOLING

Table 4.2 Fuel Clad Damage Indicators	
1.	ORANGE or RED path in F-0.2, CORE COOLING
2.	RED path in F-0.3, HEAT SINK
	AND
	Heat sink is required
3.	Coolant activity > 300 $\mu\text{Ci/cc}$ of I-131
4.	Containment radiation monitor R-25/R-26 reading > 17 R/hr

Table 4.3 Minimum Containment Cooling Safeguards Equipment	
Fan Cooler Units Operating	Spray Pumps Required
< 3	2
3	1
5	0

CATEGORY 5.0 RADIOACTIVITY RELEASE

ADDENDUM 8.5
Page 1 of 5

Category	General	Site Area	Alert	Unusual Event
5.1 Effluent Monitors	[AG1]	[AS1]	[AA1]	[AU1]
	5.1.4 {1,2,3,4,5} A valid reading on any monitors Table 5.1 column "GE" for > 15 minutes unless dose assessment can confirm releases are below Table 5.2 column "GE" within this time period.	5.1.3 {1,2,3,4,5} A valid reading on any monitors Table 5.1 column "SAE" for > 15 minutes unless dose assessment can confirm releases are below Table 5.2 column "SAE" within this time period.	5.1.2{1,2,3,4,5} A valid reading on any monitors Table 5.1 column "Alert for > 15 minutes unless dose assessment can confirm releases are below Table 5.2 column "Alert" within this time period.	5.1.1{1,2,3,4,5} A valid reading on any monitors Table 5.1 column "NUE" for > 60 minutes unless sample analysis can confirm release rates < 2 x technical specifications within this time period.

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 5.0 RADIOACTIVITY RELEASE

ADDENDUM 8.5

Page 2 of 5

Category	General	Site Area	Alert	Unusual Event
5.2 Dose Projections/ Environmental Measurements/ Release Rates	5.2.5 {1,2,3,4,5} Dose projections or field surveys resulting from an actual imminent release which indicate doses/dose rates > Table 5.2 column "GE" at the site boundary or beyond.	5.2.4 {1,2,3,4,5} Dose projections or field surveys resulting from an actual imminent release which indicate doses/dose rates > Table 5.2 column "SAE" at the site boundary or beyond.	5.2.2{1,2,3,4,5} Confirmed sample analysis for gaseous or liquid release rates > 200 x technical specifications limits for > 15 minutes 5.2.3{1,2,3,4,5} Dose projections or field surveys resulting from an actual imminent which indicate doses/dose rates > Table 5.2 column "Alert" at the site boundary or beyond.	5.2.1{1,2,3,4,5} Confirmed sample analysis for gaseous or liquid release rates > 2 x technical specifications limits for > 60 minutes.

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 5.0 RADIOACTIVITY RELEASE

ADDENDUM 8.5
Page 3 of 5

Category	General	Site Area	Alert	Unusual Event
5.3 Area Radiation Levels			<p style="text-align: right;">[AA3]</p> <p>5.3.2{1,2,3,4,5} Sustained area radiation levels > 15 mRem/hr in EITHER: Control Room <u>OR</u> Central Alarm Station and Secondary Alarm Station [AA3]</p> <p>5.3.3{1,2,3,4,5} Sustained abnormal area radiation levels > 8 R/hr within any areas, Table 5.3 <u>AND</u> Access is required for safe operation or shutdown</p>	<p style="text-align: right;">[AU2]</p> <p>5.3.1{1,2,3,4,5} Any sustained direct ARM readings > 100 x alarm or offscale high resulting from an uncontrolled process</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 5.0 RADIOACTIVITY RELEASE

ADDENDUM 8.5
Page 4 of 5

Table 5.1 Effluent Monitor Classification Thresholds				
Monitor	GE	SAE	Alert	UE
R-27	53 $\mu\text{Ci/cc}$	5.3 $\mu\text{Ci/cc}$	5.3 E-1 $\mu\text{Ci/cc}$	2.3 E-3 $\mu\text{Ci/cc}$
R-44	53 $\mu\text{Ci/cc}$	5.3 $\mu\text{Ci/cc}$	5.3 E-1 $\mu\text{Ci/cc}$	2.3 E-3 $\mu\text{Ci/cc}$
R-54	N/A	N/A	2.5 E-1 $\mu\text{Ci/cc}$	2.5 E-3 $\mu\text{Ci/cc}$
R-49	N/A	N/A	2.7 E-2 $\mu\text{Ci/cc}$	2.7 E-4 $\mu\text{Ci/cc}$

Table 5.2 Dose Projection/Env. Measurement Classification Thresholds			
	GE	SAE	Alert
TEDE	1000 mRem	100 mRem	10 mRem
CDE Thyroid	5000 mRem	500 mRem	N/A
External Exposure Rate	1000 mRem/hr	100 mRem/hr	10 mRem/hr
Thyroid exposure rate (for 1 hr. of inhalation)	5000 mRem/hr	500 mRem/hr	N/A

{1} = Power Operations {2} = Hot Shutdown {3} = Cold Shutdown {4} = Refuel {5} = Defuel

Table Continued on Next Page

CATEGORY 5.0 RADIOACTIVITY RELEASE

**ADDENDUM 8.5
Page 5 of 5**

Table 5.3 Plant Areas	
•	Condensate Storage Tank
•	RWST
•	Service Water Pump Structure
•	Service Water Valve Pit East
•	Fuel Storage Building
•	Primary Auxiliary Building/Fan House
•	480 Volt Switchgear Room (Control Building)
•	Cable Spreading Room/Electrical Tunnel
•	Diesel Generator Building/Fuel Tank Area
•	Auxiliary Feedwater Pump Building
•	Battery Room (Control Building 33'0" ele.)

CATEGORY 6.0 ELECTRICAL FAILURES

ADDENDUM 8.6

Page 1 of 2

Category	General	Site Area	Alert	Unusual Event
6.1 Loss of AC Power Sources	<p>[SG1]</p> <p>6.1.5 {1,2}</p> <p>Loss of all emergency AC power</p> <p><u>AND EITHER:</u></p> <p>Power restoration to required core cooling systems is not likely in ≤ 1 hr.</p> <p><u>OR</u></p> <p>Actual or imminent entry into ORANGE or RED path on F-0.2, "Core Cooling"</p>	<p>[SS1]</p> <p>6.1.4 {1,2}</p> <p>Loss of AC power to all 480 volt busses (5A,2A/3A,6A) for > 15 minutes.</p> <p><u>AND</u></p> <p>Inability to power required core cooling systems with alternate power sources for > 15 minutes.</p>	<p>[SA1]</p> <p>6.1.2 {3,4,5}</p> <p>Loss of AC power to all 480 volt busses (5A,2A/3A,6A) for > 15 minutes.</p> <p><u>AND</u></p> <p>Inability to power required core cooling/spent fuel cooling systems with alternate power sources for > 15 minutes.</p> <p>[SA5]</p> <p>6.1.3 {1,2}</p> <p>Available emergency bus AC power sources reduced to only one of the following for > 15 minutes:</p> <ul style="list-style-type: none"> • 480V EDG 21 • 480V EDG 22 • 480V EDG 23 • Unit Auxiliary Transformer • Station Auxiliary Transformer • 13.8KV Gas Turbine Auto 	<p>[SU1]</p> <p>6.1.1 {1,2,3,4,5}</p> <p>None of the following sources of offsite power available for > 15 minutes:</p> <ul style="list-style-type: none"> • Unit Auxiliary Transformer • Station Auxiliary Transformer • 13.8 KV Gas Turbine Auto Transformer

{1} = Power Operations {2} = Hot Shutdown {3} = Cold Shutdown {4} = Refuel {5} = Defuel

Table Continued on Next Page

CATEGORY 6.0 ELECTRICAL FAILURES

ADDENDUM 8.6

Page 2 of 2

Category	General	Site Area	Alert	Unusual Event
6.2 Loss of DC Power Sources		<p>[SS3]</p> <p>6.2.2 {1,2}</p> <p>< 105 vdc bus voltage indications for > 15 minutes on the switchable voltmeter for all of the following panels:</p> <ul style="list-style-type: none"> • 21 • 22 • 23 • 24 		<p>[SU7]</p> <p>6.2.1 {3,4}</p> <p>< 105 vdc bus voltage indications for > 15 minutes on the switchable voltmeter for all of the following panels:</p> <ul style="list-style-type: none"> • 21 • 22 • 23 • 24

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

CATEGORY 7.0 EQUIPMENT FAILURES

ADDENDUM 8.7

Page 1 of 3

Category	General	Site Area	Alert	Unusual Event
7.1 Technical Specifications/ Requirements				<div>[SU2]</div> <div>7.1.1 {1,2}</div> <div>Plant is not brought to required operating mode within Technical Specifications LCO Action Statement Time.</div>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 7.0 EQUIPMENT FAILURES

**ADDENDUM 8.7
Page 2 of 3**

Category	General	Site Area	Alert	Unusual Event
7.2 System Failures or Control Room Evacuation		<p>[HS2]</p> <p>7.2.5 {1,2,3,4,5}</p> <p>Control Room Evacuation</p> <p><u>AND</u></p> <p>Plant control cannot be established per AOI27.1.9, "Control Room Inaccessibility/ Safe Shutdown" in ≤ 15 minutes</p>	<p>[HA1]</p> <p>7.2.2 {1,2}</p> <p>Turbine failure generated missiles which causes or potentially causes any required safety related system or structure to become inoperable.</p> <p>[HA5]</p> <p>7.2.3 {1,2,3,4,5}</p> <p>Entry into AOI-27.1.9, Control Room Inaccessibility/ Safe Shutdown Control"</p> <p>[SA3]</p> <p>7.2.4 {3,4}</p> <p>Reactor coolant temperature cannot be maintained $< 200^{\circ}\text{F}$</p>	<p>[HU1]</p> <p>7.2.1 {1,2}</p> <p>Report of main turbine failure requiring turbine trip resulting in:</p> <p>Damage to turbine generator seals causing release of lubricating oil or hydrogen</p> <p>OR</p> <p>Casing penetration</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 7.0 EQUIPMENT FAILURES

ADDENDUM 8.7

Page 3 of 3

Category	General	Site Area	Alert	Unusual Event
7.3 Loss of Indications/ Alarms/Communication Capability		<p>[SS6]</p> <p>7.3.4 {1,2} Loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels</p> <p><u>AND</u></p> <p>Loss of ability to monitor critical safety function status</p> <p><u>AND</u></p> <p>A significant plant transient in progress</p>	<p>[SA4]</p> <p>7.3.3 {1,2} Unplanned loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels for > 15 minutes</p> <p><u>AND</u></p> <p>Increased surveillance is required for safe plant operation</p> <p><u>AND EITHER:</u></p> <p>A significant plant transient in progress</p> <p><u>OR</u></p> <p>Proteus and SAS are unavailable</p>	<p>[SU3]</p> <p>7.3.1 {1,2} Unplanned loss of most (approx. 75%) safety system annunciators or indications on Control Room Panels for > 15 minutes</p> <p><u>AND</u></p> <p>Increased surveillance is required for safe plant operation</p> <p>[SU6]</p> <p>7.3.2 {1,2,3,4,5} Loss of all communications capability affecting the ability to EITHER:</p> <p>Perform routine operations</p> <p><u>OR</u></p> <p>Notify offsite agencies or personnel</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

CATEGORY 8.0 HAZARDS

**ADDENDUM 8.8
Page 1 of 6**

Category	General	Site Area	Alert	Unusual Event
8.1 Security Threats	<p>[HG1]</p> <p>8.1.4 {1,2,3,4,5} Security Event which results in:</p> <p>Loss of plant control from the Control Room <u>AND</u> Loss of remote shutdown capability</p>	<p>[HS1]</p> <p>8.1.3 {1,2,3,4,5} Intrusion into a plant security vital area by an adversary <u>OR</u> Any security event which represents actual or likely failures of plant systems needed to protect the public.</p>	<p>[HA4]</p> <p>8.1.2 {1,2,3,4,5} Intrusion into plant Protected Area by an adversary <u>OR</u> Any security event which represents an actual substantial degradation of the level of safety of the plant.</p>	<p>[HU4]</p> <p>8.1.1 {1,2,3,4,5} Bomb Device or other indication of attempted sabotage discovered within plant Protected Area but outside Plant Vital Areas, Table 8.2 <u>OR</u> Any security event which represents a potential degradation in the level of safety of the plant</p>

{1} = Power Operations {2} = Hot Shutdown {3} = Cold Shutdown {4} = Refuel {5} = Defuel

Table Continued on Next Page

CATEGORY 8.0 HAZARDS

ADDENDUM 8.8

Page 2 of 6

Category	General	Site Area	Alert	Unusual Event
8.2 Fire or Explosion			<p>[HA2]</p> <p>8.2.3 {1,2,3,4,5}</p> <p>Fire or explosion in any plant area, Table 8.2, which causes or potentially causes any required safety related system or structure to become inoperable</p>	<p>[HU2]</p> <p>8.2.1 {1,2,3,4,5} Confirmed fire in or contiguous to any plant area, Table 8.2 not extinguished in ≤ 15 minutes of Control Room notification.</p> <p>[HU1]</p> <p>8.2.2 {1,2,3,4,5} Report by plant personnel of an explosion within Protected Area boundary which impacts plant safety related systems or structures.</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 8.0 HAZARDS

ADDENDUM 8.8

Page 3 of 6

Category	General	Site Area	Alert	Unusual Event
8.3 Man-Made Events			<p>[HA1]</p> <p>8.3.3 {1,2,3,4,5} Vehicle crash or projectile impact which causes or potentially causes any required safety related system or structure to become inoperable, Table 8.2</p> <p>[HA3]</p> <p>8.3.4 {1,2,3,4,5} Report or detection of toxic or flammable gases within a plant area, Table 8.2, in concentrations that will be life threatening to plant personnel or preclude access to equipment (even when using personal protective equipment) needed for safe plant operation</p>	<p>[HU1]</p> <p>8.3.1 {1,2,3,4,5} Vehicle crash into or projectile which impacts plant safety related structures or systems within Protected Area boundary</p> <p>[HU3]</p> <p>8.3.2 {1,2,3,4,5} Report or detection of toxic or flammable gases that could enter or have entered within the Protected Area boundary in amounts that could affect the health of plant personnel or safe plant operation</p> <p><u>OR</u></p> <p>Report by local, county or state officials, or Unit 3, for potential evacuation of site personnel based on offsite event</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 8.0 HAZARDS

ADDENDUM 8.8

Page 4 of 6

Category	General	Site Area	Alert	Unusual Event
8.4 Natural Events			<p>[HA1]</p> <p>8.4.4 {1,2,3,4,5} Earthquake felt in- plant based upon consensus of Control Room Operators on duty <u>AND</u> Notification from Unit 3 that an earthquake of a magnitude $\geq 0.15g$ horizontal or $\geq 0.10g$ vertical has occurred.</p> <p>[HA1]</p> <p>8.4.5 {1,2,3,4,5} Sustained winds > 100 mph <u>OR</u> Tornado strikes a plant vital area, Table 8.2</p>	<p>[HU1]</p> <p>8.4.1 {1,2,3,4,5} Earthquake felt in plant based upon a consensus of Control Room Operators on duty <u>AND</u> Notification received from Unit 3 that an earthquake has been detected on their instrumentation.</p> <p>[HU1]</p> <p>8.4.2 {1,2,3,4,5} Report by plant personnel of tornado within plant Protected Area boundary</p> <p>[HU1]</p> <p>8.4.3 {1,2,3,4,5} River level $\geq 14.5'$ (OMSL) <u>OR</u> Service water bay level < -4.5' (OMSL)</p>

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 8.0 HAZARDS

**ADDENDUM 8.8
Page 5 of 6**

Category	General	Site Area	Alert	Unusual Event
8.4 Natural Events (Continued)			<p>[HA1] 8.4.6 {1,2,3,4,5} Assessment by the Control Room personnel that a natural event has occurred which causes or potentially causes any required safety system or structure to become inoperable, Table 8.2</p> <p>[HA1] 8.4.7 {1,2,3,4,5} River level ≥ 15' (OSML) <u>OR</u> Low service water bay level resulting in a loss of service water flow</p>	

{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

Table Continued on Next Page

CATEGORY 8.0 HAZARDS

**ADDENDUM 8.8
Page 6 of 6**

Table 8.2 Plant Vital Areas

- Condensate Storage Tank
- RWST
- Service Water Pump Structure
- Service Water Valve Pit East
- Fuel Storage Building
- Primary Auxiliary Building/Fan House
- Vapor containment Building
- 480 Volt Switchgear Room (Control Building)
- Cable Spreading Room/Electrical Tunnel
- Central Control Room
- Diesel Generator Building/Fuel Tank Area
- Auxiliary Feedwater Pump Building
- Battery Room (Control Building 33'0" ele)
- Central Alarm Station

**CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING**

**IP-1024
Rev. 7**

CATEGORY 9.0 OTHER

**ADDENDUM 8.9
Page 1 of 1**

Category	General	Site Area	Alert	Unusual Event
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{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

<p>9.1 Other</p>	<p>[HG2] 9.1.7 {1,2,3,4,5} As determined by the Shift Manager, POM or Emergency Director, events are in progress which indicate actual, or imminent core damage and the potential for a large release of radioactive material in excess of EPA PAGs outside the site boundary.</p> <p style="text-align: right;">[FC7,RCS6,PC8]</p> <p>9.1.8 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to a loss of any two fission product barriers and loss or potential loss of the third, Attachment A.</p>	<p>[HS3] 9.1.5 {1,2,3,4,5} As determined by the Shift Manager, POM or Emergency Director, events are in progress which indicate actual or likely failures of plant systems needed to protect the public. Any releases are not expected to result in exposures which exceed EPA PAGs.</p> <p style="text-align: right;">[FC7,RCS6,PC8]</p> <p>9.1.6 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to</p> <p style="text-align: center;">EITHER:</p> <p>Loss or potential loss of both fuel clad and RCS barrier, Attachment A.</p> <p style="text-align: center;"><u>OR</u></p> <p>Loss or potential loss of either fuel clad or RCS barrier in conjunction with a loss of containment, Attachment A.</p>	<p>[HA6] 9.1.3 {1,2,3,4,5} Any event, as determined by the Shift Manager, POM or Emergency Director, that could cause or has caused actual substantial degradation of the level of safety of the plant.</p> <p style="text-align: right;">[FC7,RCS6]</p> <p>9.1.4 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to a loss or potential loss of either fuel clad or RCS barrier, Attachment A.</p>	<p style="text-align: right;">[HU5] 9.1.1 {1,2,3,4,5} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead to or has led to a potential degradation of the level of safety of the plant.</p> <p style="text-align: right;">[PC8]</p> <p>9.1.2 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead to or has led to a loss or potential loss of containment, Attachment A.</p>
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{1} = Power Operations

{2} = Hot Shutdown

{3} = Cold Shutdown

{4} = Refuel

{5} = Defuel

ATTACHMENT A

FISSION PRODUCT BARRIER LOSS & POTENTIAL LOSS INDICATORS

Fission Product Barrier Loss/Potential Loss Matrix

(Those thresholds for which loss of potential is determined to be imminent, classify as though the threshold(s) has been exceeded)

Fuel Cladding

Potential Loss
ORANGE path in F-0.2, CORE COOLING RED path in F-0.3, HEAT SINK Core Exit Thermocouple Readings >700°F RVLIS ≤39% w/no RCPs running Emergency Director Judgment

Loss
RED path in F-0.2, CORE COOLING Coolant activity >300μ Ci/cc I-131 equivalent Core Exit Thermocouple Readings > 1200°F Containment radiation monitor R-25 or R-26 >17R/hr Emergency Director Judgment

RCS

Potential Loss
RED path on F-0.4, INTEGRITY RED path on F-0.3, HEAT SINK Primary system leakage exceeding capacity (>75GPM) of single charging pump Emergency Director Judgment

Loss
RCS subcooling <SI initiation setpoint due to RCS leakage Unisolated faulted (outside VC) ruptured steam generator >0.17μCi/cc on R-42 OR>66 μCi/ on R-41 due to RCS leakage Emergency Director Judgment

Fission Product Barrier Loss/Potential Loss Matrix

(Those thresholds for which loss of potential is determined to be imminent, classify as though the threshold(s) has been exceeded)

Containment

Potential Loss	
RED path F-0.5, CONTAINMENT	
Either:	
Core exit thermocouples >1200°F	
OR	
Core exit thermocouples >700°F with RVLIS <39% w/no RCPs	
AND	
Restoration procedures not effective within 15 minutes	
Confirmed phase "B" isolation signal following confirmed LOCA with less than minimum containment cooling safeguards equipment operating	
Fan Cooler Units Oper.	Spray Pumps Req'd
<3	2
3	1
5	0
Containment Pressure 47 psig and increasing	
≥4% hydrogen concentration in containment	
Containment radiation monitor R-25/26 reading >68 R/hr	
Emergency Director Judgment	

Loss
Rapid uncontrolled decrease in containment pressure following initial increase due to RCS failure
Either:
Any Phase "A" or Phase "B" or containment ventilation isolation valve(s) not closed when required following confirmed LOCA
OR
Inability to isolate any primary system discharging outside containment
AND
Radiological release to the environment exists as a result
Both doors open on a VC airlock for >4 hrs.
OR
Inability to close containment pressure relief or purge valves which results in a radiological release pathway to the environment for >4 hrs.
OR
Any Phase "A" or Phase "B" or containment ventilation isolation valve(s) not closed when required which results in a radiological release pathway to the environment
Unisolable release of secondary side to atmosphere from the affected steam generator(s) with primary to secondary leakage >0.3 gpm in any steam generator
Loss of primary coolant inside containment with containment pressure or sump level response not consistent with LOCA conditions
Emergency Director Judgment

CATEGORY 9.0 OTHER

ADDENDUM 8.9
Page 1 of 1

Category	General	Site Area	Alert	Unusual Event
9.1 Other	<p>[HG2] 9.1.7 {1,2,3,4,5} As determined by the Shift Manager, POM or Emergency Director, events are in progress which indicate actual, or imminent core damage and the potential for a large release of radioactive material in excess of EPA PAGs outside the site boundary.</p> <p style="text-align: right;">[FC7,RCS6,PC8]</p> <p>9.1.8 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to a loss of any two fission product barriers and loss or potential loss of the third, Attachment A.</p>	<p>[HS3] 9.1.5 {1,2,3,4,5} As determined by the Shift Manager, POM or Emergency Director, events are in progress which indicate actual or likely failures of plant systems needed to protect the public. Any releases are not expected to result in exposures which exceed EPA PAGs.</p> <p style="text-align: right;">[FC7,RCS6,PC8]</p> <p>9.1.6 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to EITHER: Loss or potential loss of both fuel clad and RCS barrier, Attachment A. OR Loss or potential loss of either fuel clad or RCS barrier in conjunction with a loss of containment, Attachment A.</p>	<p>[HA6] 9.1.3 {1,2,3,4,5} Any event, as determined by the Shift Manager, POM or Emergency Director, that could cause or has caused actual substantial degradation of the level of safety of the plant.</p> <p style="text-align: right;">[FC7,RCS6]</p> <p>9.1.4 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead or has led to a loss or potential loss of either fuel clad or RCS barrier, Attachment A.</p>	<p style="text-align: right;">[HU5] 9.1.1 {1,2,3,4,5} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead to or has led to a potential degradation of the level of safety of the plant.</p> <p style="text-align: right;">[PC8] 9.1.2 {1,2} Any event, as determined by the Shift Manager, POM or Emergency Director, that could lead to or has led to a loss or potential loss of containment, Attachment A.</p>

HANDLING FIRE DEPARTMENT PERSONNEL FIGHTING FIRES
IN THE CONTROLLED AREA

Prepared by: B. S. S. 9/14/98 Date
Reviewer: _____ Date
Reviewer: _____ Date
Reviewer: _____ Date
SNSC Review: #2627 Date
Dennis G. 8/19/99 Meeting No. Date
Approval: Tony Kewen / A. K. 8/16/99 Signature/Title Date
9-1-99 /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

HANDLING FIRE DEPARTMENT PERSONNEL FIGHTING FIRES IN THE CONTROLLED AREA

1.0 PURPOSE

- 1.1 To provide a procedure that describes the duties of the Health Physics Technician (HPT) AND the Security Force for handling Fire Department personnel who respond to a fire in the Radiologically Controlled Area (RCA).

2.0 DISCUSSION

- 2.1 The Fire Brigade Leader shall make the determination on WHETHER the fire department should be called in to assist in fighting the fire. The call to the fire department for assistance should normally be made by the Control Room Operator. The HPT provides for the radiological protection to the fire fighters in the case where the fire is located in the RCA. Access control to the Protected Area, Vital Area AND RCA is handled by the Security Force.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Fire Department personnel are NOT required to wear our Anti-C clothing WHEN they fight a fire in the RCA.
- 3.2 ALL Fire Department personnel who enter the RCA shall be provided with a dosimeter AND TLD badge by a member of the Security Force. Dosimeters AND TLD badges are normally obtained from the supply kept at the Command Guard House.
- 3.3 ALL Fire Department personnel entering the RCA shall be required to have their person, clothing AND equipment checked for contamination by the HPT BEFORE they leave the RCA.
- 3.4 ALL clothing AND equipment NOT permitted to be removed from the RCA due to contamination shall be inventoried by the HPT for compensation on FORM 9.
- 3.5 Every effort shall be made to keep exposures to Fire Department personnel AS LOW AS REASONABLY ACHIEVABLE.
- 3.6 IF it becomes necessary for the personnel fighting the fire to EXCEED the Con Edison radiation exposure limits, the HPT shall notify the Shift Manager OR Plant Operations Manager AS SOON AS PRACTICAL.

- 3.7 DO NOT enter heavy smoke areas WITHOUT a Self Contained Breathing Apparatus (SCBA).

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D IN EPD BOOK NO. 2.

5.1 Security Force

- 5.1.1 Obtain zeroed dosimeters AND TLD badges, from the supply at the Command Guard House.
- 5.1.2 Issue a dosimeter AND TLD badge to EACH Fire Department responder WHEN they are admitted to the Protected Area. Instruct the responder to wear them underneath the raincoat to protect them from water damage.
- 5.1.3 Allow the Fire Department responders to enter the RCA WITHOUT wearing anti-C clothing.

5.2 Health Physics Technician

- 5.2.1 The name of the individual AND TLD badge number shall be recorded by the Health Physics Technician AFTER the fire has been extinguished.
- 5.2.2 Make field measurements at the fire scene AND notify the Officer in charge of any restrictions you are imposing on his personnel.
- 5.2.3 IF a Continuous Air Monitor (CAM) is available OR may be obtained WITHOUT detracting from your duties at the fire scene, set it up as close as practical to the Fire Department personnel.
- 5.2.4 Evaluate the potential for the spread of high levels of radioactive contamination from the use of water by the Fire Department personnel.

- 5.2.5 Should airborne activity be detected by the Health Physics Technician, notify the officer in charge of any restrictions you are imposing on his personnel due to the airborne activity as per Reference 6.1.
- 5.2.6 WHEN personnel have been involved in an airborne atmosphere, determine from counting the air sampler filters, AND disregarding any protective device they have worn. Check the areas of the eyes, ears, nose AND mouth with an end window G.M. survey instrument. This check should be performed in a 0.05 mR/hr background. Any reading ABOVE background should be further investigated by means of smears. These individuals should THEN be referred for Whole Body Counting AND the Shift Manager OR Plant Operations Manager shall be notified.
- 5.2.7 Check ALL Fire Department personnel, their clothing AND their equipment for contamination BEFORE they leave the RCA. Use FORMS 7 AND 9 to record the data.
- 5.2.8 Check the fire truck AND outside areas for contamination IF it became necessary for fire personnel to go back AND forth BETWEEN the truck AND the RCA WITHOUT being checked EACH time. Record on FORM 8.
- 5.2.9 Assist AND supervise the decontamination of ANY fireman IF that becomes necessary. Use FORM 31b to record skin decontamination.
- 5.2.10 Supervise the decontamination of ANY equipment OR rubberized protection gear. Make a list of ALL items you are NOT allowing to leave the Controlled Area as well as the items you have checked okay using FORM 9.
- 5.2.11 IF a CAM was used, remove the chart AND incorporate it with the data. Indicate the instrument range, IF APPROPRIATE, on the chart.
- 5.2.12 Using FORM 24 record the dosimeter readings AND TLD badge numbers for ALL the participating Fire Department personnel.
- 5.2.13 Turn in ALL completed FORMS EITHER to the Plant Operations Manager OR the Radiation Protection Manager during an emergency AND to the Radiation Protection Manager AFTER the emergency, as APPROPRIATE.

6.0 REFERENCES

6.1 RS-10.001, "Issuance of Respiratory Protection Devices"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

Personnel Accountability and Evacuation

Prepared by:	<u>RICHARD BURNS</u> Print Name	<u>[Signature]</u> Signature	<u>3/16/00</u> Date
Technical Reviewer:	<u>Al Lee</u> Print Name	<u>[Signature]</u> Signature	<u>3/16/00</u> Date
Reviewer:	<u>T.S. ELSROTH</u> Print Name	<u>[Signature]</u> Signature	<u>3/22/00</u> Date
Reviewer:	_____ Print Name	_____ Signature	_____ Date
Reviewer:	_____ Print Name	_____ Signature	_____ Date
SNSC Review:	<u>2706</u> Meeting Number	<u>[Signature]</u> Signature Secretary	<u>3/16/00</u> Date
Approval:	<u>Frank Inzirillo</u> Print Name	<u>[Signature]</u> Signature	<u>3/22/00</u> Date

Effective Date: 3/28/00

Extensively Revised

_____	Biennial Review	_____
Reviewer/Date		Reviewer/Date
_____		_____
_____		_____

Table of Contents

1.0	PURPOSE	3
2.0	DISCUSSION	3
3.0	PRECAUTIONS AND LIMITATIONS	5
4.0	EQUIPMENT AND MATERIALS	5
5.0	INSTRUCTIONS	5
5.1	Initial Accountability	5
5.2	Continuing Accountability	8
5.3	Site Evacuation	8
6.0	REFERENCES	10
7.0	ATTACHMENTS	
8.0	ADDENDUM	
8.1	Addendum #1, Accountability Rosters (Form IP-1027-1)	11
8.2	Addendum #2, Site Map with Assembly Areas (Form IP-1027-2)	12

Site Personnel Accountability and Evacuation

1.0 **PURPOSE**

- 1.1 To describe the method and procedures used to initially account for individuals within the Protected Area whenever the Site Assembly Alarm is sounded and/or accountability is called for.
- 1.2 To describe the method of handling continuing accountability during the emergency.
- 1.3 To describe method of conducting Site Evacuation.

2.0 **DISCUSSION**

2.1 Accountability Philosophy

- 2.1.1 Accountability is defined as accounting (knowing the location of) for all personnel within the Protected Area OR knowing they are within the Protected area but missing.
- 2.1.2 For the purpose of this procedure the following groups of personnel are defined:
 - A. Essential Personnel individuals assigned to the Emergency Response Organization (ERO). This includes:
 - (1) All members of the onshift watch (SM, CRS, ROs, NPOs, Watch Engineer, Watch HP and Chemistry Technicians)
 - (2) All members of the Security Force.
 - (3) All TSC/OSC ERO staff members,
 - (4) Non-Shift Licensed Operators within the Protected Area
 - (5) All ConEd Mechanics, Electricians, I&C Technicians and HP Technicians within the Protected Area.
 - B. Non-essential personnel all other personnel who are not assigned responsibilities in the ERO. This also includes all contractors.
- 2.1.3 Accountability is accomplished by evacuation of all non-essential personnel from the Protected Area and physically accounting for all individuals who remain within the Protected Area.
- 2.1.4 During plant shutdowns, when there may be large numbers of workers onsite and within the radiological control areas, a Health Physics computer printout may be used to assist in locating missing personnel within the radiological control area after accountability is completed.

- 2.1.5 After non-essential personnel have been evacuated from the Protected Area Security will provide an access report to the OSC Manager (or individual designated to complete accountability), which will be compared with Assembly Area Rosters to confirm all individuals have been accounted for.
- 2.1.6 Accountability is complete when the Shift Manager (or Emergency Plant Manager if he/she is in place) are informed that all personnel are accounted for or the names of missing people are identified.
- 2.1.7 Search and Rescue missions shall be undertaken immediately to locate any missing personnel.
- 2.1.8 Initial Accountability shall be accomplished for events classified at the Alert, Site Area or General Emergency

2.2 Assembly Area Locations

- 2.2.1 Within the Protected Area all personnel will assemble in one of three (3) pre-designated Assembly Areas. These are the TSC/OSC Complex, the Central Control Room (CCR), and Command Guard House.
- 2.2.2 Non-essential personnel who evacuate the Protected Area will assemble in the Energy Education Center (auditorium and large area outside auditorium)
- 2.2.3 All Personnel shall remain assembled onsite until released by the Emergency Director.

2.3 Continuing Accountability

After initial accountability is complete, continuing accountability shall be maintained for events classified as Site Area Emergencies or General Emergencies. For events classified as an Alert the Emergency Plant Manager (EPM) may suspend accountability requirements based on plant conditions. The EPM may also suspend accountability during the later stages of higher classifications after plant conditions have stabilized and surveys have been completed in all habitable areas within the Protected Area verifying normal radiation levels.

2.4 Site Evacuation

- 2.4.1 Evacuation of all non-essential personnel from the site shall be at the direction of the Emergency Director at a Site Area Emergency or General Emergency. He/she may call for Site Evacuation prior to these emergency levels if deemed necessary.
- 2.4.2 Personnel may evacuate using either their own vehicles or by company vehicles obtained for that purpose if personal vehicles are contaminated.
- 2.4.3 Evacuation and/or relocation of essential personnel will be at the direction of the Emergency Plant Manager for individuals within the Protected Area or the Emergency Director for onsite individuals outside the Protected Area.

3.0 PRECAUTIONS AND LIMITATIONS

None

4.0 EQUIPMENT AND MATERIALS

None

5.0 INSTRUCTIONS

5.1 Initial Accountability

5.1.1 The Shift Manager or Control Room Supervisor

IF an event has been classified as an Alert, Site Area or General Emergency **AND** Accountability has **NOT** been established **THEN** the Shift Manager or the Control Room Supervisor shall direct the following:

NOTE:

Steps A and B, Emergency notifications are performed in accordance with a checklist provided in IP-1002, Emergency Notification and Communication

- A. Sound the Site Assembly Alarm for at least 30 seconds.
- B. Make a Public Address system announcement for activation of the ERO and evacuation of non-essential personnel from the Protected Area.
- C. Account for CCR Personnel (or assigning someone to account for)
 - (1) Use an Accountability Roster (Form IP-1027-1) and develop a list of all watch individuals (CCR Staff, NPOs, watch HP and chemistry technicians) and non-watch Operations personnel assembled in the CCR or assigned to tasks in the field.
 - (2) Have the Accountability Roster of watch and operations personnel who have been accounted for delivered to the OSC Manager or Accountability Clerk.
- D. Send an individual to or call the TSC/OSC Complex to verify there is an OSC Manager or Accountability Clerk present **IF** one of these individuals is not present **THEN** direct an individual to perform step 5.1.3 of this procedure.
- E. Wait for the OSC Manager, the Accountability Clerk (or Shift Manager designated individual) report on the completion of Initial Accountability
- F. **IF** the OSC has not been activated **AND** personnel have been determined to be missing **THEN** coordinate search and rescue missions to locate missing persons within the Protected Area, until the OSC is activated and assumes this responsibility.

- G. **IF** the OSC has not been activated **THEN** authorize ERO members to enter the Protected Area and report to the TSC/OSC Complex.

NOTE:

Senior Management who are not assigned to the ERO but are within the Protected Area may report to the CCR or TSC/OSC Complex to be accounted for and assist in emergency response.

5.1.2 All personnel within the Protected Area

WHEN the Site Assembly Alarm sounds and an announcement is made for activation of the ERO and evacuation of the non-essential personnel **THEN** all personnel within the Protected Area shall:

NOTE:

Personnel within the Radiological Control Areas shall follow normal procedures to leave the area as quickly as possible and report to Assembly Area.

- A. **IF** you are a member of the Onshift Watch (SROs, ROs, NPOs, Watch Engineer, Watch HP or Chemist) **THEN** report to the CCR for accountability.
- B. **IF** you are a member of the ERO (TSC, OSC) **THEN** report to the TSC/OSC Complex and sign the accountability rosters.
- C. **IF** you are a member of the EOF ERO **THEN** identify yourself as a member of the EOF Staff and move to the front of the line to expedite egress from the Protected Area and report to the EOF
- D. **IF** you are a ConEd employee but non-essential to the ERO **THEN** exit the Protected Area as quickly as possible and report to the Energy Education Center and stand by for further instructions.

NOTE

Non-ConEd personnel (such as HP Technicians & Security) may be designate to remain onsite

- E. **IF** you are a Non-ConEd employee **THEN** exit the Protected Area and leave the site.

5.1.3 The OSC Manager (or Accountability Clerk) shall:

NOTE:

Initial Accountability shall be completed within approximately 30 minutes from the time the Site Accountability Alarm is sounded.

- A. Direct all ERO members reporting to the TSC/OSC Complex to sign an Accountability Roster (Form IP-1027-1)
- B. Obtain Accountability Rosters from the CCR
- C. **WHEN** security delivers the Protected Area Security Access Report **THEN**:
 - (1) Verify that names of Security personnel have been checked off Access Report.
 - (2) Check off names of individuals who's names appear on TSC/OSC and CCR Accountability Rosters.
- D. **WHEN** you have completed comparing the Security Access Report, (all individuals within Protected Area) to the Accountability Rosters (personnel accounted for) **THEN**:
 - (1) Report to the Shift Manager or Emergency Plant Manager that accountability is complete and the number of names not checked off Security Access Report as missing.
 - (2) Log initial accountability as completed.
- E. **IF** there are individuals who are **NOT** accounted for **THEN**:
 - (1) Contact the Security Guard House for Accountability Rosters of individuals who may have left Protected Area since Security Access Report was printed and printout of individuals within the Protected Area sorted by location.
 - (2) Send an HP to obtain the Health Physics Computer Printout of individuals within the Radiological Control Area.
 - (3) Check off names of possible missing individuals who have left Protected Area to narrow the list of actually missing persons and review HP Computer Printout for any missing individuals within the Radiological Control Area.

NOTE:

Search and Rescue missions should attempt to located anyone thought to be within the Radiological Control Areas first.

- (4) Assemble and dispatch search and rescue teams in using guidance provided in IP-1023, Operations Support Center, procedure for team dispatch.
- F. **IF** there has been a release of radioactive materials **THEN** direct the RP Coordinator to dispatch an HP Technician to the Energy Education Center to verify habitability.

- G. Inform the Emergency Plant Manager or Shift Manager of any habitability concerns in the Energy Education Center.
- H. Designate an individual to report to the Energy Education Center and act as Assembly Area Coordinator. Direct them to:
 - (1) Call the OSC Manager or Accountability Clerk and establish a communications path between OSC and Assembly Area. Additional personnel at the Assembly Area should be selected to act as a communicator.
 - (2) Have personnel stand-by in the Assembly Area until directed to leave site or return to work.
 - (3) Coordinate movement of personnel to the Buchanan Service Center is required.

5.1.4 The Security Shift Supervisor shall direct the Security Force to perform the following:

- A. Stop all ingress to the Protected Area
- B. Expedite the egress of non-essential personnel from the Protected Area.

NOTE:

The Security Access Report should be run approximately 20 minutes (or when most individuals have exited) after the Site Accountability Alarm is sounded.

- C. WHEN the majority of non-essential personnel have departed THEN have LO2 Security Access Report printed.
- D. Check off Security Force personnel from the Security Access Report
- E. Maintain a list of all personnel who leave the Protected Area after the report is printed, to be used to quickly identify location of personnel once initial accountability is complete.
- F. Have Security Access Report with security force checked off delivered to the OSC Manager or Accountability Clerk in the TSC/OSC complex.
- G. Maintain Continuing Accountability until directed otherwise as follows:
 - (1) Do not allow any access to the Protected Area unless the Shift Manager, Emergency Plant Manager or the OSC Manager authorizes individuals in.
 - (2) IF individual arrives to report to the CCR or TSC/OSC AND security has not received authorization for their entry THEN contact CCR or OSC to verify they have been authorized in.
 - (3) WHEN individuals are authorized to enter Protected Area THEN instruct them to report either to the CCR or TSC/OSC Complex.

5.1.5 **WHEN** the oncall Emergency Plant Manager has assumed duties **THEN** he/she Shall:

- A. **IF** there is any habitability concerns with the Energy Education Center. **THEN** inform the Emergency Director at once and recommend Site Evacuation.
- B. Request any additional personnel who have relocated to the Energy Education Center augment the ERO within the Protected Area before personnel are evacuated or released from Assembly Area.
- C. Recommend to the Emergency Director that non-essential personnel assembled at the Energy Education Center be released from the site.
- D. **IF** the Emergency Plant Manager elects to suspend continuing accountability **THEN** the Emergency Plant Manager shall:
 - (1) Consider if plant conditions could degrade to the point accountability is again required.
 - (2) Make a formal announcement accountability is no longer required and log time decision is made in his/her position log.
 - (3) Ensure **IF** conditions again require accountability (such as declaration of higher classification) **THEN** direct initial accountability be performed in accordance with step 5.1 of this procedure.

5.2 Continuing Accountability

- 5.2.1 Unless otherwise directed by the Emergency Plant Manager, continuing accountability shall be maintained once initial accountability is completed.
- 5.2.2 Continuing Accountability shall be maintained by facility managers as directed in procedures IP-1023, Operations Support Center and IP-1035, Technical Support Center.

5.3 Site Evacuation

5.3.1 The Emergency Plant Manager shall:

- A. Review the current and second shift staffing requirements for ERO positions station within the Protected Area.
- B. Determine if additional personnel should be added to ERO **BEFORE** non-essential personnel are dismissed or evacuated.
- C. **IF** radiological release of a magnitude that requires declaration of a General Emergency **THEN**: recommend to the Emergency Director evacuate the Site.

- D. **IF** there has been a radiological release of a magnitude that requires declaration of a Site Area Emergency **THEN**: recommend the Emergency Director have a random survey of personal vehicles onsite performed to determine if they are contaminated.
- E. **IF** there has been **NO** radiological release of a magnitude that requires declaration of a Site Area Emergency **THEN**: recommend to the Emergency Director that non-essential personnel be dismissed without any contamination checks.

5.3.2 The Emergency Director shall:

- A. Review the current and second shift staffing requirements for ERO positions station outside the Protected Area.
- B. Determine if additional personnel should be added to ERO **BEFORE** non-essential ConEd personnel are dismissed or evacuated from the site.
- C. **IF** radiological release of a magnitude that requires declaration of a General Emergency **THEN**: Evacuate the Site by calling the Energy Education Center and informing personnel to evacuate and directing security to do a sweep of all site areas outside the Protected Area.
- D. **IF** there has been a radiological release of a magnitude that requires declaration of a Site Area Emergency **THEN** after conferring with the Emergency Plant Manager:
 - (1) Direct ORAD to have a random survey of personal vehicles onsite performed to determine if they are contaminated.
 - (2) **IF** vehicles are found to be contaminated **THEN** make arrangements for other vehicles to evacuate personnel from the site.
 - (3) Direct Security to do a sweep of site areas outside the Protected Area and inform personnel to the Buchanan Service Center.
 - (4) Relocate personnel from Energy Education Center to the Buchanan Service Center to be checked for contamination and released.
- E. **IF** there has been **NO** radiological release of a magnitude that requires declaration of a Site Area Emergency **THEN**: after conferring with the Emergency Plant Manager:
 - (1) Direct non-essential personnel be dismissed from the Energy Education Center without any contamination checks.
 - (2) Direct Security to do a sweep of site areas outside the Protected Area and inform personnel to leave the site.

5.3.3 Security shall:

- A. **WHEN** directed by the Emergency Director **THEN** perform sweeps of site areas outside the Protected Area informing personnel to relocate or leave site.
- B. **IF** Site Evacuation has been called for **THEN** restrict site access, allowing only personnel authorized by the Emergency Director or the Emergency Plant Manager to enter the site.

6.0 REFERENCES

- 6.1 IP-1002, "Emergency Notification and Communication"
- 6.2 IP-1023, "Operations Support Center"
- 6.3 IP-1035, "Technical Support Center"

7.0 ATTACHMENTS

None

8.0 ADDENDUM

- 8.1 Addendum 1, Accountability Rosters (Form IP-1027-1)
- 8.2 Addendum 2, Site Map with Assembly Areas (Form IP-1027-2)

Addendum 1
 Accountability Roster (Form IP-1027-1)
 Sheet 1 of 1

Accountability Roster

Location: ☐ TSC/OSC Complex ☐ Central Control Room ☐ Command Guard House

✓		Clearly Print Last / First Name
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	

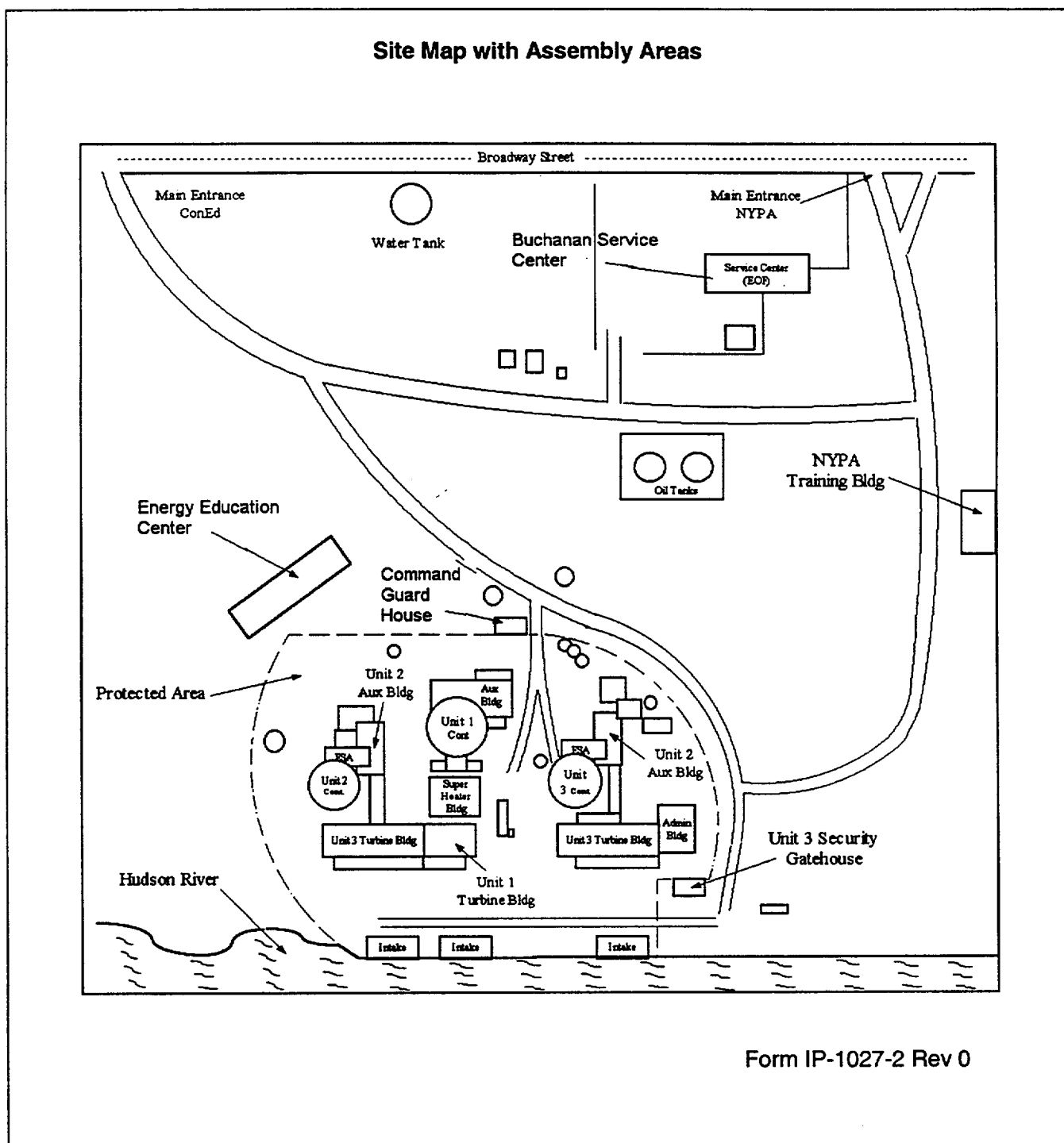
✓		Clearly Print Last / First Name
	21	
	22	
	23	
	24	
	25	
	26	
	27	
	28	
	29	
	30	
	31	
	32	
	33	
	34	
	35	
	36	
	37	
	38	
	39	
	40	

Total Individuals on this Roster: _____

Accountability checked by _____ on _____ at _____
 (Signature) (Date) (Time)

Form IP-1027-1 Rev 0

Addendum 2
 Site Map with Assembly Areas (Form 1027-2)
 Sheet 1 of 1



CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1028
Rev. 7

ONSITE (OUT OF PLANT) FIELD SURVEYS

Prepared by: B. Burns 9/11/98 Date 9/11/98 Technical Reviewer: Tony Grew 8/16/99 Date 8/16/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____
Approval: Tony Grew / Atty. Gen. 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

ONSITE (OUT OF PLANT) FIELD SURVEYS

1.0 PURPOSE

- 1.1 To describe onsite, out of Plant, field surveys that could be performed during an Alert, Site Area or General Emergency.

2.0 DISCUSSION

- 2.1 Onsite, out of Plant, is the area located outside of the Protected Area fence, BUT within the site boundary. The Emergency Director (ED) OR the Offsite Radiological Assessment Director (ORAD) is responsible for initiating the field surveys. The onsite monitoring team(s) operating from the EOF, perform the surveys. The surveys comprise beta AND gamma readings taken with an ionization chamber instrument. The survey teams obtain personnel monitoring devices AND survey instruments at the EOF. In addition, any respiratory protection equipment AND KI that might be needed by the onsite monitoring team shall be specified by the Emergency Director/Offsite Radiological Assessment Director AND obtained at the EOF.
- 2.2 The site boundary map, located in the EOF, may be used for planning AND identifying the areas to be surveyed by the team(s).

3.0 PRECAUTIONS AND LIMITATION

- 3.1 The team normally consists of a Health Physics Technician (HPT) PLUS a Security Guard WITH a vehicle.

4.0 EQUIPMENT AND MATERIALS

- 4.1 The monitoring team shall obtain the following equipment BEFORE leaving the EOF. This equipment is stored in the EOF cabinet.
- 4.1.1 Handi-talkie radio (comes with the Security Guard).
- 4.1.2 Ion chamber survey instrument (5 R/hr range).
- 4.1.3 TLD badge.
- 4.1.4 Dosimeters (0-500 AND 0-5000 mrem).
- 4.1.5 KI IF, in the judgement of the ED/ORAD, the individual could be expected to receive a thyroid exposure GREATER THAN 25 Rem CDE thyroid.

4.1.6 Iodine cartridge respirator (as directed by the ED/ORAD).

4.1.7 Site boundary map (Addendum 8.1).

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 The ORAD, using the site boundary map instructs the monitoring team on the areas of the site to survey.
- 5.2 The expected radiation fields AND airborne contamination levels that the monitoring team may encounter shall be discussed.
 - 5.2.1 The concept of personnel exposure NOT EXCEEDING 5 Rem TEDE shall be factored into the planning.
 - 5.2.2 Survey teams shall NOT enter areas where the radiation fields EXCEED 1 R/hr WITHOUT permission of the ORAD.
 - 5.2.3 Thyroid exposure due to radioiodine shall be evaluated especially during a SG tube rupture scenario where NG/I ratios are considered to be as low as 100/1.
- 5.3 The ORAD should consider issuing KI to EACH member of the team IF the expected thyroid exposure would be 25 Rem CDE thyroid OR more.
- 5.4 EACH team member shall obtain a TLD badge AND dosimeters (0-500 AND 0- 5000 mrem).
- 5.5 The ORAD should determine whether respiratory protection is required as per Reference 6.1 .
- 5.6 Anti-C clothing shall be not worn during drills AND exercises.
- 5.7 The operation of the survey instrument (ion chamber) shall be checked using the 5 μ Ci Cs-137 source. In the beta plus gamma mode the instrument indication should be APPROXIMATELY 15 mR/hr on contact.
- 5.8 Energize the radio AND contact the EOF Communicator BEFORE leaving the EOF parking area.

NOTE:

GAMMA AND BETA FIELD READINGS ARE NORMALLY HIGHEST AT THE CENTER OF THE PLUME.

- 5.9 Take beta AND gamma field readings as you proceed BETWEEN locations. Take readings WITH the instrument detector window shield opened (OW, beta AND gamma) AND closed (CW, gamma).

5.9.1 Determining the beta reading by subtracting the CW reading from the corresponding OW reading AND multiply the difference by 2 for mRad/hr beta.

5.9.2 Record the readings on FORM 10.

NOTE:

OPENED WINDOW READINGS GREATER THAN CLOSED WINDOW READINGS MAY BE INDICATION OF NEARBY AIRBORNE OR SURFACE CONTAMINATION

NOTE:

IF THE RADIO FAILS RETURN TO THE EOF.

- 5.10 Maintain radio contact with the EOF AND inform the Communicator of significant readings as you proceed to the specified survey area.
- 5.11 Perform a beta AND gamma survey at the specified location, record on FORM 10 AND radio the results to the EOF.
- 5.12 Check yourself for contamination, IF appropriate, WHEN returning to the EOF.
- 5.13 Submit data forms to the ORAD AFTER returning to the EOF.

6.0 REFERENCES

6.1 RS-10.001, "Issuance of Respiratory Protection Device"

7.0 ATTACHMENTS

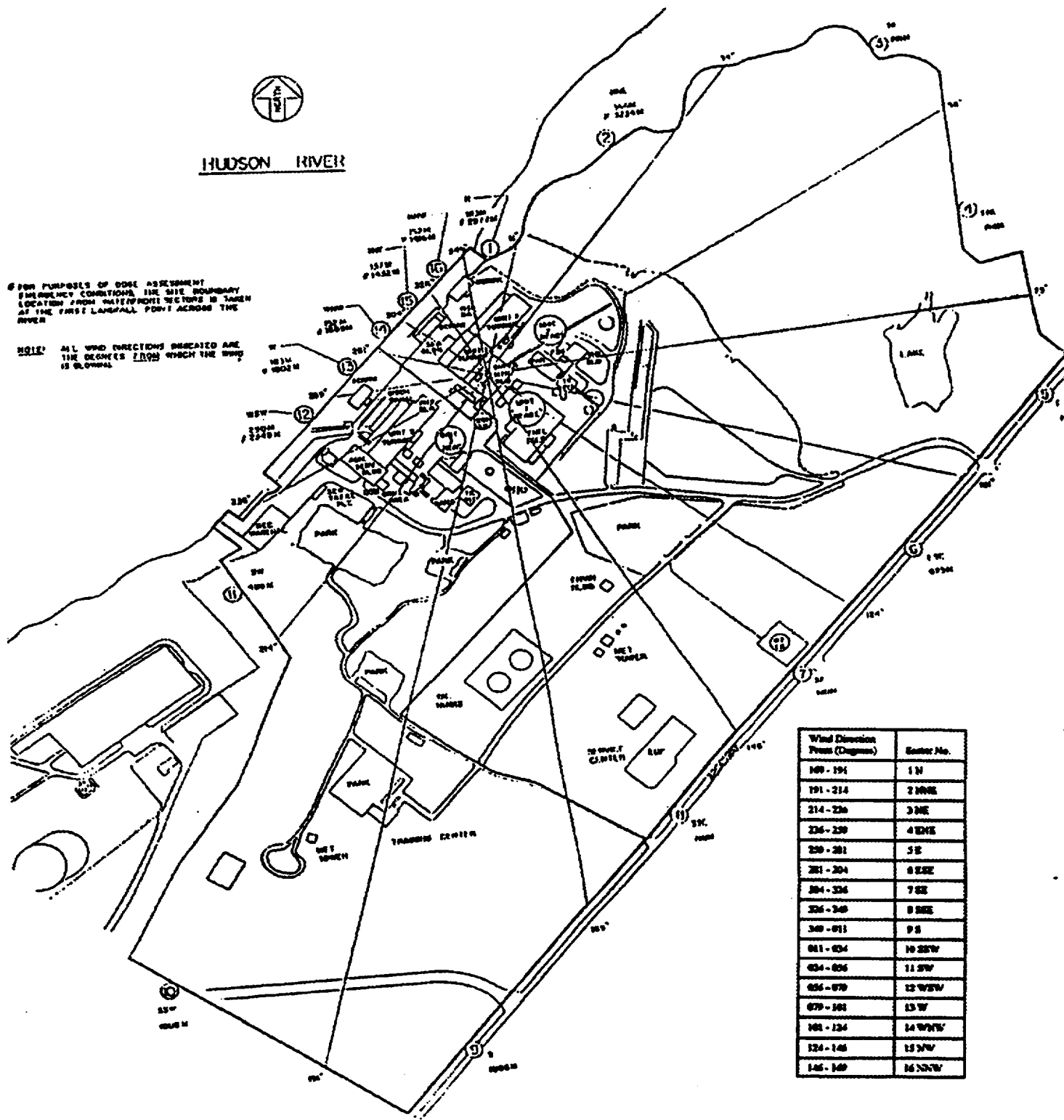
NONE

8.0 ADDENDUM

8.1 Site Perimeter Survey Map

ADDENDUM 8.1
Page 1 of 1

SITEMONITORING MAP



Emergency Operations Facility

Prepared by:

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Meeting Number Signature Secretary Date

Approval:

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Effective Date: 3/28/00

Biennial Review _____
Reviewer/Date Reviewer/Date

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 PURPOSE	4
2.0 DISCUSSION	4
3.0 PRECAUTIONS AND LIMITATIONS	4
4.0 EQUIPMENT AND MATIREALS.....	4
5.0 INSTRUCTIONS	5
5.1 Emergency Director	5
5.2 EOF Manager	5
5.3 Offsite Radiological Assessment Director	5
5.4 Dose Assessment Health Phycisist.....	5
5.5 Survey Team Health Phycisist	5
5.6 Midas Operator	5
5.7 Technical Advisor to Emergency Director	5
5.8 EOF Communicator #1	5
5.9 EOF Communicator #2	5
5.10 EOF Clerical Staff.....	5
6.0 REFERENCES	6
7.0 ATTACHMENTS	
Attachment 1:Emergency Director Checklist.....	7
Attachment 2:EOF Manager Checklist.....	15
Attachment 3:Offsite Radiological Assessment Director Checklist	25
Attachment 4: Dose Assessment Health Phycisist Checklist.....	33
Attachment 5: Survey Team Health Phycisist Checklist	37
Attachment 6: MIDAS Operator Checklist	41
Attachment 7: Technical Advisor to Emergency Director Checklist.....	45
Attachment 8: EOF Communicator #1 Checklist.....	48
Attachment 9: EOF Communicator #2 Checklist.....	52
Attachment 10: EOF Clerical Staff Checklist.....	55

8.0 ADDENDUM

Addendum 1:EOF Layout	59
Addendum 2:NYS Radiological Data Form (Part I & II) (Form IP-1030-1)	61
Addendum 3:Normal EOF Staffing (Form IP-1030-2)	63
Addendum 4:EOF Radiological Survey Map (Form IP-1030-3)	64
Addendum 5:Directions to NYS EOC.....	65
Addendum 6:EPA 302.4 Nuclide Table (Form IP-1030-4).....	66
Addendum 7:Offsite Survey Team Data Sheet (Form IP-1030-5)	67

1.0 PURPOSE

To describe the activation and operation of the Emergency Operations Facility (EOF)

2.0 DISCUSSION

None

3.0 PRECAUTIONS AND LIMITATIONS

EOF habitability checks are necessary to ensure long-term manning of the EOF. Should conditions exist which may result in a loss of long-term habitability of the EOF, evaluate the need for relocation of emergency response functions to the Alternate EOF in accordance with IP-1045 "Activation of Alternate Emergency Operations Facility."

4.0 EQUIPMENT AND MATERIALS

4.1 The following types of equipment and materials are available for use in the EOF

4.1.1 Plant information systems:

- EDDS
- SAS
- Proteus
- Meteorological Displays

4.1.2 Radiological equipment needed to perform offsite monitoring:

- Field Monitoring kits
- Survey equipment for performance of facility habitability checks

4.1.3 Dose Assessment and plume tracking equipment:

- MIDAS
- MEANS
- Map table

4.1.4 Communication systems needed to transfer important data to offsite authorities:

- V-Band communications consoles
- Telephones
- Fax Machines

4.1.5 Procedures and forms:

- IP2 Emergency Plan
- IP2 Emergency Plan Implementing Procedures
- Position Binders
- Forms

4.1.6 Office Supplies

4.2 The key to the EOF is located in a break glass container in the EOF entry way.

5.0 INSTRUCTIONS

5.1 The Emergency Director (ED) shall follow the instructions outlined in Attachment 1, Emergency Director Checklist.

5.2 The EOF Manager shall follow the instructions outlined in Attachment 2, EOF Manager Checklist.

5.3 The Offsite Radiological Assessment Director (ORAD) shall follow the instructions outlined Attachment 3, Offsite Radiological Assessment Director (ORAD) Checklist

5.4 The Dose Assessment Health Physicist (DAHP) shall follow the instructions outlined in Attachment 4, Dose Assessment Health Physicist Checklist.

5.5 The Midas Operator shall follow the instructions outlined Attachment 5, Midas Operator Checklist.

5.6 The Survey Team Health Physicist (STHP) shall follow the instructions outlined in Attachment 6, Survey Team Health Physicist Checklist.

5.7 The Technical Advisor to Emergency Director shall follow the instructions outlined in Attachment 7, Technical Advisor (TA) Checklist

5.8 The EOF Communicator #1 shall follow the instructions outlined in Attachment 8, EOF Communicator #1. Checklist

5.9 The EOF Communicator #2 shall follow the instructions outlined in Attachment 9, EOF Communicator #2. Checklist

5.10 The EOF Clerical Staff shall follow the instructions outlined in Attachment 10, EOF Clerks. Checklist

6.0 REFERENCES

- 6.1 IP-1021, "Manual Update and Readout of Proteus Plant Parameter Data"
- 6.2 IP-1024, "Emergency Classification"
- 6.3 IP-1027, "Site Personnel Accountability and Evacuation"
- 6.4 IP-1048, "Closeout/De-escalation of Emergency and Initiation of Recovery"

7.0 ATTACHMENTS

- 7.1 Attachment 1, Emergency Director Checklist
- 7.2 Attachment 2, EOF Manager Checklist
- 7.3 Attachment 3, Offsite Radiological Assessment Director (ORAD) Checklist
- 7.4 Attachment 4, Dose Assessment Health Physicist (DAHP) Checklist
- 7.5 Attachment 5, MIDAS Operator Checklist
- 7.6 Attachment 6, Survey Team Health Physicist (STHP) Checklist
- 7.7 Attachment 7, ED Technical Advisor Checklist
- 7.8 Attachment 8, EOF Communicator #1 Checklist
- 7.9 Attachment 9, EOF Communicator #2 Checklist
- 7.10 Attachment 10, EOF Clerical Staff Checklist

8.0 ADDENDUM

- 8.1 Addendum 1, EOF Layout
- 8.2 Addendum 2, NYS Radiological Data Form (Part I & II) (Form IP-1030-1)
- 8.3 Addendum 3, Sample Form - Normal EOF Staffing (Form IP-1030-2)
- 8.4 Addendum 4, Sample Form - EOF Radiological Survey Map (Form IP-1030-3)
- 8.5 Addendum 5, Directions to NYS EOC
- 8.6 Addendum 6., EPA 302.4 Nuclide Table (Form IP-1030-4)
- 8.7 Addendum 7, Sample Form - Offsite Survey Team Data Sheet (Form IP-1030-5)

Attachment 1
Emergency Director Checklist
Sheet 1 of 8

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Emergency Director.</p> <p>1.1 Upon arrival at the EOF review facility status boards, EDDS and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain a briefing from the acting ED. (if the EOF has not been activated, either the SM or EPM will be the acting ED in the Central Control Room, they can be contacted via the direct EOF-CCR ring-down on the V-Band console)</p> <p>A. Use an Essential Information Checklist (Form IP-1035-2) to document the briefing.</p> <p>B. Request additional information on current status of emergency classification, response activities and offsite notifications.</p> <p>1.3 <u>IF</u> the EOF has <u>NOT</u> been activated <u>THEN</u>:</p> <p>A. Request the CCR to fax copies of all NYS Radiological Emergency Data Forms used to make offsite notifications to the EOF for your review.</p> <p>B. <u>IF</u> an EOF Manager is <u>NOT</u> yet present <u>THEN</u> assign individuals to the following positions as they become available:</p> <ol style="list-style-type: none"> 1. ED Technical Advisor 2. Offsite Radiological Assessment Director (ORAD) 3. Dose Assessment Health Physicist (DAHP) 4. MIDAS Operator 5. EOF Communicator #1 6. EOF Communicator #2 7. EOF Clerical Staff <p>C. <u>IF</u> additional personnel are needed <u>THEN</u> call or direct someone to call additional individuals using the Emergency Telephone Directory.</p>	

Attachment 1
Emergency Director Checklist

Sheet 2 of 8

<u>Initial Responsibility/Activity(cont.)</u>	<u>Notes</u>
<p>D. <u>WHEN</u> there is sufficient EOF staff present to assume the following emergency responsibilities:</p> <ul style="list-style-type: none"> • Assess plant conditions and classify emergencies. • Perform dose assessment and make protective action recommendations (PARs) • Make notifications to offsite authorities <p><u>THEN</u> perform a formal turnover with the acting ED (SM or EPM in the Central Control Room):</p> <ul style="list-style-type: none"> • Review the latest transmitted NYS Radiological Emergency Data Form (Part I & II). Determine the time that the next follow-up notifications will be required. • Coordinate the official time of turnover to ensure it will not interfere with or delay required emergency classification, offsite notifications, briefings or issuance of PARs. • Once the determination has been made to formally turnover ED responsibilities, make an announcement to EOF personnel that you are now the Emergency Director and that the EOF is now activated. <p>E Inform, or direct the EOF Manager to inform, the following individuals that you have assumed the duties of Emergency Director and that the EOF is activated.</p> <ol style="list-style-type: none"> 1. Emergency Plant Manager (TSC) 2. Shift Manager (CCR) 3. Company Spokes person or JNC Director (if activated) 4. CIG Duty Officer <p>F Direct EOF Manager or EOF Communicator #2 to notify Offsite Agencies that the EOF is now activated:</p> <ol style="list-style-type: none"> 1. NRC via ENS 2. NYS and 4 Counties via RECS 	

Attachment 1
Emergency Director Checklist

Sheet 3 of 8

<u>Initial Responsibility/Activity(cont.)</u>	<u>Notes</u>
<p>1.4 <u>IF</u> relieving another Emergency Director in the EOF <u>THEN</u> perform a formal turnover with the current Emergency Director:</p> <p>A. Review the Emergency Director's activity log</p> <p>B. Obtain briefing form current ED on the emergency and any actions the have been competed or are in progress using an Essential Information Checklist (Form IP-1035-2) to document the briefing.</p> <p>C. Once the formal turnover is complete direct the EOF Manager to inform the EOF, TSC, CCR and JNC that you are now the Emergency Director.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Maintain personnel accountability in the EOF</p> <p>2.1 Direct EOF personnel that are required to temporarily leave the EOF area to inform the EOF Manager before leaving the work area.</p> <p>2.2 If you leave the area, upon your return, obtain a briefing from the EOF Manager on any events that have occurred while you were away.</p>	
<p>3.0 Maintain a log:</p> <p>3.1 Maintain or direct the EOF Manager to maintain a log using Form IP-1023-4, ERO Log Sheet</p> <p>3.2 Log when you assume the duties of Emergency Director (and EOF activation if not previously done).</p> <p>3.3 Log significant decisions and important details used to make decisions. (emergency classification changes and protective actions recommendations)</p> <p>3.4 Log all significant communications with other members of the ERO and all communications with individuals offsite.</p> <p>3.5 <u>IF</u> you have assigned someone to maintain the ED log <u>THEN</u> periodically review the log for accuracy.</p>	

Attachment 1
Emergency Director Checklist
Sheet 4 of 8

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>4.0 Classify emergency conditions. (non-delegable)</p> <p>4.1 Review plant conditions with the Emergency Plant Manager in the TSC and ED Technical Advisor.</p> <p>4.2 Review offsite radiological data with the ORAD and EOF Manager.</p> <p>4.3 Compare current information and recommendations with the thresholds on the EAL Wall Chart, Procedure IP-1024, Emergency Classification and the EAL Technical Basis Document.</p> <p>4.4 Solicit recommendation for change of classification from the Emergency Plant Manager.</p> <p>4.5 Escalate the emergency classification when appropriate.</p> <p>4.6 Notify the Emergency Plant Manager and the EOF Staff when and at what time the new emergency classification is made.</p>	
<p>5.0 Make protective action recommendations (PARs). (non-delegable)</p> <p style="text-align: center;">NOTE:</p> <p>Protective Action Recommendations (PARs) are to be made only at the General Emergency classification</p> <p>5.1 Determine, with the assistance of the ORAD and EOF Manager, the appropriate PAR per IP-1013, Protective Action Recommendations</p> <p>5.2 Reevaluate the adequacy of PARs when plant conditions, dose projections, meteorological, or environmental conditions change.</p> <p>5.3 Confer with State authorities prior to PAR issuance, if possible.</p> <p>5.4 PARs shall be transmitted to offsite authorities within 15 minutes of the decision to make the PAR using the offsite notification methods as specified in Step 6.0 below.</p>	

Attachment 1
Emergency Director Checklist
Sheet 5 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>6.0 Direct initial notification of emergency classification and/or PARs to offsite authorities (State, local and NRC). (non-delegable)</p> <p style="text-align: center;">NOTE:</p> <p>Initial offsite notifications to State and local authorities must be completed within 15 minutes of making an emergency declaration or PAR. Notification of the NRC must be completed within 1 hour.</p> <p>6.1 Direct the EOF Manager to complete a NYS Radiological Emergency Data Form Part I</p> <p>6.2 Review and approve (sign) the completed NYS Radiological Emergency Data Form (non-delegable).</p> <p>6.3 Direct the EOF Manager to have EOF Communicator #2 transmit data on the form to the State and Local authorities and the NRC and report to you when task is complete.</p>	
<p>7.0 Direct periodic update notification to offsite authorities</p> <p>7.1 Direct the EOF Manager to complete a NYS Radiological Emergency Data Form (Parts I & II) at the following frequencies:</p> <p style="padding-left: 20px;">A When there has been a significant change in release rates and/or meteorological conditions.</p> <p style="text-align: center;"><u>OR</u></p> <p style="padding-left: 20px;">B When there has been a significant change in plant conditions.</p> <p style="text-align: center;"><u>OR</u></p> <p style="padding-left: 20px;">C Approximately every 30 minutes when conditions are static.</p> <p>7.2 Review and approve the completed NYS Radiological Emergency Data Forms (non-delegable).</p> <p>7.3 Direct the EOF manager to have EOF Communicator #2 transmit data on the form to State and Local authorities and the NRC and report to you when task is complete.</p>	

Attachment 1
Emergency Director Checklist
 Sheet 6 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>8.0 Brief offsite representatives (State, Local, FEMA and NRC)</p> <p>8.1 Upon their arrival at the EOF, brief offsite representatives on:</p> <ul style="list-style-type: none"> A. emergency events B. current plant conditions C. emergency response activities currently underway D. offsite radiological release status E. dose assessment and PARs <p>8.2 Conduct periodic briefing of offsite representatives as deemed appropriate.</p>	
<p>9.0 Review and approve ConEd news releases (non-delegable)</p> <p>9.1 Maintain the EOF Information Liaison apprised of current emergency status and any significant events that may be of public interest.</p> <p>9.2 Ensure that the EOF Information Liaison obtains a copy of any news release prior to issue for your review and approval.</p> <p>9.3 Confer with the Company Spokesperson at the JNC and the EOF Manager and ORAD if there is any question as to the accuracy of the proposed news release prior to approval.</p>	
<p>10.0 Conduct periodic facility briefings</p> <p>10.1 Coordinate with the EOF Manager to schedule the conduct of periodic facility briefings. Establish a briefing schedule of approximately every 30 minutes or as conditions change.</p> <p>10.2 Use an Essential Information Checklist (Form IP1035-2) as a guide for leading the briefings.</p> <p>10.3 Direct the ED Technical Advisor and the ORAD to participate in briefing facility personnel on current plant status and offsite radiological conditions respectively.</p> <p>10.4 Emphasize what the major tasks and priorities are during every briefing</p> <p>10.5 Direct EOF staff to review there procedure to ensure required actions are being performed..</p>	

Attachment 1
Emergency Director Checklist
Sheet 7 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>11.0 Approve emergency radiation exposures and KI issuance for ConEd Workers outside the Protected Area (non-delegable)</p> <p>11.1 When requested by the EOF Manager and/or ORAD, approve emergency radiation exposures and/or issuance of KI for ConEd emergency workers outside the Protected Area Fence.</p> <p>11.2 Authorize emergency exposures up to 1 Rem TEDE for all monitoring team personnel dispatched from the EOF and other EOF staff as required. Ensure this authorization is documented in the ED's Log Sheet.</p> <p>11.3 IF emergency measures require additional exposure THEN authorize raising the blanket emergency exposure limit 1 Rem at a time up to a limit of 5 Rem</p> <p>11.4 Review, when requested by ORAD or EOF Manager, emergency exposures beyond 5 Rem on an individual basis. Exposure in excess of 5 Rem shall be authorized using an Emergency Exposure Authorization sheet (Form IP-1023-6).</p>	
<p>12.0 Acquire and allocate ConEd and external resources as needed to support emergency response.</p> <p>12.1 Review personnel, equipment and supply needs with the EPM.</p> <p>12.2 Make all Nuclear Organization resources available to supply needed items.</p> <p>12.3 Direct the EOF Manager to interface and coordinate with the ConEd Corporate organization to acquire needed equipment and resources that are not under the direct control of the Nuclear Organization.</p> <p>12.4 Request support from INPO and Federal authorities when needed.</p>	
<p>13.0 IF the emergency is classified as a General Emergency THEN direct evacuation of onsite non-essential personnel.</p>	
<p>14.0 IF the emergency is classified as a Site Area Emergency THEN review procedure IP-1027, Personnel Accountability and Evacuation for evacuation or dismissal of non-essential personnel.</p>	

Attachment 1
Emergency Director Checklist
Sheet 8 of 8

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>15.0 Terminate the emergency and enter the Recovery Phase.</p> <p>15.1 Refer to IP-1048, Closeout / De-escalation of Emergency and Initiation of Recovery and IP-1049, Recovery, for guidance on entry into Recovery Phase.</p> <p>15.2 Identify and assign a Recovery Manager.</p> <p>15.3 Notify the Recovery Manager of the intention to enter recovery and request his/her presence in the EOF.</p> <p>15.4 IF there was a radiological release THEN direct the Emergency Plant Manager to have a survey team survey the Recovery Center (Vice President, Nuclear Power Office complex, 72' elevation).</p> <p>15.5 Terminate the emergency and officially enter the Recovery Phase.</p> <p>15.6 Formally turnover the emergency organization to the Recovery Manager</p> <p>15.7 Direct notification of the following locations that Indian Point has entered the Recovery Phase:</p> <ul style="list-style-type: none"> A. The NRC via Energy Notification System (ENS) B. State and Counties using a NYS Radiological Emergency Data Form – Part I, via the RECS C. Corporate Information Group (CIG) D. All activated emergency response centers (TSC/OSC and JNC) <p>15.8 Ensure that a written summary of the event is provided to State and Counties per IP-1048, Closeout/De-escalation of Emergency and Initiation of Recovery</p>	
<u>Closeout Responsibility/Activity</u>	
<p>16.0 Direct all Emergency Response Organization Managers to review documentation generated during the emergency</p> <p>16.1 Verify all required documentation has been completed.</p> <p>16.2 Verify accuracy of documentation.</p> <p>16.3 Provide additional documentation such as summary reports or closeout reports that could assist in recovery of station.</p>	
<p>17.0 Have ERO members provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.</p>	

Attachment 2
EOF Manager

Sheet 1 of 10

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of EOF Manager.</p> <p>1.1 Upon arrival at the EOF review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain briefing from the Emergency Director</p> <p style="padding-left: 20px;">A. Use an Essential Information Checklist (Form IP-1035-2) to document briefing items.</p> <p style="padding-left: 20px;">B. Request any additional information on current status of emergency response.</p> <p>1.3 IF the EOF has <u>NOT</u> been activated <u>THEN</u>:</p> <p style="padding-left: 20px;">A. <u>IF</u> the NYS Radiological Emergency Data Form (Part I & II) completed by the CCR are not available in the EOF <u>THEN</u>. Request CCR fax copies to EOF</p> <p style="padding-left: 20px;">B. Review notification forms, noting time next notification is due.</p> <p style="padding-left: 20px;">C. Assign individuals to the following positions:</p> <ol style="list-style-type: none"> ED Technical Advisor Offsite Radiological Assessment Director (ORAD) Dose Assessment Health Physicist (DAHP) MIDAS Operator EOF Communicator #1 EOF Communicator #2 EOF Clerical Staff <p style="padding-left: 20px;">D. <u>WHEN</u> the following minimum staff is available <u>THEN</u> inform the ED that you are ready to activate the EOF.</p> <ol style="list-style-type: none"> Offsite Radiological Assessment Director (ORAD) EOF Communicator #2 Additional personnel as deemed necessary for the EOF to perform it's functions based on the current emergency conditions. <p style="padding-left: 20px;">E. Review Normal EOF Staffing (Form IP-1030-2) to verify full EOF Staffing.</p>	

Attachment 2
EOF Manager
 Sheet 2 of 10

<u>Initial Responsibility/Activity(cont.)</u>	<u>Notes</u>
<p>F <u>IF</u> additional personnel are required <u>THEN</u>:</p> <ol style="list-style-type: none"> 1. <u>IF</u> it is during normal working hours <u>THEN</u> call or assign someone to call the Energy Education Center for additional personnel. 2. <u>IF</u> the needed individuals are <u>NOT</u> available onsite <u>THEN</u> call or assign someone to call individuals at home using the Emergency Telephone Directory. <p>G <u>WHEN</u> the Emergency Director is ready to assume ED responsibilities from the acting ED in the CCR he/she will formally activate the EOF <u>THEN</u>:</p> <ol style="list-style-type: none"> 1. Inform the following locations that _____ (name) _____ is now the Emergency Director and the EOF has been activated. <ol style="list-style-type: none"> (a) TSC (b) CCR (c) JNC (if activated) (d) CIG 2. Inform the NRC via the ENS phone the EOF is activated. <p>H Establish EOF Security</p> <ol style="list-style-type: none"> 1. Request temporary guard for EOF entrance from the Site Security Supervisor 2. Fill out Authorization List for EOF (Form 23) and give to guard. Include individuals from the following organizations: <ol style="list-style-type: none"> (a) ConEd (b) State and Counties (c) Others as required. (NRC, FEMA, etc.) <p>I. Send Liaison to New York State EOC</p> <ol style="list-style-type: none"> (a) Give the Liaison the State Campus Office Building Map, Addendum 1 (b) Direct that the Liaison should provide technical assistance to state personnel and direct any other request to the EOF (c) Direct the Liaison NOT to talk to the press and direct any media questions to the JNC 	

Attachment 2
EOF Manager
 Sheet 3 of 10

<u>Initial Responsibility/Activity(cont.)</u>	<u>Notes</u>
<p>J Notify or direct the EOF Communicator #2 to notify Offsite Agencies that the EOF is now activated:</p> <ol style="list-style-type: none"> 1. NRC via ENS 2. NYS and 4 Counties via RECS <p>1.4 <u>IF</u> relieving another EOF Manager <u>THEN</u> perform a formal turnover with the current EOF Manager:</p> <ol style="list-style-type: none"> A Review the Emergency Director's activity log B Obtain briefing from current EOF Manager on the emergency and any actions the have been completed or are in progress. C Announcement to the EOF that you are now the EOF Manager. 	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Maintain personnel accountability in the EOF</p> <p>2.1 Direct EOF personnel to inform you and sign out with Security if they must temporarily leave the EOF.</p> <p>2.2 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <ol style="list-style-type: none"> A Inform the Emergency Director if you are leaving the work area. B Upon return, obtain a briefing from the Emergency Director on any events that have occurred while you were away. 	
<p>3.0 Assist the ED in maintenance of ED Log</p> <p>3.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>3.2 Log when the Emergency Director assumed the duties of ED (and EOF activation if not previously done).</p> <p>3.3 Log when you assumed the duties of EOF Manager.</p> <p>3.4 Log significant decisions and important details used to make decisions. (Emergency classification changes and protective actions recommendations shall be logged)</p> <p>3.5 Log significant communications with other members of the ERO and all communications with individuals offsite.</p>	

Attachment 2
 EOF Manager
 Sheet 4 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>4.0 Keep the ED informed of changing conditions that may cause an upgrade in the Emergency Classification.</p> <p>4.1 Review plant data with ED Technical Advisor</p> <p>4.2 Review offsite radiological data with ORAD.</p> <p>4.3 Compare current information and recommendations with EAL Wall Chart, Procedure IP-1024, Emergency Classification and the EAL Technical Basis Document.</p> <p>4.4 Inform the ED of any possible changes in the Emergency Classification</p>	
<p>5.0 Assist the ED in determining the appropriate Protective Action Recommendations to Offsite Authorities.</p> <p style="text-align: center;">NOTE:</p> <p>Protective Action Recommendations (PARs) will only be made for the General Emergency Classification</p> <p>5.1 Determine with the assistance of the ORAD the appropriate PAR per IP-1013, Protective Action Recommendations</p> <p>5.2 Reevaluate the adequacy of PARs when plant conditions, dose projection, meteorological, or environmental measurements change.</p> <p>5.3 Confer with State authorities prior to PAR issuance, if possible.</p> <p>5.4 Once the ED makes or changes a PAR it shall be transmitted to offsite authorities using a NYS Radiological Emergency Data Form, Part I, within 15 minutes of the decision to make the PAR.</p>	

Attachment 2
EOF Manager

Sheet 5 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>6.0 IF the ED changes the emergency classification THEN ensure notification of State and Local authorities be completed within 15 minutes.</p> <p>6.1 Complete (or designate the completion of) a NYS Radiological Emergency Data Form (Part I)</p> <p>6.2 Have the ED review and approve the completed NYS Radiological Emergency Data Form (The ED approval is non-delegable).</p> <p>6.3 Direct EOF Communicator #2 to transmit data on form to State and Local authorities and report to you when task is complete.</p> <p>6.4 Direct transmittal of form data to NRC as soon as possible but no later than 1 hour.</p>	
<p>7.0 Direct periodic updates to offsite authorities be prepared</p> <p style="text-align: center;">NOTE:</p> <p>Completion and transmittal of part II of the NYS Radiological Emergency Data Form may not be needed if there has been no significant release of radioactive materials.</p> <p>7.1 Complete (or designate the completion of) a NYS Radiological Emergency Data Form (Parts I & II) at the following times:</p> <p style="padding-left: 40px;">A When there has been a significant change in release rates and/or meteorological data.</p> <p style="padding-left: 40px;">B When there has been a significant change in plant conditions.</p> <p style="padding-left: 40px;">C <u>OR</u> approximately every 30 minutes if conditions are static.</p> <p>7.2 Present completed form to the ED for review and approval. (The ED's Approval is non-delegable.)</p> <p>7.3 Direct EOF Communicator #2 to transmit data on form to State and Local authorities and the NRC and report to you when task is complete.</p>	

Attachment 2
EOF Manager

Sheet 6 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>8.0 Assist the ED in briefing offsite representatives (State, Local, FEMA and NRC)</p> <p>8.1 Upon their arrival at the facility, offsite representatives should be briefed on:</p> <ul style="list-style-type: none"> A. emergency events B. current plant conditions C. emergency response activities currently underway D. offsite radiological release status E. dose assessment and PARs <p>8.2 Coordinate with ED the periodic briefing of offsite representatives as deemed appropriate.</p>	
<p>9.0 Evaluate the need to evacuate all Non-Essential Personnel and recommend evacuation to ED if conditions warrant.</p> <p>9.1 Check with the EPM on conditions within the Protected Area and the ORAD on conditions outside the Protected Area.</p> <p>9.2 Review IP-1027, Personnel Accountability and Evacuation</p> <p>9.3 Evacuation should occur at a Site Area Emergency, if radiological plume direction does not preclude.</p> <p>9.4 <u>IF</u> conditions exist at an Alert that could warrant evacuation <u>THEN</u> consider evacuation of non-essential personnel from site.</p>	
<p>10.0 Assist the ED in periodic facility briefings</p> <p>10.1 Coordinate with the Emergency Director to schedule the conduct of periodic facility briefings. Establish a briefing schedule of approximately every 30 minutes or as conditions change.</p> <p>10.2 Use Form IP1035-2, Essential Information Checklist as a guide for leading the briefings.</p> <p>10.3 Direct the ED Technical Advisor and the ORAD to participate in briefing facility personnel on current plant status and offsite radiological conditions respectively.</p> <p>10.4 Emphasize what the major tasks and priorities are.</p>	

Attachment 2

EOF Manager

Sheet 7 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>11.0 Track EOF Staff emergency exposures.</p> <p>11.1 Monitor actual or potential EOF personnel exposures or potential exposures and request ED to authorize emergency exposures and the issuance of KI to ConEd emergency workers outside the Protected Area. (ED authorization of emergency exposures is non-delegable)</p> <p>11.2 IF EOF staff must receive exposure THEN request the ED authorize emergency exposures up to 1 Rem TEDE for all monitoring team personnel dispatched from the EOF and remainder of staff as required. Document this authorization in the ED's ERO Log Sheet.</p> <p>11.3 IF emergency measures require additional exposure THEN request the ED to the raise the emergency exposure limit 1 Rem at a time up to a total exposure of 5 Rem.</p> <p>11.4 Evaluate when requested by ORAD, emergency exposures beyond 5 Rem on an individual basis. Request the ED authorize these exposures using Form IP-1023-6, Emergency Exposure Authorization general guidelines (more details are listed on the authorization form).</p> <p>A. ERO members may receive up to 5 Rem TEDE (per event) for any required emergency activities.</p> <p>B. ERO members may be authorized emergency exposures up to 10 Rem TEDE to protect vital equipment.</p> <p>C. ERO members may be authorized emergency exposures up to 25 Rem TEDE to save a life.</p> <p>D. Individuals may volunteer to receive greater than 25 Rem TEDE to save a life.</p> <p>E. Authorize the issuance of KI when requested for any large exposures or expected large exposures to the thyroid.</p>	

Attachment 2
EOF Manager

Sheet 8 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	
12.0 IF additional resources are need to support emergency response THEN assist ED in making request to Federal agencies or other non-ConEd organizations.	
13.0 Relocation of the EOF 13.1 IF the following conditions are present THEN perform an organized evacuation of the EOF to the AEOF. <ul style="list-style-type: none"> • Exposure rates > 80 mRem/Hr TEDE OR 500mRem/Hr TODE • Projected Whole Body Dose for a 12 hour period is > 1 Rem TEDE OR Thyroid Dose >5 Rem TODE • Airborne concentrations which may result in exceeding occupational limits for inhalation specified in 10CFR20, Appendix B, Table 1. <p>Evacuation may be performed at rates below those listed based on plant conditions and response needs.</p> 13.2 IF there has been a core melt sequence where large amounts of fission products (other than noble gases) are in the containment atmosphere AND containment failure is judged imminent THEN consider starting relocation to the AEOF. 13.3 IF time permits THEN have a relief shift report to the AEOF and perform turnover prior to evacuation of EOF. 13.4 Determine the speed at which the relocation of personnel should occur giving consideration to the following items: <ul style="list-style-type: none"> A. Consider the impact of immediate relocation vs. projects in progress. B. Current radiological conditions within the EOF C. Radiological conditions en route. D. The adequacy of response from the alternate location. 13.5 Coordinate evacuation of the EOF with the ED and the EPM transferring ED responsibilities back to the EPM if another ED can not assume responsibilities at the AEOF 13.6 Request that the EPM announce the decision to evacuate and ensure relief shift is made aware of re-location.	

Attachment 2
EOF Manager
 Sheet 9 of 10

<u>Continuous Responsibility/Activity (cont.)</u>	
<p>14.0 Termination of the emergency and entering the Recovery Phase. (The ED is responsible for directing entry into the Recovery Phase)</p> <p>14.1 Refer to IP-1048, Closeout / De-escalation of Emergency and Initiation of Recovery and IP-1049, Recovery, for guidance on entry into Recovery Phase.</p> <p>14.2 The ED shall assign a Recovery Manager</p> <p>14.3 Notify the Recovery Manager of the intention to enter recovery and request his/her presence in the EOF</p> <p>14.4 <u>IF</u> there was a radiological release <u>THEN</u> direct the Emergency Plant Manager to have a survey team survey the Recovery Center.</p> <p>14.5 De-escalate the Emergency and officially enter the Recovery Phase</p> <p>14.6 Formally turnover the emergency organization to the Recovery Manager</p> <p>14.7 Notify the following locations that Indian Point has entered the Recovery Phase:</p> <ul style="list-style-type: none"> A. The NRC via Energy Notification System (ENS) B. State and Counties using information on a NYS Radiological Emergency Data Form Part I, via the RECS C. Corporate Information Group D. All activated emergency response centers (TSC/OSC and JNC) <p>14.8 Ensure that a written summary of the event is provided to State and Counties per IP-1048, Closeout/De-escalation of Emergency and Initiation of Recovery</p>	

Attachment 2
EOF Manager
Sheet 10 of 10

<u>Closeout Responsibility/Activity</u>	
15.0 Direct EOF Staff to return all equipment to proper storage locations.	
16.0 Review all documentation the EOF Staff maintained during the emergency:	
16.1 Ensure logs, forms and other documentation are complete	
16.2 Ensure all temporary procedures used and/or developed are properly documented for use by Recovery Organization so that necessary actions can be taken for plant operations	
17.0 Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 3
Offsite Radiological Assessment Director (ORAD)

Sheet 1 of 8

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of ORAD.</p> <p>1.1 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain briefing from the EOF Manager or Emergency Director</p> <p style="padding-left: 20px;">A. Use an Essential Information Checklist (Form IP-1035-2) to document briefing items.</p> <p style="padding-left: 20px;">B. Request any additional information on current status of emergency response.</p> <p>1.3 <u>IF</u> the EOF has <u>NOT</u> been activated <u>THEN</u>:</p> <p style="text-align: center;"><u>NOTE:</u></p> <p style="padding-left: 40px;">Offsite Dose Assessment and Radiological Monitoring responsibilities may be transferred to the ORAD before the EOF is fully activated.</p> <p>A. <u>WHEN</u> the following minimum staff is available <u>THEN</u> inform the EOF Manager or the ED that you are ready to assume responsibilities for offsite dose assessment and offsite monitoring.</p> <p style="padding-left: 40px;">1. On or Offsite Survey Team Members (2)</p> <p style="padding-left: 40px;">2. EOF Communicator #1</p> <p>B. <u>WHEN</u> ready to assume dose assessment and offsite (outside Protected Area) monitoring responsibilities from the CCR <u>THEN</u> contact the CCR and formally assume these responsibilities.</p> <p>C. Review Normal EOF Staffing (Form IP-1030-2) to verify full EOF Staffing for offsite radiological tracking.</p> <p>D. <u>IF</u> additional personnel are required <u>THEN</u> inform the EOF Manager to direct callout of needed personnel.</p> <p>E. Notify the EOF staff that you have assumed these responsibilities.</p>	

Attachment 3

Offsite Radiological Assessment Director (ORAD)

Sheet 2 of 8

<u>Initial Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>F Direct the MIDAS Operator to disarm (or disarm IAW steps in MIDAS Operator's Checklist) the Halon Fire Protection System (Real emergencies only)</p> <p>G <u>IF</u> there has been a release of radioactive to the environment <u>THEN:</u></p> <ol style="list-style-type: none"> 1. Direct the MIDAS Operator to place (or place IAW steps in MIDAS Operator's Checklist) the EOF ventilation in the internal recirculation mode. 2. Contact the Unit #3 Control Room and request that NYPA Offsite Monitoring Teams report to EOF <p>H <u>IF</u> the CCR performed offsite dose assessments and made a Protective Action Recommendation <u>THEN:</u></p> <ol style="list-style-type: none"> 1. Obtain and review NYS Radiological Emergency Data Form - Part I and Part II 2. Verify or have the Dose Assessment HP verify dose assessment calculations. 3. Evaluate Protective Action Recommendations. 4. Notify the ED or CCR if there are any discrepancies. <p>1.4 <u>IF</u> relieving another ORAD <u>THEN</u> perform a formal turnover with the current ORAD:</p> <ol style="list-style-type: none"> A Review the current ORAD's activity log B Obtain briefing form current ORAD on the emergency and any actions the have been competed or are in progress. C Make an announcement to the EOF Staff that you are now the ORAD. 	

Attachment 3

Offsite Radiological Assessment Director (ORAD)

Sheet 3 of 8

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Ensure habitability surveys are performed in the EOF</p> <p>2.1 Assign an HP Technician to the position of Survey Team Health Physicist (STHP) providing them the following instructions:</p> <p style="padding-left: 40px;">A Perform steps in Attachment 6, Survey Team Health Physicist (STHP) Checklist</p> <p>2.2 <u>IF</u> there is a potential for surface or airborne contamination with in the EOF <u>THEN</u></p> <p style="padding-left: 40px;">A Suspend eating and drinking until you ensure EOF food and drinking water supplies are consumable.</p> <p style="padding-left: 40px;">B Determine the survey and radiological controls needed for the EOF based on plant conditions and whether there has been a release or not.</p> <p style="padding-left: 40px;">C Provide further guidance to STHP on frequency of surveys and on the level of contamination controls required.</p> <p>2.3 <u>IF</u> the following conditions are present <u>THEN</u> inform the EOF Manager and/or the ED that an organized evacuation of the EOF to the AEOF should be considered.</p> <ul style="list-style-type: none"> • Exposure rates > 80 mRem/Hr TEDE <u>OR</u> 500mRem/Hr TODE • Projected Whole Body Dose for a 12 hour period is > 1 Rem TEDE <u>OR</u> Thyroid Dose >5 Rem TODE • Airborne concentrations which may result in exceeding occupational limits for inhalation specified in 10CFR20, Appendix B, Table 1. <p>2.4 Evacuation may be performed at rates below those listed based on plant conditions and response needs.</p>	

Attachment 3
Offsite Radiological Assessment Director (ORAD)
Sheet 4 of 8

<p>3.0 Maintain personnel accountability in the EOF</p> <p>3.1 Keep apprised of the whereabouts of Field Monitoring Teams and other personnel assigned to you at all times.</p> <p>3.2 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <p style="padding-left: 40px;">A Inform the EOF Manager if you are leaving the work area.</p> <p style="padding-left: 40px;">B Upon return, obtain a briefing from the EOF Manager on any events which have occurred while you were away.</p>	
<p>4.0 Maintain a Log</p> <p>4.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>4.2 Log when the you assumed the duties of ORAD.</p> <p>4.3 Log significant decisions and important details used to make decisions.</p>	
<p>5.0 Develop and provide recommendations for EAL and classification level changes based on radiological considerations to the ED.</p> <p>5.1 Compare dose projection and field survey results with EAL criteria to determine the impact on the existing classification level.</p> <p>5.2 Notify the ED of any EALs effected by changes in radiological conditions.</p>	
<p>6.0 Develop and provide recommendations for offsite PARs based on radiological considerations to the ERM.</p> <p>6.1 Notify the ED of any changes in radiological conditions which may effect the PAR</p> <p>6.2 Use procedure IP-1013, Protective Action Recommendations to determine proper PAR.</p> <p>6.3 Document ConEd PARs whenever a General Emergency is declared.</p> <p>6.4 Review PARs whenever radiological conditions change significantly.</p>	

Attachment 3
Offsite Radiological Assessment Director (ORAD)
 Sheet 4 of 8

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>7.0 Maintain communications with the TSC Radiological Advisor to discuss radiological conditions and on and off site response actions.</p> <p>7.1 Contact the TSC Radiological Advisor for information on releases or potential releases and plant conditions which may lead to offsite radiological effects.</p> <p>7.2 Periodically contact the TSC Radiological Advisor to provide updates on new dose projections, results of environmental monitoring and to provide technical assistance as needed.</p>	
<p>8.0 Coordinate and direct the dose assessment and environmental monitoring efforts.</p> <p>8.1 Supervise the activities of the Dose Assessment HP, MIDAS Operator, EOF Communicator #1 and the Field Monitoring Teams</p> <p>8.2 Ensure the Health Physics Network (HPN) is manned when requested by the NRC</p> <p>8.3 Determine the periodicity of dose projection calculations.</p> <p style="padding-left: 20px;">A Direct the Dose Assessment HP to perform offsite dose projections using IP-1007, Dose Assessment.</p> <p style="padding-left: 20px;">B Direct MIDAS Operator to obtain dose projections, plume plot and Reuter-Stokes Senti System readings, using IP-1047, Obtaining Offsite Exposure Rates from MIDAS using Data Terminal and IP-1037, Obtaining Offsite Reuter-Stokes Monitoring Data.</p> <p>8.4 Analyze dose assessment and environmental information to determine any actual or potential offsite consequences of the event.</p> <p>8.5 Determine anticipated plume based on meteorological data.</p> <p>8.6 Mark plume front and times on map table map.</p> <p>8.7 Based on projected plume travel path select offsite sample points and indicate them on Form 27.</p>	

Attachment 3
Offsite Radiological Assessment Director (ORAD)
 Sheet 6 of 8

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>8.8 Determine special instructions to be provided to monitoring teams:</p> <p style="padding-left: 40px;">A IF the expected thyroid dose is greater than 25 Rem THEN consider issuing KI</p> <p style="padding-left: 40px;">B Team tracking efforts should be directed to limit their exposure to less than 5 Rem for the entire emergency.</p> <p>8.9 Teams should not go into radiation fields greater than 1 Rem/hr without specific directions from you. Direct On and Offsite Monitoring to survey anticipated plume path:</p> <p style="padding-left: 40px;">A Direct EOF Communicator #1 to:</p> <ol style="list-style-type: none"> 1. Brief teams on expected doses, plume path and any special instructions or safety precautions (such as use of KI, respirators, or protective clothing). 2. Have teams pick up samples from designated sample points. 3. Direct environmental monitoring be performed to confirm dose projections and track any offsite radioactive plume. <p>8.10 Compare projected doses with actual readings taken by field monitoring teams.</p> <p>8.11 Determine which ERPAs are affected by any release and verify proper PARs have been issued.</p> <p>8.12 Conduct periodic briefings with the ED and the EOF Manager to discuss the status of offsite radiological information and assessments.</p> <p>8.13 Compare dose assessment and environmental monitoring efforts with state personnel in the State EOC and/or in the EOF.</p> <p>8.14 Compare dose assessment and environmental monitoring efforts with the NRC Environmental Dose Assessment Coordinator once the NRC Site Team is in the EOF.</p>	

Attachment 3

Offsite Radiological Assessment Director (ORAD)

Sheet 7 of 8

<p>9.0 Evaluate and direct the requirements for offsite emergency exposure.</p> <p>9.1 Track EOF Staff emergency exposures.</p> <p>A Monitor EOF personnel exposures or potential exposures and request ED to Authorize Emergency Exposures and the issuance of KI to ConEd emergency workers outside the Protected Area. (ED authorization of exposures is non-delegable)</p> <p>B <u>IF</u> EOF staff must receive exposure <u>THEN</u> request the ED authorize emergency exposures up to 1 Rem TEDE for all monitoring team personnel dispatched from the EOF and remainder of staff as required. This authorization shall be documented in the ED's ERO Log Sheet.</p> <p>C <u>IF</u> emergency measures require additional exposure <u>THEN</u> request the ED to the raise the emergency exposure limit 1 Rem at a time up to 5 Rem.</p> <p>D Emergency exposures beyond 5 Rem shall be authorized on an individual basis. Request the ED authorize these exposures using Form IP-1023-6, Emergency Exposure Authorization. General guidelines (more details are listed on authorization form)</p> <ol style="list-style-type: none"> 1. ERO members may receive up to 5 Rem TEDE (per event) for any required emergency activities. 2. ERO members may be authorized emergency exposures up to 10 Rem TEDE to protect vital equipment. 3. ERO members may be authorized emergency exposures up to 25 Rem TEDE to save a life. 4. Individuals may volunteer to receive greater than 25 Rem TEDE to save a life. <p>9.2 Request authorization for the issuance of KI for any large exposures or expected large exposures to the thyroid.</p> <p>9.3 Direct the use of protective clothing and respirators as necessary for ConEd workers outside the Protected Area.</p>	
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Attachment 3

Offsite Radiological Assessment Director (ORAD)

Sheet 8 of 8

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>10.0 Report releases to the Environmental Protection Agency (EPA)</p> <p>10.1 <u>IF</u> any radionuclide release exceeds the value listed in Appendix B to § 302.4, (Form IP-1030-4) Title 40CFR302 <u>THEN</u></p> <p style="padding-left: 40px;">A Notify the EPA National Response Center (phone number in Emergency Telephone Directory).</p> <p style="padding-left: 40px;">B Direct Communicator to identify report is pursuant to 40CFR302.</p> <p>10.2 Document details of any communications with EPA.</p>	
<u>Closeout Responsibility/Activity</u>	
<p>11.0 Direct Staff to return all equipment to proper storage locations.</p>	
<p>12.0 Review all documentation the EOF Radiological Staff maintained during the emergency:</p> <p>12.1 Ensure logs, forms and other documentation are complete</p> <p>12.2 Ensure all temporary procedures used and/or developed are properly documented for use by Recovery Organization so that necessary actions can be taken for plant operations</p>	
<p>13.0 Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.</p>	

Attachment 4
Dose Assessment Health Physicist (DAHP)
Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of DAHP.</p> <p>1.1 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain briefing from the ORAD or EOF Manager</p> <p style="padding-left: 20px;">A. Use an Essential Information Checklist (Form IP-1035-2) to document briefing items.</p> <p style="padding-left: 20px;">B. Review NYS Radiological Emergency Data Form, Part II if copy is available.</p> <p style="padding-left: 20px;">C. Request any additional information on current status of emergency response.</p> <p>1.5 <u>IF</u> relieving another DAHP <u>THEN</u> perform a formal turnover with the current DAHP:</p> <p style="padding-left: 20px;">D Review the current DAHP activity log</p> <p style="padding-left: 20px;">E Obtain briefing form current DAHP on the emergency and any actions the have been competed or are in progress.</p> <p>1.3 Inform the ORAD that you are now the DAHP.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <p>2.1 Inform the ORAD you are leaving the work area.</p> <p>2.2 Upon return, obtain a briefing from the ORAD on any events which have occurred while you were away.</p>	
<p>3.0 Maintain a Log</p> <p>3.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>3.2 Log when the you assumed the duties of DAHP.</p> <p>3.3 Log significant decisions and important details used to make decisions.</p>	

Attachment 4
Dose Assessment Health Physicist (DAHP)
Sheet 2 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>4.0 Evaluate Plant Radiological Data</p> <p>4.1 Obtain Form 42c data from EDDS display, SAS printouts or fax copies received from the TSC.</p> <p>4.2 Review radiation monitor readings and evaluate for actual or potential radiological releases.</p> <p>4.3 Contact the TSC Radiological Advisor for additional information on plant radiological conditions and assistance in interpreting data.</p> <p>4.4 IF there are any indications of a radiological release THEN perform step 5.0 of this checklist.</p>	
<p>5.0 <u>IF</u> there has been a release or potential release of radioactive materials from the plant <u>THEN</u>:</p> <p>5.1 Give meteorological data, iodine to noble gas ratio and release rates to the MIDAS operator and direct him/her to perform dose projections</p> <p><u>OR</u></p> <p>5.2 Perform dose projections utilizing procedure IP-1007, Dose Assessment.</p>	
<p>6.0 Assist the ORAD in directing Onsite and Offsite Monitoring Teams to survey locations.</p> <p>6.1 Use overlays to obtain an approximation of the plume location</p> <p>6.2 Determine which emergency sampling sites would be appropriate to send the offsite monitoring teams to.</p> <p>6.3 Use Xu/Q values to approximate relative values between locations.</p>	

Attachment 4
Dose Assessment Health Physicist (DAHP)
Sheet 3 of 4

<u>Continuous Responsibility/Activity</u> (con't)	<u>Notes</u>
<p>7.0 Evaluate the offsite survey data.</p> <p>7.1 Calculate the charcoal / silver zeolite iodine and particulate activities using procedure IP-1020, Airborne Radioiodine Determination.</p> <p>7.2 Determine the equivalent thyroid and whole body exposure rates utilizing Procedure IP-1007, "Dose Assessment"</p> <p>7.3 Complete Form 27, Offsite Survey Data and review data with the ORAD</p>	
<p>8.0 Establish communications with the NRC via the HPN phone line.</p> <p>8.1 Dial the number listed on the V-Band console or listed in the Emergency Telephone Directory.</p> <p>8.2 Inform the NRC that the EOF is activated and performing offsite dose assessment activities. Brief them on any potential releases and answer any questions.</p> <p>8.3 <u>IF</u> requested by the NRC to stay on <u>THEN</u> stay on the line and request the ORAD to locate another individual to assist in HPN line communications.</p> <p>8.4 <u>IF</u> continuous communications are not requested <u>THEN</u> receive calls from the NRC on the HPN when phone rings.</p>	

Attachment 4

Dose Assessment Health Physicist (DAHP)

Sheet 4 of 4

<u>Continuous Responsibility/Activity</u> (con't)	<u>Notes</u>
9.0 Review Reuter-Stokes Sentri readings. 9.1 Obtain the readings from the MIDAS Operator 9.2 Compare the projected values and the measured offsite exposure rates with the Reuter-Stokes readings 9.3 IF there are large discrepancies THEN Inform the ORAD and continue to gather and analyze data to resolve values. 9.4 Present Reuter-Stokes data to ORAD for review	
<u>Closeout Responsibility/Activity</u>	
10.0 Return all equipment to proper storage locations.	
11.0 Review all documentation the DAHPs maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase	
12.0 Provide all logs and records to the ORAD upon termination of the emergency and entry into the Recovery Phase.	

Attachment 5
MIDAS Operator

Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of MIDAS Operator.</p> <p>1.1 Sign in on the Facility Sign-in Board</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.3 Obtain briefing from the DAHP or the ORAD</p> <p style="padding-left: 20px;">A. Review NYS Radiological Emergency Data Form, Part II if copy is available.</p> <p style="padding-left: 20px;">B. Request any additional information on current status of emergency response.</p> <p>1.4 <u>IF</u> relieving another MIDAS Operator <u>THEN</u> perform a formal turnover with the current MIDAS Operator:</p> <p style="padding-left: 20px;">A. Review the current MIDAS Operator activity log</p> <p style="padding-left: 20px;">B. Obtain briefing from current MIDAS Operator on the emergency and any actions the have been completed or are in progress.</p> <p>1.5 Inform the DAHP that you are now the MIDAS Operator.</p> <p>1.6 <u>IF</u> the facility has <u>NOT</u> been activated <u>THEN</u></p> <p style="padding-left: 20px;">A. Check operability and availability of MIDAS equipment, Reuter-Stokes Systems and Meteorological data.</p> <p style="padding-left: 20px;">B. Report any equipment problems to the DAHP or ORAD.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <p>2.1 Inform the DAHP or ORAD you are leaving the work area.</p> <p>2.2 Upon return, obtain a briefing from the DAHP or ORAD on any events which have occurred while you were away.</p>	

Attachment 5
MIDAS Operator
Sheet 2 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>3.0 Maintain a Log</p> <p>3.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>3.2 Log when the you assumed the duties of MIDAS Operator.</p> <p>3.3 Log significant decisions, important details used to make decisions and any equipment operability issues.</p>	
<p>4.0 <u>WHEN</u> directed by the ORAD <u>THEN</u> disarm the EOF Halon System</p> <p>4.1 Obtain the key to the FIKE Fire Suppression System control panel from the EOF key locker.</p> <p>4.2 Open the upper compartment of the FIKE control panel located on the west wall of the EOF next to the key locker.</p> <p>4.3 Toggle the module switch (the switch is located in the lower left corner of the panel.) from the "Armed" position to the "S1" position.</p> <p>4.4 <u>IF</u> the ORAD does <u>NOT</u> direct this action <u>THEN</u> ask the ORAD if the action is required.</p>	
<p>5.0 <u>WHEN</u> directed by the ORAD <u>THEN</u> place the EOF ventilation on internal recirculation.</p> <p>5.1 Obtain the key to the EOF Electrical Equipment Room from the EOF key locker.</p> <p>5.2 Locate the EOF HVAC damper control system switches on the East wall of the EOF Electrical Equipment Room.</p> <p>5.3 Rotate all three (3) damper control knobs CLOCKWISE to close the dampers.</p> <p>5.4 Place the three (3) AC Unit control switches to the "OVERRIDE" (up) position</p> <p>5.5 Inform the ORAD and log when you have placed ventilation system in recirculation and return key to key locker.</p> <p>5.6 <u>IF</u> the ORAD does <u>NOT</u> direct this action <u>THEN</u> ask the ORAD if the action is required.</p>	

Attachment 5
MIDAS Operator

Sheet 3 of 4

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>6.0 Maintain the MET Data Status Board</p> <p>6.1 Use procedure IP-1016, Obtaining Meteorological Data to retrieve weather predictions.</p> <p>6.2 Obtain the latest measured MET data from MIDAS every 15 minutes.</p> <p style="padding-left: 40px;">A Update the MET Data Status Board to display the correct data.</p> <p style="padding-left: 40px;">B Notify the ORAD of any changes in the meteorological data.</p> <p>6.3 Obtain weather predictions from MIDAS and/or Weather Bureau</p> <p style="padding-left: 40px;">A Update the MET Data Status Board to display the correct data.</p> <p style="padding-left: 40px;">B Notify the ORAD of any significant changes in the weather forecast data</p>	
<p>7.0 Obtain Reuter-Stokes data.</p> <p>7.1 Use procedure IP-1037, Obtaining Reuter-Stokes Monitor Data to obtain radiological data.</p> <p>7.2 IF any readings indicate above background levels THEN inform the DAHP and ORAD immediately of the readings.</p>	
<p>8.0 Obtain radiological release data and perform dose projections as directed.</p> <p>8.1 Use procedure IP-1022, Obtaining Meteorological and Dose Assessment Data from MIDAS</p> <p>8.2 Review MIDAS dose assessment data with the DAHP and ORAD</p>	

Attachment 5
MIDAS Operator
 Sheet 4 of 4

<u>Closeout Responsibility/Activity</u>	
9.0 Rearm the EOF Halon System 9.1 Obtain the key to the FIKE Fire Suppression System control panel from the EOF key locker. 9.2 Open the upper compartment of the FIKE control panel located on the west wall of the EOF next to the key locker. 9.3 Toggle the module switch (the switch is located in the lower left corner of the panel.) from the "S1" (up) position to the "Armed" (down) position.	
10.0 Return the EOF ventilation to normal. 10.1 Obtain the key to the EOF Electrical Equipment Room from the EOF key locker. 10.2 Locate the EOF HVAC damper control system switches on the East wall of the EOF Electrical Equipment Room. 10.3 Rotate all three (3) damper control knobs COUNTER - CLOCKWISE half way to open the dampers. 10.4 Place the three (3) AC control switches to the "NORMAL" (down) position	
11.0 Return all equipment used by MIDAS Operators to it's proper storage locations.	
12.0 Review all documentation the MIDAS Operator maintained during the emergency: 12.1 Ensure logs, forms and other documentation are complete 12.2 Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase	
13.0 Provide all logs and records to the ORAD upon termination of the emergency and entry into the Recovery Phase.	

Attachment 6
Survey Team Health Physicist (STHP)

Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 When directed by the ORAD assume the position of STHP.</p> <p>1.1 Sign in on the Facility Sign In Board.</p> <p>1.2 Periodically review this checklist throughout the emergency to determine which actions are appropriate for current conditions.</p> <p>1.3 <u>IF</u> relieving another STHP <u>THEN</u> perform a formal turnover with the current STHP:</p> <p style="padding-left: 20px;">A. Review the current EOF survey data</p> <p style="padding-left: 20px;">B. Obtain briefing form current STHP on the emergency and any actions the have been competed or are in progress.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Confer with the ORAD or DAHP on the need to set up EOF Radiological Controls. When directed set up EOF entrance as follows:</p> <p>2.1 Set up stanchions, rope barricade, and frisker in the main hall entrance to EOF work area.</p> <p>2.2 Set frisker alarm to two (2) times background.</p> <p>2.3 Set up Step Off Pads (SOPs) at entrance.</p> <p style="padding-left: 20px;">A <u>IF</u> hallway contamination levels are LESS THAN 1000 dpm/100 cm² <u>THEN</u> use SOP labeled "CHECK SHOES BEFORE STEPPING HERE"</p> <p style="padding-left: 20px;">B <u>IF</u> hallway contamination levels are GREATER THAN 1000 dpm/100 cm² <u>THEN</u> use SOP labeled "REMOVE PROTECTIVE CLOTHING BEFORE STEPPING HERE"</p> <p style="padding-left: 40px;">AND</p> <p style="padding-left: 20px;">C Place a waste receptacle and clean shoe covers near the SOP location.</p> <p>2.4 Post the door in the upper level EOF near the Clerks as "Emergency Exit Only"</p> <p>2.5 Check to ensure door to West stairwell (to upper EOF) is locked.</p>	

Attachment 6
Survey Team Health Physicist (STHP)

Sheet 2 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>3.0 Monitor Habitability of the EOF</p> <p>3.1 Survey building using an Ion Chamber instrument approximately every 30 minutes. Survey times can be changed at the discretion of the ORAD.</p> <p>3.2 Take Beta and Gamma readings throughout occupied areas of the EOF and hallways record readings on EOF Radiological Survey (Form IP-1030-3).</p> <p>3.3 Take smears at building entrance, EOF entrance and in hallways. Record results on EOF Radiological Survey (Form IP-1030-3)</p> <p>3.4 <u>IF</u> any readings are found to be above background <u>THEN</u> inform the ORAD or DAHP immediately.</p> <p>3.5 Use procedure IP-1041, "Use of Triton to Monitor for Radiogas" to set up the Triton monitor.</p> <p>3.6 <u>IF</u> Triton monitor alarms or surveys indicate contamination <u>THEN</u> monitor air in the EOF</p> <p style="padding-left: 20px;">A Set up air sampler near HP Work Area</p> <p style="padding-left: 20px;">B <u>IF</u> beta survey results are greater than 50 mr/hr <u>OR</u> the iodine-131 activity on a charcoal filter cartridge is greater than 10 –8 uCi/cc <u>THEN</u> use silver zeolite filter cartridge.</p> <p style="padding-left: 20px;">C Set up MS-2/SPA-3 Counter in the lower level of the EOF by the HP area.</p> <p style="padding-left: 20px;">D Determine airborne air activity using procedure IP-1020, Airborne Activity Determination. Record results EOF Radiological Survey (Form IP-1030-3).</p>	
<p>4.0 <u>IF</u> the Security Guards do <u>NOT</u> bring two (2) radios <u>THEN</u> obtain Emergency Planning Radios</p> <p>4.1 Call the Command Guard House and request they send the two (2) Emergency Planning Radios to the EOF</p> <p>4.2 Provide radios to Security Guards</p>	

Attachment 6
Survey Team Health Physicist (STHP)
Sheet 3 of 4

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>5.0 Assign Dosimetry</p> <p>5.1 <u>IF</u> the EOF Security Guards do <u>NOT</u> have a TLD or dosimeter <u>THEN</u> assign a TLD badge and dosimeter to the EOF Security Guards.</p> <p>5.2 Place one (1) each TLD badge and dosimeter in the upper and lower areas of the EOF work areas to monitor EOF personnel exposures.</p> <p>5.3 Ensure Onsite and Offsite Monitoring Team members are issued TLD badges and dosimeter.</p>	
<p>6.0 Personnel Exposure Control - ALARA</p> <p>6.1 <u>IF</u> ConED Emergency Personnel outside the Protected Area must receive emergency exposures <u>THEN</u> confer with the ORAD and EOF Manager to establish controls and limits.</p> <p style="padding-left: 40px;">A Emergency Exposures may be authorized by the Emergency Director up to 5 Rem for the event regardless of prior year-to-date exposures.</p> <p style="padding-left: 40px;">B Limits will normally be set at 1 Rem and raised 1 Rem at a time up to 5 Rem.</p> <p style="text-align: center;"><u>NOTE</u></p> <p>EOF Communicator #1 shall track exposures of on and offsite monitoring team members.</p> <p>6.2 <u>IF</u> any ConEd emergency workers outside the Protected Area are receiving radiological exposures <u>THEN</u> record exposures on Individual Exposure Tracking Log (Form IP-1023-3)</p> <p>6.3 Maintain Total Effective Dose Equivalent (TEDE) less than established emergency exposure limits.</p> <p>6.4 <u>IF</u> any worker must receive greater than 5 Rem <u>THEN</u> Have the ORAD request the ED authorize these exposures using Form IP-1023-6, Emergency Exposure Authorization.</p>	
<p>7.0 <u>IF</u> directed to determine thyroid burdens <u>THEN</u> use procedure IP-1005, MS-2 / SPA-3 to Determine Thyroid Burden.</p>	

Attachment 6
Survey Team Health Physicist (STHP)
Sheet 4 of 4

<u>Continuous Responsibility/Activity</u> (con't)	<u>Notes</u>
8.0 IF directed to perform onsite surveys and site perimeter surveys THEN use procedure IP-1006, Site Perimeter Survey.	
9.0 IF directed to perform personnel contamination checks and decontamination THEN use procedure IP-1008, Personnel Radiological Check and Decontamination.	
10.0 IF directed to perform personnel contamination checks and decontamination THEN use procedure IP-1008, Personnel Radiological Check and Decontamination.	
11.0 IF directed to perform vehicle contamination checks and decontamination THEN use procedure IP-1009, Radiological Check and Decontamination of Vehicles.	
12.0 IF directed to check equipment leaving the site THEN use procedure IP-1014, Radiological Check of Equipment Before it leaves the Site.	
<u>Closeout Responsibility/Activity</u>	
13.0 Review all documentation the STHPs maintained during the emergency: 13.1 Ensure logs, forms and other documentation are complete 13.2 Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase	
14.0 Provide all logs and records to the ORAD upon termination of the emergency and entry into the Recovery Phase.	

Attachment 7
Emergency Director Technical Advisor (TA)
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of TA.</p> <p>1.1 Sign in on the Facility Sign-in Board</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.3 Confer with the Emergency Director and EOF Manager on emergency status</p> <p>1.4 <u>IF</u> relieving another TA <u>THEN</u> perform a formal turnover with the current TA:</p> <p style="padding-left: 20px;">A. Review the current TA activity log</p> <p style="padding-left: 20px;">B. Obtain briefing from current TA on the emergency and any actions the have been competed or are in progress.</p> <p>1.5 Inform the Emergency Director that you are now the TA.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <p>2.1 Inform the DAHP or ORAD you are leaving the work area.</p> <p>2.2 Upon return, obtain a briefing from the DAHP or ORAD on any events which have occurred while you were away.</p>	
<p>3.0 Maintain a Log</p> <p>3.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>3.2 Log when you assumed the duties of Emergency Director Technical Advisor.</p> <p>3.3 Log significant decisions, important details used to make decisions and any equipment operability issues.</p>	

Attachment 7

Emergency Director Technical Advisor (TA)

Sheet 2 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>4.0 Obtain and monitor plant data:</p> <p>4.1 Monitor plant data and operations information on the EOF-TSC-CCR dedicated phone line.</p> <p>4.2 Monitor plant data on the Emergency Data Display System (EDDS), SAS Computer Terminal and Proteus Computer.</p> <p>4.3 Advise ED on the following items:</p> <p style="padding-left: 40px;">A Any significant change in the condition of the plant</p> <p style="padding-left: 40px;">B Any observable trends in plant data</p> <p style="padding-left: 40px;">C Major Operator actions being undertaken</p> <p style="padding-left: 40px;">D Any condition which may effect the emergency classification.</p> <p>4.4 Advise the ORAD of any observed changes in plant radiological data.</p> <p>4.5 <u>IF</u> any of the EOF plant data computer systems are not functioning <u>THEN</u> inform a SAS/Proteus operator of malfunctions.</p>	
<p>5.0 Maintain Plant Status Chronology on easel pad.</p> <p>5.1 Enter major information on plant status or changes to plant status obtained from CCR or TSC</p> <p>5.2 WHEN easel sheet gets full THEN:</p> <p style="padding-left: 40px;">A Have Clerical Staff transcribe information onto log sheet, place sheet with TA logs.</p> <p style="padding-left: 40px;">B Have Clerical Staff hang completed easel sheet on the wall between upper and lower levels of EOF.</p>	
<p>6.0 Assist ED in interpreting plant data</p> <p>6.1 Provide technical advice on plant operating procedures</p> <p>6.2 Provide technical advice on Severe Accident Management Guidelines.</p>	

Attachment 7
Emergency Director Technical Advisor (TA)
Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
7.0 Assist Emergency Director in conduct of briefings 7.1 Assist the ED in preparations for facility briefings. 7.2 When directed by the ED provide summary briefings of plant conditions to EOF Staff and/or offsite authorities present in the EOF.	
8.0 Return all equipment to it's proper storage locations.	
9.0 Review all documentation the ED Technical Advisors maintained during the emergency: 9.1 Ensure logs, forms and other documentation are complete 9.2 Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase	
10.0 Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 8
EOF Communicator No. 1

Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of EOF Communicator No. 1.</p> <p>1.1 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain briefing from the DAHP or the ORAD</p> <p style="padding-left: 20px;">A. Review Onsite and Offsite Monitoring Team data.</p> <p style="padding-left: 20px;">B. Request any additional information on current status of emergency response.</p> <p>1.3 <u>IF</u> relieving another communicator <u>THEN</u> perform a formal turnover with the current EOF Communicator No. 1:</p> <p style="padding-left: 20px;">A. Review the current EOF Communicator No. 1 activity log.</p> <p style="padding-left: 20px;">B. Obtain briefing form current EOF Communicator No. 1 on the emergency and any actions the have been competed or are in progress.</p> <p>1.4 Inform the ORAD and DAHP that you are now EOF Communicator No. 1.</p>	

Attachment 8
EOF Communicator No. 1

Sheet 2 of 4

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Transmit directions to the Offsite Teams</p> <p style="text-align: center;">Note:</p> <p style="text-align: center;">Offsite Teams are designated as Unit # 2 or Unit # 3</p> <p>2.1 Use the Radio or Cell Phones to communicate with teams.</p> <p>2.2 Confer with the ORAD and DAHP to determine the sample points and the expected whole body exposure rates based on dose projections.</p> <p>2.3 Enter selected sample point(s) and assigned team number on Form IP-1030-5, Offsite Survey Team Data Sheet.</p> <p>2.4 Contact the Team and direct them to the designated sample point providing following information:</p> <p style="margin-left: 40px;">A The expected whole body dose rates</p> <p style="margin-left: 40px;">B Methods of traversing the plume to keep their exposure as low as possible, such as going around plume or traveling through low field areas.</p> <p>2.5 Have Team verify instructions by repeating them back.</p>	
<p>3.0 Receive and Record Offsite Monitoring Team Data</p> <p>3.1 Have teams state sample point for which data is being transmitted.</p> <p>3.2 Record survey data on Form IP-1030-5, Offsite Survey Team Data Sheet.</p> <p>3.3 Verify numbers by repeating values back to Team</p> <p>3.4 Inform the ORAD or DAHP immediately of survey and sample results</p>	

Attachment 8
 EOF Communicator No. 1
 Sheet 3 of 4

<u>Continuous Responsibility/Activity (con't)</u>	<u>Notes</u>
<p>4.0 <u>Receive and Record Onsite Monitoring Team Data</u></p> <p>4.1 Have teams state sample locations for which data is being transmitted.</p> <p>4.2 Record survey data on Form 10, Monitoring Team Field Survey.</p> <p>4.3 Verify numbers by repeating values back to Team</p> <p>4.4 Inform the ORAD or DAHP immediately of survey and sample results</p>	
<p>5.0 <u>Maintain Onsite and Offsite Monitoring Team Exposure Records.</u></p> <p>5.1 <u>IF</u> any exposure rates are above background <u>THEN</u> obtain team member whole body exposure (dosimetry readings) each time they radio or call in.</p> <p>5.2 <u>IF</u> any team members are receiving radiological exposures <u>THEN</u> record exposures on Individual Exposure Tracking Log (Form IP-1023-3)</p>	
<p>6.0 <u>Keep Onsite and Offsite Teams informed of major changes in emergency status:</u></p> <p>6.1 Changes in emergency classification.</p> <p>6.2 Start or Stop of any offsite releases of radioactive materials.</p>	
<p>7.0 <u>Obtain new sample locations and points from ORAD</u></p> <p>Repeat above steps to continue plume tracking until ORAD determined surveys and sampling are no longer necessary.</p>	

Attachment 8
EOF Communicator No. 1

Sheet 4 of 4

<u>Closeout Responsibility/Activity</u>	
8.0	Return all equipment to proper storage locations.
9.0	Review all documentation EOF Communicator No. 1s maintained during the emergency:
9.1	Ensure logs, forms and other documentation are complete
9.2	Ensure any items which need follow up investigations are identified to be completed during the Recovery Phase
10.0	Provide all logs and records to the ORAD upon termination of the emergency and entry into the Recovery Phase.

Attachment 9
EOF Communicator No. 2

Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of EOF Communicator No. 2.</p> <p>1.1 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.2 Obtain briefing from the EOF Manager or the Emergency Director</p> <p style="padding-left: 20px;">A. Review NYS Radiological Emergency Data Form Part I data which has been transmitted</p> <p style="padding-left: 20px;">B. Request any additional information on current status of emergency response.</p> <p>1.3 <u>IF</u> relieving another communicator <u>THEN</u> perform a formal turnover with the current EOF Communicator No. 2:</p> <p style="padding-left: 20px;">A. Review the current EOF Communicator No. 2 activity log.</p> <p style="padding-left: 20px;">B. Obtain briefing from current EOF Communicator No. 2 on the emergency and any actions that have been completed or are in progress.</p> <p style="padding-left: 20px;">C. Determine the time the next notification update is due to be transmitted.</p> <p>1.4 Inform the EOF Manager and ED that you are now EOF Communicator No. 2.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 <u>IF</u> you are temporarily leaving the work area <u>THEN</u></p> <p>2.1 Inform the EOF Manager you are leaving the work area.</p> <p>2.2 Upon return, obtain a briefing from the EOF Manager on any events which have occurred while you were away.</p>	
<p>3.0 Maintain a Log</p> <p>3.1 Use Form IP-1023-4, ERO Log Sheet to log information.</p> <p>3.2 Log when the you assumed the duties of EOF Communicator No.2.</p> <p>3.3 Log all communications that are not already documented on Forms.</p>	

Attachment 9
 EOF Communicator No. 2
 Sheet 2 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>4.0 Perform required notifications to Offsite Authorities.</p> <p style="text-align: center;">NOTE:</p> <p>Start notification of any change in classification within 15 minutes of the classification change.</p> <p>4.1 IF the emergency classification changes(upgrade, downgrade, terminates) THEN perform the following:</p> <ul style="list-style-type: none"> A Complete or obtain from ED a NYS Radiological Emergency Data Form Part 1 (Form IP-1030-1) B Ensure the ED has signed the NYS Radiological Emergency Data Form to indicate approval for transmittal. C Communicate the information on the completed form(s) to the offsite authorities per instructions on Alert/SAE/GE Upgrade/Update Notification Checklist (Form IP-1002-3) <p>4.2 IF the emergency classification DOES NOT change THEN perform subsequent notifications as follows:</p> <ul style="list-style-type: none"> A Complete or obtain from ED a NYS Radiological Emergency Data Form (Part I) when any of the following conditions are met: <ul style="list-style-type: none"> • It has been approximately 30 minutes since the last form was transmitted. • The plant status has changed (Stable, Improving or degrading) • There has been a change in the status of an actual or potential radiological release. B IF there is a change in radiological release data THEN include transmittal of data on NYS Radiological Emergency Data Form Part II C Ensure the ED has signed the NYS Radiological Emergency Data Form(s) to indicate approval for transmittal. D Communicate the information on the completed form(s) to the offsite authorities per instructions on Alert/SAE/GE Upgrade/Update Notification Checklist (Form IP-1002-3) 	

Attachment 9
EOF Communicator No. 2

Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>		<u>Notes</u>
5.0	WHEN directed by the Emergency Director (ED) THEN obtain accountability status from the OSC Manager and/ or Unit 3 Watch Supervisor.	
<u>Closeout Responsibility/Activity</u>		
6.0	Return all equipment to proper storage locations.	
7.0	Review all documentation EOF Communicator No. 2 maintained during the emergency:	
7.1	Ensure logs, forms and other documentation are complete	
8.0	Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 10
EOF Clerical Staff

Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of EOF Clerical.</p> <p>1.1 Sign in on the Facility Sign-in Board</p> <p>1.2 Obtain briefing from the EOF Manager</p> <p>1.3 <u>IF</u> relieving another clerk <u>THEN</u> perform a formal turnover with the current clerk:</p> <p style="padding-left: 40px;">A. Review current emergency status</p> <p style="padding-left: 40px;">B. Obtain briefing from current Clerical Staff on the emergency and any actions the have been completed or are in progress.</p> <p>1.4 Inform the EOF Manager that you are now part of the EOF Clerical Staff.</p>	
<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Process Plant Status Data</p> <p>2.1 <u>IF</u> the Emergency Data Display System (EDDS) is operating <u>THEN</u> perform the following:</p> <p style="padding-left: 40px;">A. Obtain computer printout of Forms 42a, 42b and 42c trend data screens every 15 minutes.</p> <p style="padding-left: 40px;">B. Make copies of updated Forms 42a, 42b and 42c.</p> <p style="padding-left: 40px;">C. Distribute copies of forms to NRC, FEMA, State and County Representatives at the EOF</p>	

Attachment 10
EOF Clerical Staff
 Sheet 2 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>2.2 <u>IF</u> the Emergency Data Display System (EDDS) is <u>NOT</u> operating <u>THEN</u> perform the following:</p> <ul style="list-style-type: none"> A. Receive Forms 42a, 42b and 42c via telecopier from the TSC. B. Prepare transparencies of forms and place on projector. C. Make copies of updated D. Distribute copies of forms to NRC, FEMA, State and County Representatives at the EOF E. Telecopy forms to the Counties and record times sent in the Telecopy Log (Form IP-1030-2) F. Telecopy forms (a,b &c) to New York State, the JNC and the NRC and record times sent in the Telecopy Log Form 42 (Form IP-1030-2) <p>2.3 <u>IF</u> the Emergency Data Display System (EDDS) is <u>NOT</u> operating <u>AND</u> telecopiers are <u>NOT</u> operating <u>THEN</u> perform the following:</p> <ul style="list-style-type: none"> A. Receive data on Forms 42a, 42b and 42c from the EOF SAS Proteus Operator and the TSC B. Prepare transparencies of forms and place on projector. C. Make copies of updated Forms 42a, 42b and 42c. D. Distribute copies of forms to NRC, FEMA, State and County Representatives at the EOF <p>2.4 <u>IF</u> all of the following systems are <u>NOT</u> operating:</p> <ul style="list-style-type: none"> • EDDS • Telecopiers to TSC • EOF SAS Proteus Computer Terminals <p><u>THEN</u></p> <ul style="list-style-type: none"> A. Request the SAS / Proteus Operator obtain Form 42a, 42b and 42c data via phone from the TSC B. Prepare transparencies of forms and place on projector. 	

Attachment 10
EOF Clerical Staff

Sheet 3 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>3.0 Process the NYS Radiological Emergency Data Form Parts I II as follows:</p> <p>3.1 Receive form from the EOF Communicator #2</p> <p>3.2 Telecopy form to NYS, Counties, JNC and NRC</p> <p>3.3 Record time of telecopy on Telecopy Log Form 30</p> <p>3.4 Distribute copies of form to NRC, FEMA, State and County representatives in the EOF.</p> <p>3.5 Return original form to EOF Communicator #2</p>	
<p>4.0 Process the Offsite Survey Team Data (Form IP-1030-4) as follows:</p> <p>4.1 Receive form from the ORAD</p> <p>4.2 Make copies of form and distribute to NRC, FEMA, State and County representatives in the EOF.</p> <p>4.3 Telecopy form to NYS and counties. (Ask the ORAD for the order in which to transmit forms to the counties.)</p>	
<p>5.0 Receive and distribute telecopies from outside sources as follows:</p> <p>5.1 Make copies of all documents received.</p> <p>5.2 Distribute to addressee if known</p> <p>5.3 For any document containing radiological data distribute copies to ORAD and NRC, FEMA, State and County representatives in the EOF.</p> <p>5.4 Maintain copies of all telecopies.</p>	

Attachment 10
EOF Clerical Staff

Sheet 4 of 4

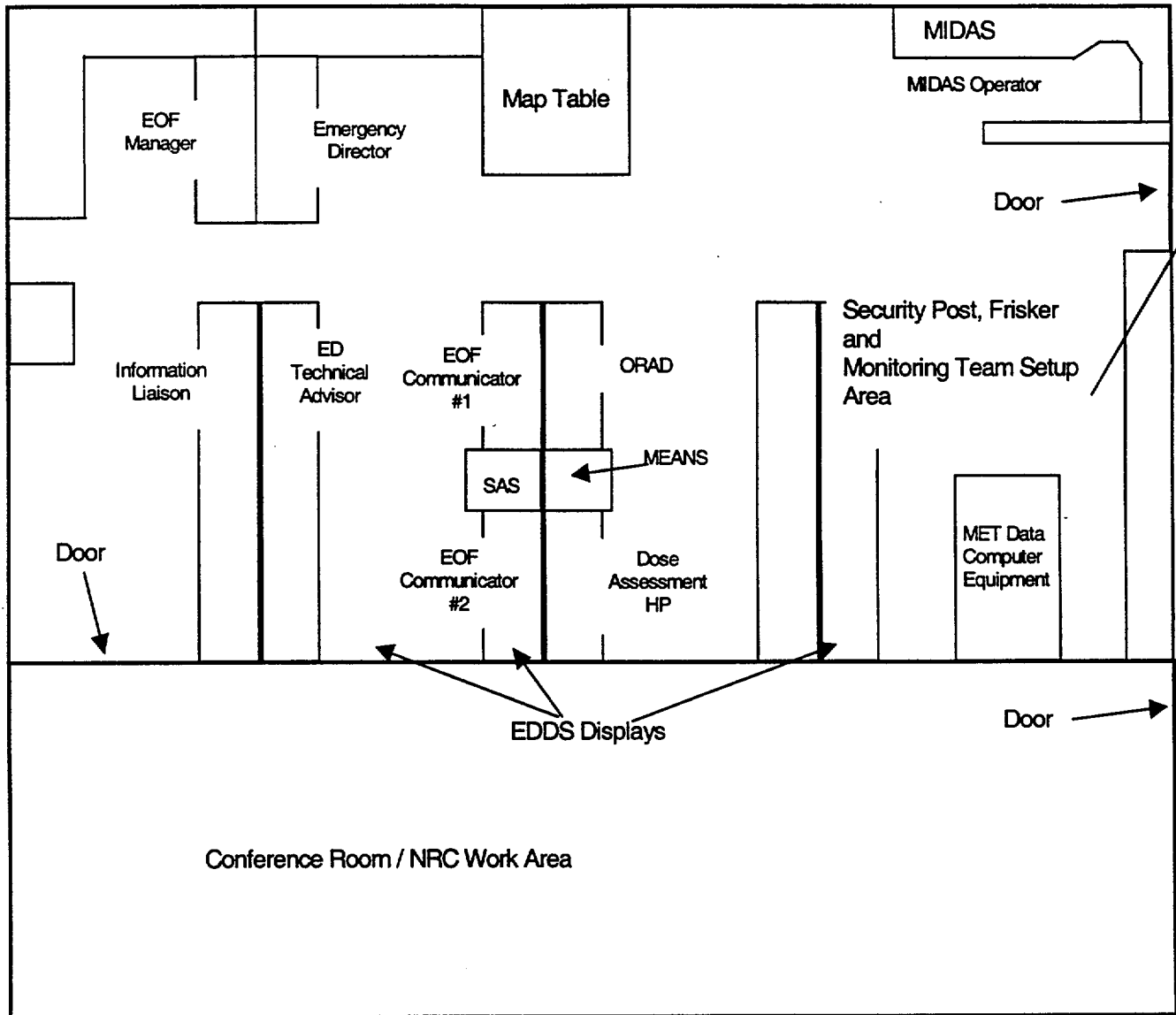
<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
6.0 Copy Chronology Easel Pad as follows: 6.1 Receive completed easel pad from ED Technical Advisor 6.2 Transcribe the information from the easel pad and give transcript to the ED Technical Advisor 6.3 Tape the easel pad to the wall between the upper and lower levels of the EOF.	
7.0 Perform Accountability Duty for the Upper Level of the EOF as follows: 7.1 Record the names and arrival times of personnel stationed in the upper level on Whole Body Exposure Record for TSC – OSC – EOF, Form 41. 7.2 Provide latest copy of form 41 to the STHP	
<u>Closeout Responsibility/Activity</u>	
8.0 Return all equipment to proper storage locations.	
9.0 Review all documentation maintained during the emergency by the clerical staff to ensure it is complete and organized.	
10.0 Provide all logs and records to the EOF Manager upon termination of the emergency and entry into the Recovery Phase.	

Addendum 1

EOF Layout

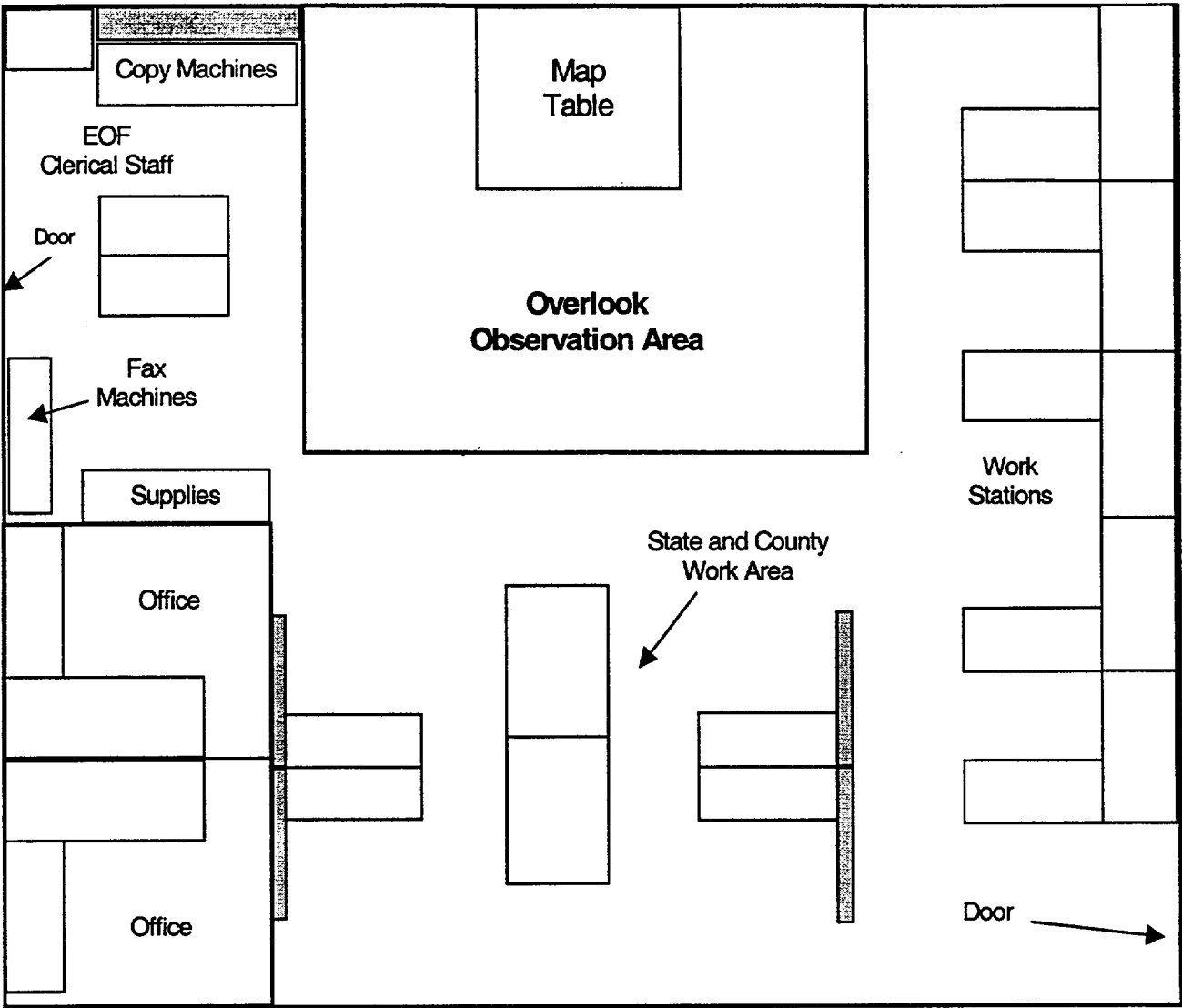
Sheet 1 of 2

Lower Level Work Area



Addendum 1
EOF Layout
Sheet 2 of 2

Upper Level Work Area



Addendum 2

NYS Radiological Data Form (Part I) (Form IP-1030-1)

Sheet 1 of 2

CON EDISON

(Formally FORM 30a)

New York State

Radiological Emergency Data Form**Part I - General Information Instructions:**

Circle or Fill-in Information as appropriate

1.	This message being transmitted on: _____ at: _____ (Date) (Time)		<input type="checkbox"/> AM <input type="checkbox"/> PM	VIA: A. RECS B. Other _____																																																												
2.	This is..... A. <u>NOT</u> an Exercise B. An Exercise																																																															
3.	The Facility Providing this Information is:		A. INDIAN POINT NUMBER 2 B. INDIAN POINT NUMBER 3																																																													
4.	The Emergency A. Unusual Event C. Site Area Emergency E. Emergency F. Recovery B. Alert D. General Emergency Terminated G. Transportation Incident																																																															
5.	This Emergency Classification Declared on: _____ at: _____ (Date) (Time)		<input type="checkbox"/> AM <input type="checkbox"/> PM	VIA: A. RECS																																																												
6.	Release of Radioactive Materials: A. No release (Above Technical Specifications limits) B. Release to atmosphere (above Technical Specifications limits) C. Release to a Body of Water (Above Technical Specifications limits)																																																															
7.	Protective Action Recommendations: A. No need for Protective Actions outside the site boundary. B. EVACUATE the following ERPAs: <table border="0"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td> </tr> <tr> <td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td><td>28</td><td>29</td><td>30</td><td>31</td><td>32</td><td>33</td><td>34</td><td>35</td><td>36</td><td>37</td><td>38</td><td>39</td><td>40</td> </tr> <tr> <td>41</td><td>42</td><td>43</td><td>44</td><td>45</td><td>46</td><td>47</td><td>48</td><td>49</td><td>50</td><td>51</td><td colspan="9"></td> </tr> </table> C. SHELTER all remaining ERPAs.				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20																																													
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																													
41	42	43	44	45	46	47	48	49	50	51																																																						
8.	EAL Number: <input type="text"/> Brief _____ Event _____ Description _____																																																															
9.	The Plant status is: A. Stable C. Degrading E. Cold Shutdown B. Improving D. Hot Shutdown																																																															
10.	Reactor Shutdown:		A. Not Applicable B. _____ at: _____ (Date) (Time) <input type="checkbox"/> AM <input type="checkbox"/> PM																																																													
11.	Wind Speed: _____ Meters/Second at elevation <u>10</u> meters.																																																															
12.	Wind Direction: (From) _____ Degrees at elevation <u>10</u> meters.																																																															
13.	Stability Class: A B C D E F G																																																															
14.	Report By: _____ at Telephone Number (914) 737-8929 (Communicator's Name)																																																															
Message Received by: _____		Message Ended at: _____																																																														

Emergency Director Review and Approval: _____

Part I Page 1 of 1

Form IP-1030-1 Rev 0

Addendum 2

NYS Radiological Data Form (Part II) (Form IP-1030-1)

Sheet 2 of 2

CON EDISON

(Formally FORM 30b)

New York State

Radiological Emergency Data Form

Part II - EP Form Part II:

Circle or Fill-In Information as appropriate

14. Message transmitted at: DATE: _____ TIME: _____ FROM: _____

16. General release information:

A. RELEASE > TECH. SPEC STARTED AT:

E. WIND SPEED: _____ M/SEC.

DATE: _____ TIME: _____

AT ELEVATION: _____ (METERS)

B. PROJECTED DURATION OF RELEASE: _____ (hrs.)

F. WIND DIRECTION: (FROM) _____ DEGREES

C. RELEASE > TECH. SPEC. ENDED DATE: _____ TIME: _____

AT ELEVATION: _____ (METERS)

D. REACTOR SHUTDOWN: N/A OR DATE: _____ TIME: _____

G. STABILITY CLASS: (PASQUILL A-G)

17. Atmospheric release information:

A. RELEASE FROM: GROUND LEVEL FT. _____

D. NOBLE GAS RELEASE RATE: _____ CI/SEC.

B. IODINE/NOBLE GAS RATIO: _____
(Assumed or Actual)

E. IODINE RELEASE RATE: _____ CI/SEC.

F. PARTICULATE RELEASE RATE: _____ CI/SEC.

C. TOTAL RELEASE RATE: _____ CI/SEC.

18. Waterborne release information:

A. VOLUME OF RELEASE: _____ GALLONS C. RADIONUCLIDES IN RELEASE:

B. TOTAL CONCENTRATION (gross): _____ $\mu\text{Ci/ml}$ D. TOTAL ACTIVITY RELEASED:

19. Dose calculations (based on release duration of _____ Hrs.):

CALCULATION IS BASED ON: (circle one)

TABLE BELOW APPLIES TO: (circle one)

A. INPLANT MEASUREMENTS

A. ATMOSPHERE RELEASE

B. FIELD MEASUREMENTS

B. WATERBORNE RELEASE

C. ASSUMED SOURCE TERM

DISTANCE	$X\mu/Q$	DOSE	
		TEDE (REM)	TODE (REM)
SITE BOUNDARY			
2 MILES			
5 MILES			
10 MILES			
MILES			

20. Field measurement of dose rates or surface contamination/deposition:

MILE/SECTOR OR MILES/DEGREES	LOCATION OR SAMPLING POINT	TIME OF READING	DOSE RATE (mR/HR.) OR CONTAMINATION ($\mu\text{Ci/m}^2$)

Emergency Director Review and Approval: _____

Part II Page 1 of 1

Form IP-1030-1 Rev 0

Addendum 3
Normal EOF Staffing (Form IP-1030-2)
 Sheet 1 of 1

Normal EOF Staffing

No.	Positions	Number Present	Number Needed	Called
1	Emergency Director			
1	EOF Manager			
1	Offsite Radiological Assessment Director			
1	ED Technical Advisor			
1	Dose Assessment Health Physicist			
1	Survey Team Health Physicist			
1	MIDAS Operator			
1	EOF Communicator #1			
1	EOF Communicator #2			
3	EOF Clerical Staff			
2	Onsite Monitoring Team Members			
4	Offsite Monitoring Team Members			
1	Technical Advisor to State EOC			
19	Total number of individuals assigned to EOF			

EOF Manager should enter number of each position needed based on event.

Form IP-1030-2 Rev 0

Addendum 4

EOF Radiological Survey Map (Form IP-1030-3)

Sheet 1 of 1

EOF Radiological Survey Map

By:		Area / Item: Occupied Areas EOF / Service Center	
Date:	Time:	Type of Survey: <input type="checkbox"/> Rad <input type="checkbox"/> Cont <input type="checkbox"/> Air	
Meter / Serial #		Smear Counter/ Serial #	
Map Key: __ =Dose Rate, * =Contact, β =Beta, O =Smear, H =Head, C =Chest, K =Knee, FL = Floor			
Air Sample Results:	RadioGas:	Particulate:	Charcoal:
Air Sample Counter / Serial #		Highest mr/hour Reading:	
Comments:			

The diagram illustrates the layout of the Emergency Operations Facility (EOF) for a radiological survey. It is divided into two main sections: the Upper Level and the Lower Level. The Upper Level includes a Hallway, a Security area, an HP Work Area, and an EOF Work Area. The Lower Level is also shown. A table for Contamination Results (dpm / 100 cm²) is provided on the right.

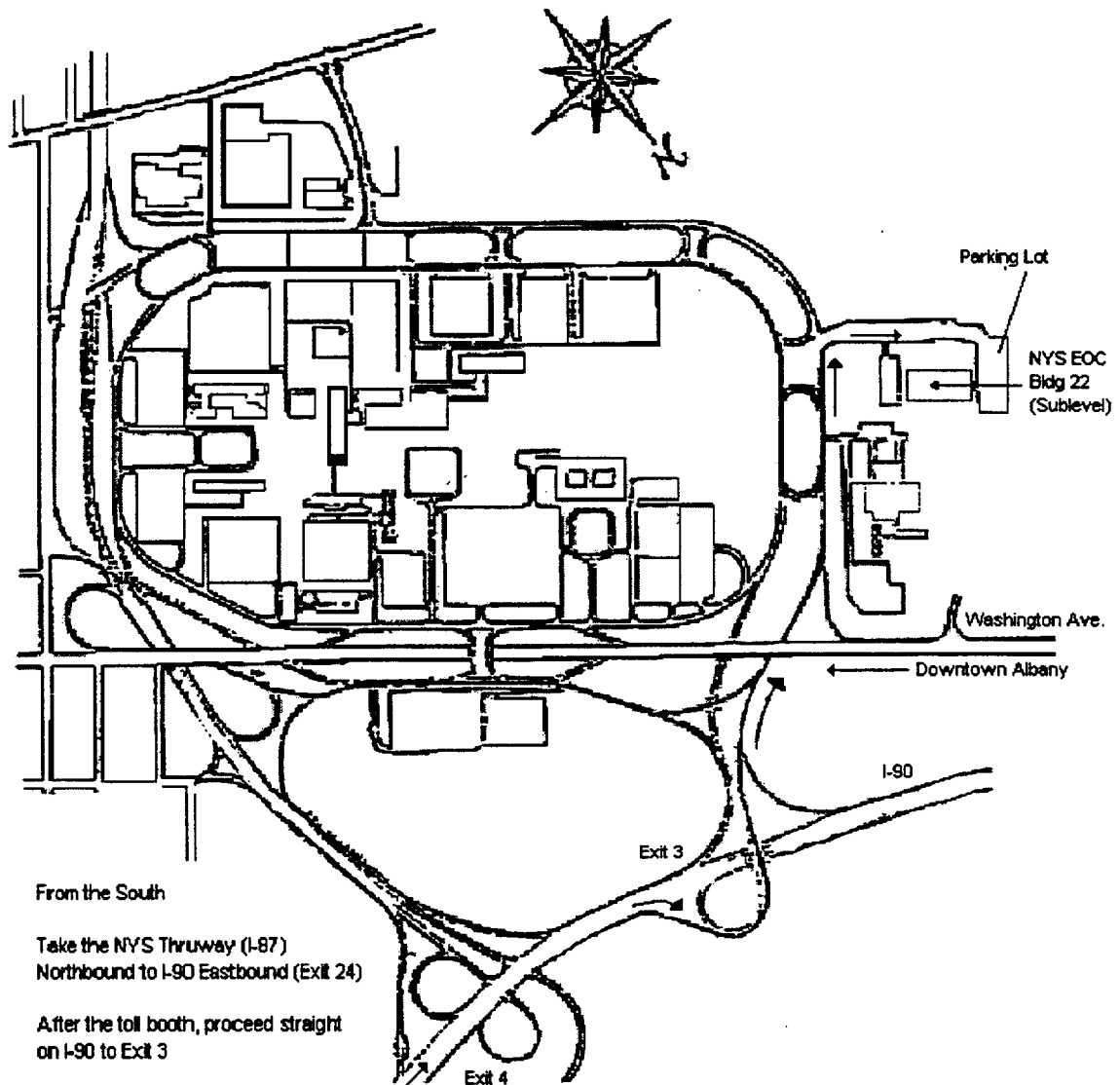
Contamination Results (dpm / 100 cm²)

Form IP-1030-3 Rev 0

Addendum 5

State Campus Office Building Map

Sheet 1 of 1



Addendum 6
Appendix B to § 302.4

The table of reportable amounts of radionuclides from CFR 40 PART 302—
DESIGNATION, REPORT-ABLE QUANTITIES, AND NOTIFICATION

Maintained current by Emergency Planning Department and distributed to ERO position
binders where required.

The table is designated as Form IP-1030-4, titled "APPENDIX B TO § 302.4 –
RADIONUCLIDES"

Current Revision is 0

7 pages

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1031
Rev. 7

AIR RAID ALERT

Prepared by: Burn 2/18/99 Technical Reviewer: Terry Finner 8/6/99
Date Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #2627 8/19/99 Reviewer: _____ Date
Meeting No. Date Date
Approval: Terry Finner / Acting EP Manager 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

AIR RAID ALERT

1.0 PURPOSE

- 1.1 To describe the procedure to be used when an Air Raid Alert is received by the Control Room Operator.

2.0 DISCUSSION

- 2.1 Air Raid Alert, comes from the System Operator.

3.0 PRECAUTIONS AND LIMITATION

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C AND D OF EPD BOOK NO. 2.

5.1 Control Room Operator

- 5.1.1 On receipt of an AIR RAID ALERT, sound the steady tone for ten seconds AND announce the Air Raid Alert three times over the public address system. Announce the location of shelter areas in Section 5.3 and direct personnel to shelter areas.
- 5.1.2 On verification of a true air raid threat, bring Indian Point, Unit 2 to the cold shutdown condition AS SOON AS PRACTICAL.
- 5.1.3 IF a reactor trip or safety injection occurs implement the Emergency Operating Procedures.
- 5.1.4 Evaluate plant conditions and implement Abnormal and Emergency Operating Procedures as required.
- 5.1.5 Evaluate Emergency Action Levels per Reference 6.1

5.2 Watch Personnel

5.2.1 Remain at assigned posts OR work areas.

5.3 ALL Other Employees, Contractors AND Visitors

5.3.1 Proceed to designated shelter areas as follows:

- a. All non-operating personnel located in the Administration Building, Turbine Building, Superheater Building and Technical Support Center shall proceed to the 5' elevation of Unit #1 OR Unit #2
- b. All non-operating personnel located in the Radiological Controlled Area shall proceed to 33' elevation of the Nuclear Service Building (NSB) OR 15' elevation of the Chem Systems Building (CSB).
- c. ALL other personnel located inside the Protected Area shall proceed to the 5' elevation of Unit #1 OR Unit #2.
- d. ALL personnel located outside the Protected Area shall proceed to the old Simulator Building Auditorium OR Mechanical Room.

6.0 REFERENCES

6.1 IP-1024, "Emergency Classification".

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1032
Rev. 5

TORNADO EMERGENCY

Prepared by: ABurne 9/14/98 Date 9/14/98 Technical Reviewer: Ben Gurnee 8/6/99 Date 8/6/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Danna Lynne 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____
Approval: Ben Gurnee / Acting EP Mgr 8/16/99 Signature/Title Date 9/1/99 /Effective Date

Biennial Review

Reviewer/Date _____ Reviewer/Date _____

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

TORNADO EMERGENCY

1.0 PURPOSE

- 1.1 To describe the actions which would be followed in the event of a tornado watch or a tornado warning at the Indian Point Site.

2.0 DISCUSSION

- 2.1 Meteorological conditions that could result in a tornado would be determined by the United States National Weather Service. Their services are available to the System Operator at the Company's Energy Control Center located at 128 West End Avenue in New York City.

3.0 PRECAUTIONS AND LIMITATION

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 The immediate protective actions taken by the Watch personnel AFTER receipt of a tornado watch OR tornado warning shall be as follows:

5.1.1 Control Room Operators

- a. Notify the Shift Manager of the tornado watch OR warning.
- b. Following notification of a tornado warning, as per Reference 6.1.
- c. Notify Operations Manager (OM) of observed tornado within one mile of site.
- d. Notify Unit 3 of observed tornado within one mile of site.

e. Notify the following of observed tornado within one mile of site:

- Security
- Health Physics
- Maintenance
- Chemistry

5.1.2 Shift Manager

- a. Assign personnel to look AND listen for a tornado.
- b. IF a tornado warning has been received, order all fuel handling operations halted. IF a fuel handling cask is suspended from the crane at this time, order that it be set down. Order ALL other non-essential plant operations halted.
- c. Notify station management.
- d. IF a tornado is observed on-site determine Emergency Action Level based on location of tornado and any damage caused by tornado as per Reference 6.2.

5.1.3 Operating Personnel

- a. Maintain a watch to listen for AND look for a tornado.
- b. IF a tornado is sighted, notify Control Room Operators IMMEDIATELY.

6.0 REFERENCE

- 6.1 A-28.0.7 "Hurricane, Tornado, High Winds, Severe Thunderstorm"
- 6.2 IP-1024 "Emergency Classification"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

TECHNICAL SUPPORT CENTER

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Reviewer:	_____ Print Name	_____ Signature	_____ Date
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Approval:	<u>Frank Inzillo</u> Print Name	<u>[Signature]</u> Signature	<u>3/22/00</u> Date

Effective Date: 3/28/00

Extensively Revised

_____	Biennial Review	_____
Reviewer/Date		Reviewer/Date
_____		_____
_____		_____

CONTROLLED

**Reference
Use**

1.0	PURPOSE	3
2.0	DISCUSSION	3
3.0	PRECAUTIONS AND LIMITATIONS	3
4.0	EQUIPMENT AND MATERIALS	3
5.0	INSTRUCTIONS	4
5.1	The Emergency Plant Manager (EPM)	4
5.2	The TSC Manager	4
5.3	The Technical Assessment Coordinator	4
5.4	The Operations Advisor	4
5.5	The Radiological Advisor	4
5.6	The Core Physics Engineer	4
5.7	The Mechanical and Electrical / I&C Engineer	4
5.8	The TSC Data Coordinator	4
5.9	The TSC Communicator	4
6.0	REFERENCES	4
7.0	ATTACHMENTS	
7.1	Attachment 1, EPM Checklist.	6
7.2	Attachment 2, TSC Manager Checklist.	13
7.3	Attachment 3, Technical Assessment Coordinator Checklist.	18
7.4	Attachment 4, Operations Advisor Checklist.	22
7.5	Attachment 5, Radiological Advisor Checklist.	25
7.6	Attachment 6, Core Physics Engineer Checklist	28
7.7	Attachment 7, Mechanical and Electrical / I&C Engineer Checklist	31
7.8	Attachment 8, TSC Data Coordinator Checklist	34
7.9	Attachment 9, TSC Communicator	38
8.0	ADDENDUM	
8.1	Addendum 1, OSC / TSC Layout	41
8.2	Addendum 2, Normal TSC Staffing (Form IP-1035-1)	42
8.3	Addendum 3, Essential Information Checklist (Form IP-1035-2)	43

TECHNICAL SUPPORT CENTER (TSC)

1.0 PURPOSE

To describe the activation and operation of the Technical Support Center (TSC)

2.0 DISCUSSION

None

3.0 PRECAUTIONS AND LIMITATIONS

None

4.0 EQUIPMENT AND MATERIALS

4.1 The following types of equipment and materials are available for use in the TSC

4.1.1 SAS, Emergency Display Data System (EDDS) Monitors and Proteus Computer Systems for accessing plant data.

4.1.2 Plant Procedures

4.1.3 Plant Drawings

4.2 Keys for TSC Cabinets are contained in the TSC key locker. The key to the key locker is kept in the FSS Office. A backup key is located in a break glass container in the TSC.

5.0 INSTRUCTIONS

- 5.1 The Emergency Plant Manager (EPM) shall follow the instructions outlined in Attachment 1, EPM Checklist.
- 5.2 The TSC Manager shall follow the instructions outlined in Attachment 2, TSC Manager Checklist.
- 5.3 The Technical Assessment Coordinator shall follow the instructions outlined in Attachment 3, Technical Assessment Coordinator Checklist.
- 5.4 The Operations Advisor shall follow the instructions outlined in Attachment 4, Operations Advisor Checklist.
- 5.5 The Radiological Advisor shall follow the instructions outlined in Attachment 5, Radiological Advisor Checklist.
- 5.6 The Core Physics Engineer shall follow the instructions outlined in Attachment 6, Core Physics Engineer Checklist.
- 5.7 The Mechanical and Electrical / I&C Engineer shall follow the instructions outlined in Attachment 7, Mechanical and Electrical / I&C Engineer Checklist.
- 5.8 The TSC Data Coordinator shall follow the instructions outlined in Attachment 8, TSC Data Coordinator.
- 5.9 The TSC Communicator shall follow the instructions outlined in Attachment 9, TSC Communicator.

6.0 REFERENCES

- 6.1 IP-1027, "Site Personnel Accountability and Evacuation"
- 6.2 IP-1021, "Manual Update and Readout of Proteus Plant Parameter Data"

7.0 ATTACHMENTS

- 7.1 Attachment 1, EPM Checklist.
- 7.2 Attachment 2, TSC Manager Checklist.
- 7.3 Attachment 3, Technical Assessment Coordinator Checklist.
- 7.4 Attachment 4, Operations Advisor Checklist.
- 7.5 Attachment 5, Radiological Advisor Checklist.
- 7.6 Attachment 6, Core Physics Engineer Checklist
- 7.7 Attachment 7, Mechanical and Electrical / I&C Engineer Checklist
- 7.8 Attachment 8, TSC Data Coordinator Checklist
- 7.9 Attachment 9, TSC Communicator

8.0 ADDENDUM

8.1 Addendum 1, OSC / TSC Layout

8.2 Addendum 2, Normal TSC Staffing (Form IP-1035-1)

8.3 Addendum 3, Essential Information Checklist (Form IP-1035-2)

Attachment 1
Emergency Plant Manager Checklist
Sheet 1 of 7

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Emergency Plant Manager (EPM).</p> <p>1.1 Go to the Central Control Room to receive briefing on plant conditions. Use an Essential Information Checklist (Form IP-1035-2) to document turnover information.</p> <p>1.2 <u>IF</u> the oncall ED has not assumed the ED duties <u>THEN</u>:</p> <p style="padding-left: 40px;">A. Relieve the Shift Manager of ED duties as outline in IAP-10, Shift Manager <u>AND</u> remain in the CCR until relieved by the oncall ED.</p> <p style="padding-left: 40px;">B. <u>WHEN</u> relieved of ED duties by the oncall ED <u>THEN</u> continue to assume EPM duties per this checklist.</p> <p>1.3 Go to the TSC/OSC and sign in on the facility organization chart.</p> <p>1.4 Review TSC/OSC status boards and EDDS information if available.</p> <p>1.5 <u>IF</u> relieving another EPM <u>THEN</u> perform a formal turnover with the current EPM</p> <p style="padding-left: 40px;">A. Review TSC Status Boards and EDDS Displays if available.</p> <p style="padding-left: 40px;">B. Review or complete an Essential Information Checklist (Form IP-1035-2)</p> <p style="padding-left: 40px;">C. Obtain a briefing from current EPM on the emergency, plant conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">D. Relieve current EPM</p> <p style="padding-left: 40px;">E. Make a formal announcement to TSC/OSC when relief takes place</p> <p>1.6 Inform the Control Room, Command Guard House and EOF you have assumed the duties of the EPM and are now located in the TSC/OSC Complex.</p>	

Attachment 1
Emergency Plant Manager Checklist
 Sheet 2 of 7

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Maintain (or direct a clerk to maintain) a log using an, ERO Log Sheet (Form IP-1023-4).</p> <p>2.1 Log when you assumed the duties of EPM.</p> <p>2.2 Log significant communications to individuals outside the TSC/OSC complex and all communications to individuals offsite</p> <p>2.3 Log major decisions and any important details used to make decision</p>	
<p>3.0 Inform the TSC Manager and OSC Manager when temporarily leaving the work area.</p> <p>3.1 Instruct the TSC Manager to answer your phone while away.</p> <p>3.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>3.3 Upon return, obtain a briefing from TSC Manager on any events which have occurred while you were away.</p>	
<p>4.0 Establish and maintain accountability for Plant personnel within the Protected Area</p> <p style="text-align: center;"><u>NOTE</u></p> <p>After initial accountability has been completed, the Shift Manager, TSC Manager, OSC Manager and Security Supervisor are responsible for accountability of individuals assigned to their respective organizations.</p> <p>4.1 Check with the OSC Manager on the status of initial onsite accountability. Initial accountability should be completed within approximately 30 minutes of time it is called for.</p> <p>4.2 <u>IF</u> anyone is unaccounted for <u>THEN</u> direct the OSC Manager to commence search and rescue operations.</p> <p>4.3 Direct TSC Manager, OSC Manager, Shift Manager and Security Supervisor to maintain onsite accountability throughout the event.</p>	

Attachment 1
Emergency Plant Manager Checklist
Sheet 3 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.0 Confer with the Emergency Director on release or evacuation of non-essential personnel from the Energy Education Center</p> <p>5.1 Check with CCR, TSC Manager and OSC Manager to determine if additional personnel are needed to support emergency response.</p> <p>5.2 Inform the ED when you no longer have any immediate personnel needs and concur with release of non-essential personnel from the site.</p>	
<p>6.0 Coordinate and direct the Response Activities of all Onsite ERO Personnel.</p> <p>6.1 Establish and promulgate onsite priorities in response to the emergency.</p> <p>A. Designate priorities as High (H), Medium (M), or Low (L) as appropriate.</p> <ol style="list-style-type: none"> 1. High (H): The task is necessary to protect the immediate health and safety of the public. High priority tasks are in response to plant conditions that are allowing the rapid deterioration of safety barriers, or barriers have already been broken such that a release is either occurring or is imminent. 2. Medium (M): Any task that requires action by the TSC/OSC and should be worked on at the immediate time period, but does not fit the criteria of a health and safety of the public related item (for example, if a system has only one remaining component, repair of the backup components). 3. Low (L): Any task which can be worked on when resources permit (i.e. getting meals, preparations for recovery activities). <p>B. If multiple tasks exist within a single priority classification, confer with the appropriate managers and personnel to establish the preferred sequence.</p> <p>C. Direct TSC Manager and OSC Manager to maintain current task and priorities on the Status Boards.</p>	
<p>7.0 Prepare for NRC Site Team response activities.</p> <p>7.1 Coordinate the arrival of the Site Response Team with the EOF.</p> <p>7.2 Brief (or designate an individual to brief) the inplant NRC Site Team upon arrival.</p> <p>7.3 Direct the TSC Manager to coordinate activities associated with the NRC Site Team.</p>	

Attachment 1
Emergency Plant Manager Checklist
Sheet 4 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>8.0 When applicable direct implementation of Severe Accident Management Guidelines.</p> <p>8.1 Determine which strategies to implement.</p> <p>8.2 Discuss actions with the Shift Manager, TSC Manager and the ED.</p>	
<p>9.0 Keep the Security Supervisor at the Command Guard House informed of emergency classification, plant status and any radioactive releases which may effect Security Personnel</p>	
<p>10.0 Authorize Emergency Exposures</p> <p>10.1 Inform the OSC Manager and RP Coordinator that you authorize emergency exposures up to 1 Rem TEDE for all OSC and Operations personnel dispatched into the plant. Document this authorization on your ERO Log Sheet.</p> <p>10.2 IF emergency measures require additional exposure THEN raise the emergency exposure limit 1 Rem at a time up to 5 Rem.</p> <p>10.3 Review and authorize, when requested by OSC Staff, emergency exposures beyond 5 Rem on an individual basis using Form IP-1023-6, Emergency Exposure Authorization. General guidelines (more details are listed on authorization form):</p> <p>A. ERO members may receive up to 5 Rem TEDE (per event) for any required emergency activities.</p> <p>B. ERO members may be authorized emergency exposures up to 10 Rem TEDE to protect vital equipment.</p> <p>C. ERO members may be authorized emergency exposures up to 25 Rem TEDE to save a life.</p> <p>D. Individuals may volunteer to receive greater than 25 Rem TEDE to save a life.</p>	
<p>11.0 Maintain communications with the Shift Manager</p> <p>11.1 Discuss current plant status and planned operations</p> <p>11.2 Discuss tasks the TSC/OSC are performing and review priorities.</p> <p>11.3 Inform Shift Manager of any other important ERO activities (such as shift changes, arrival of NRC personnel, etc.)</p>	

Attachment 1
Emergency Plant Manager Checklist
Sheet 5 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>12.0 Maintain communications with the Emergency Director.</p> <p>12.1 Use an Essential Information Checklist (Form IP-1035-2) to periodically update ED on conditions.</p> <p>12.2 Inform the ED of onsite priorities and activities.</p> <p>12.3 Inform the ED of any plant conditions or events which have the potential for change of emergency classification or radiological releases status.</p>	
<p>13.0 Coordinate with TSC and OSC Managers to establish a Time Period for and Conduct of Facility Briefings</p> <p>13.1 Make an announcement approximately 5 minutes before actual brief that a brief will be conducted (if possible).</p> <p>13.2 Use Form IP1035-2, Essential Information Checklist as guide for leading briefings.</p> <p>13.3 Emphasize the following items in each brief:</p> <p style="padding-left: 40px;">A. What the major task and priorities are, to maintain personnel awareness.</p> <p style="padding-left: 40px;">B. Everyone should review their procedure checklist to ensure proper actions are being taken.</p> <p style="padding-left: 40px;">C. Everyone should ensure they are maintaining proper logs and all forms are completed and legible.</p> <p>13.4 Establish briefing periods at approximately 30 to 60 minute intervals or as conditions change.</p> <p>13.5 Periodically update the Security Supervisor on emergency status.</p>	
<p>14.0 Maintain adequate manning, access control, and 24-hour functional continuity of the CCR, TSC, and OSC.</p> <p style="text-align: center;">NOTE:</p> <p style="padding-left: 40px;">The OSC Accountability Clerk prepares shift relief schedules and calls out the second shift.</p> <p>14.1 Request additional material, manpower, and equipment as necessary.</p>	

Attachment 1
Emergency Plant Manager Checklist
Sheet 6 of 7

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>15.0 <u>IF</u> the recommendation to evacuate the TSC/OSC Complex is made by the OSC Manager or RP Coordinator <u>THEN</u> coordinate an orderly evacuation with TSC and OSC Managers.</p> <p>15.1 Determine a suitable alternate location for TSC and OSC staffs. Key individuals may report to CCR and others may go to EOF, AEOF or Park Place Engineering Offices.</p> <p>15.2 Determine the speed at which the relocation of personnel should occur giving consideration to the following items:</p> <ul style="list-style-type: none">A. Consider the impact of immediate relocation vs. mitigation activities in progress.B. Current radiological conditions within the TSC/OSCC. Radiological conditions at the proposed TSC/OSC.D. Radiological conditions en route.E. The adequacy of response from the alternate location. <p>15.3 Determine proper path to take to new locations.</p> <p>15.4 Inform the Shift Manager and the ED of need to relocate TSC/OSC personnel.</p> <p>15.5 Direct personnel to relocate.</p> <p>15.6 Notify Security to instruct incoming personnel to report to the designated alternate TSC/OSC.</p>	

Attachment 1
Emergency Plant Manager Checklist
Sheet 7 of 7

<u>Closeout Responsibility/Activity</u>	<u>Notes</u>
16.0 Preparations for Recovery Phase: 16.1 Start preparations as soon as conditions and resources allow. This should occur several hours before actual termination of an event. 16.2 Review IP-1048, Termination and Initiation of Recovery, for guidance on termination of the emergency and entry into Recovery.	
17.0 Direct Onsite personnel to return all equipment to proper storage locations.	
18.0 Review all documentation: 18.1 Ensure logs, forms and other documentation are complete 18.2 Direct the OSC Manager to document all repairs performed by OSC Teams that deviate from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or long term restoration. 18.3 Direct the TSC Manager to document all deviations from Technical Specifications, Quality Assurance Documents and other procedures so that these items are evaluated during the Recovery Phase.	
19.0 Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 2
TSC Manager Checklist
Sheet 1 of 5

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Activation of the TSC and assuming the position of TSC Manager.</p> <p>1.1 Upon arrival in the TSC/OSC Complex sign in on the facility organization chart.</p> <p>1.2 <u>IF</u> the TSC has not been previously activated <u>THEN</u> perform the following:</p> <p>A. Obtain a briefing from the Emergency Plant Manager (EPM) on plant conditions using form IP-1035-2, Essential Information Checklist.</p> <p>B. Verify you have the following minimum staffing prior to activation of the TSC:</p> <ol style="list-style-type: none"> 1. TSC Manager (the Technical Assessment Coordinator shall assume the duties of TSC Manager if oncall TSC Manager does not arrive) 2. TSC Communicator (may be assigned to any TSC position) 3. Based on your judgement, adequate Engineering Staff to provide some support to Control Room Personnel for the current events <p>C. <u>IF</u> additional personnel are required <u>THEN</u>:</p> <ol style="list-style-type: none"> 1. <u>IF</u> it is during normal working hours <u>THEN</u> call or assign someone to call the Assembly Areas for needed personnel 2. <u>IF</u> it is <u>NOT</u> normal working hours <u>THEN</u> assign someone to call the EOF or AEOF for needed personnel. 3. <u>IF</u> needed individuals are not available onsite <u>THEN</u> assign someone to call individuals at home using the Emergency Telephone Directory (Appendix A, B and C of Emergency Plan Implementing Procedures). 	

Attachment 2
TSC Manager Checklist
Sheet 2 of 5

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>D. Verify the following systems are operational (normally started by TSC Data Coordinator):</p> <ol style="list-style-type: none"> 1. Emergency Response Data System (ERDS) should be set up to transfer plant data to the NRC 2. Emergency Data Display System (EDDS) should be set up to display plant data in the TSC. 3. SAS and Proteus Computer Systems should be started to display plant data (increase video brightness). 4. TSC clocks shall be synchronized with CCR and EOF using the EOF GPS Satellite Clock as the correct time. <p>1.3 Report readiness status to the EPM and CCR when prepared to assume the TSC Manager position and activate the TSC.</p> <p style="text-align: center;">NOTE:</p> <p>Addendum 2 is a normal staffing level, however the TSC Manager should call in as many resources as needed to support the CCR for the event in progress.</p> <p>1.4 <u>IF</u> TSC staffing is less than that shown in Addendum 2, Normal TSC Staffing <u>THEN</u> call for additional personnel per step 1.2.C</p> <p>1.5 <u>IF</u> relieving another TSC Manager <u>THEN</u>, perform a formal turnover:</p> <ol style="list-style-type: none"> A. Review TSC Status Boards and EDDS displays if available. B. Review or complete a current Essential Information Checklist (Form IP-1035-2) C. Obtain a briefing from current TSC Manager on the emergency, plant conditions and any actions that have been completed or are in progress. D. Relieve current TSC Manager <p>1.6 Inform the EPM, CCR, OSC Manager and the TSC staff that you are now the TSC Manager.</p> <p>1.7 Log the time you assumed duties of TSC Manager.</p>	

Attachment 2
TSC Manager Checklist
Sheet 3 of 5

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the Technical Assessment Coordinator when temporarily leaving the work area.</p> <p>2.1 Direct the Technical Assessment Coordinator to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p>A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p>B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing from the TAC on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log</p> <p>3.1 Log the time when you assumed the duties of TSC Manager.</p> <p>3.2 Log significant communications to individuals outside the TSC/OSC complex and all communications to individuals offsite</p> <p>3.3 Log major decisions, actions and any important details</p>	
<p>4.0 Manage the activities of the TSC Staff:</p> <p>4.1 Analyze plant information to provide support to plant operations personnel in returning the plant to a safe condition.</p> <p>4.2 Develop action plans and procedures to repair and/or mitigate consequences.</p> <p>4.3 Provide a central organization and facility for the accumulation and transmittal of plant information to the EOF and NRC</p> <p>4.4 When applicable, implement and perform monitoring and evaluations as directed in the Indian Point Severe Accident Management Guidelines.</p> <p>4.5 <u>IF</u> requested by the NRC to provide an open communications line for plant data <u>THEN</u> have a Licensed or Certified Operator man the phone</p>	

Attachment 2
TSC Manager Checklist
Sheet 4 of 5

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>5.0 Monitor containment integrity status throughout the event:</p> <p>5.1 Initiate a review of the valves listed in ES-1-4, Attachment 1 and 2 to determine if any non-automatic containment valves should be closed.</p> <p>5.2 Repeat the above review approximately every 2 hours for first 24 hours of event and thereafter at the discretion of the EPM</p>	
<p>6.0 Work with the EPM to set priorities for TSC activities.</p> <p>6.1 Designate priorities as High (H), Medium (M), or Low (L) as appropriate.</p> <p style="padding-left: 20px;">A High (H): The task is necessary to protect the immediate health and safety of the public. High priority tasks are in response to plant conditions that are allowing the rapid deterioration of safety barriers, or barriers have already been broken such that a release is either occurring or is imminent.</p> <p style="padding-left: 20px;">B Medium (M): Any task that requires action by the TSC/OSC and should be worked on at the immediate time period, but does not fit the criteria of a health and safety of the public related item (for example, if a system has only one remaining component, repair of the backup components).</p> <p style="padding-left: 20px;">C Low (L): Any task which can be worked on when resources permit (for example, getting meals, preparations for recovery activities).</p> <p>6.2 Keep TSC Staff informed of priorities</p> <p>6.3 Direct that TSC status boards are maintained to reflect priorities.</p>	
<p>7.0 Participate in periodic briefings with EPM and OSC Manager on the following items:</p> <p>7.1 Current plant conditions</p> <p>7.2 Emergency Classifications</p> <p>7.3 Activities underway to mitigate the emergency,</p> <p>7.4 Current priorities</p> <p>7.5 Log and record keeping</p>	

Attachment 2
TSC Manager Checklist
Sheet 5 of 5

<u>Closeout Responsibility/Activity</u>	
8.0 Direct TSC Staff to return all equipment to proper storage locations.	
9.0 Review all documentation the TSC Managers and TSC Staff maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure all temporary procedures used and/or developed are properly documented for use by Recovery Organization so that necessary actions can be taken for plant operations	
10.0 Provide all logs and records to the Recovery Manager upon termination of the emergency and entry into the Recovery Phase.	

Attachment 3

Technical Assessment Coordinator Checklist

Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Technical Assessment Coordinator.</p> <p style="text-align: center;">NOTE:</p> <p>If the TSC Manager is not present use Attachment 2, TSC Manager Checklist to perform the duties of the TSC Manager.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Evaluate the adequacy of the Technical Assessment Team staffing and ability to support CCR in technical assessment activities. The normal Technical Assessment Team includes:</p> <ul style="list-style-type: none"> A Operations Advisor B Radiological Advisor C Core Physics Engineer D Electrical / I&C Engineer E Mechanical Engineer <p>1.3 Report readiness status to the TSC Manager when prepared to assume the Technical Assessment Coordinator position.</p> <p>1.4 <u>IF</u> relieving another Technical Assessment Coordinator <u>THEN</u> perform a formal relief:</p> <ul style="list-style-type: none"> A. Review TSC Status Boards and EDDS displays if available B. Review current Essential Information Checklist (Form IP-1035-2) C. Obtain a briefing from current Technical Assessment Coordinator on the emergency, plant conditions and any tasks that have been completed or are in progress. D. Relieve current Technical Assessment Coordinator. <p>1.5 Inform TSC staff that you are now the Technical Assessment Coordinator.</p>	

Attachment 3

Technical Assessment Coordinator Checklist

Sheet 2 of 4

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform a staff member when temporarily leaving the work area.</p> <p>2.1 Direct the TSC Communicator or Clerk to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Use, ERO Log Sheet (Form IP-1023-4) to maintain a log of significant items.</p> <p>3.1 Time you assume position of Technical Assessment Coordinator</p> <p>3.2 Technical Assessment Team activities undertaken with information pending actions to ensure the plant is returned to a safe condition.</p> <p>3.3 Communications external to the TSC</p>	
<p>4.0 Coordinate with the TSC Manager to call in additional engineering assistance as needed:</p> <p>4.1 All ConEd engineering resources should be utilized as required. Individuals may be tasked with activities to be completed at the offsite engineering offices, be called to report to the TSC or directed to other facilities as needed.</p> <p>4.2 Non ConEd engineering support such as Westinghouse, Equipment Vendors and/or NRC Engineers. (some support organization phone numbers are located in the Emergency Telephone Directory)</p>	

Attachment 3

Technical Assessment Coordinator Checklist

Sheet 3 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
5.0 Assist the TSC Manager in planning and performing engineering assessment of the plant conditions and/or actions to be taken to mitigate plant damage.	
6.0 Direct the activities of the Technical Assessment Team in the following areas: 6.1 Direct the technical support and engineering activities in accordance with the priorities established by the EPM and the TSC Manager. 6.2 Use EDDS, SAS and Proteus computer systems along with communications with the CCR to monitor and assess vital plant parameters and conditions 6.3 Direct the Assessment Team to monitor, trend and assess plant parameters and status to: A. Determine the condition of safety related systems and the fission product barriers. B. Verify that the status of equipment out-of-service is maintained. C. Provide recommendations for emergency classification changes based on review of the EALs. D. Provide recommendations for mitigating activities. E. Forecast expected changes in the level of plant and system safety. F. Determine the extent of core damage.	

Attachment 3

Technical Assessment Coordinator Checklist

Sheet 4 of 4

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>6.4 When applicable perform monitoring, assessment and evaluation in accordance with the Indian Point Severe Accident Management Guidelines.</p> <p>6.5 Direct personnel to develop or modify procedures to perform response activities as necessary. (Such as emergency repairs or emergency system lineups).</p> <p>6.6 Confirm that any sample requests for chemistry sampling contain specific details on the type of results information that is necessary (such as system boron concentration, activity, etc.).</p> <p>6.7 Focus TSC Engineering efforts on short term (< 12 hours) support activities. If longer term engineering activities are to be undertaken a separate team should be established at offsite engineering locations.</p> <p>6.8 Provide engineering support for OSC activities as requested.</p>	
<u>Closeout Responsibility/Activity</u>	
<p>7.0 Direct Technical Assessment Team Staff to return all equipment to proper storage locations.</p>	
<p>8.0 Review all documentation the Technical Assessment Team maintained during the emergency:</p> <p>A. Ensure logs, forms and other documentation are complete</p> <p>B. Ensure all temporary procedures used and/or developed are properly documented for use by the Recovery Organization so that necessary actions can be taken for continuous plant operations or long term restoration.</p>	
<p>9.0 Provide all logs and records to the TSC Manager upon termination of the emergency and entry into the Recovery Phase.</p>	

Attachment 4
Operations Advisor Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Operations Advisor.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.3 Report readiness status to the Technical Assessment Coordinator or TSC Manager when prepared to assume the Operations Advisor position.</p> <p>1.4 <u>IF</u> relieving another Operations Advisor <u>THEN</u>, perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review TSC Status and EDDS displays if available</p> <p style="padding-left: 40px;">B. Review current Essential Information Checklist (Form IP-1035-2)</p> <p style="padding-left: 40px;">C. Obtain a briefing from current Operations Advisor on the emergency, plant conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">D. Relieve the current Operations Advisor</p> <p>1.5 Inform TSC staff that you are now the Operations Advisor.</p>	

Attachment 4
Operations Advisor Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the Technical Assessment Coordinator when temporarily leaving the work area.</p> <p>2.1 Designate an individual to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Monitor plant data communications between CCR and other Emergency Response Facilities</p>	
<p>4.0 Monitor fission product barrier and plant status</p> <p>4.1 Provide recommendations to TSC Manager and EPM for emergency classification changes based on EALs.</p> <p>4.2 Assist the Core Physics Engineer in maintaining the Fission Product Barrier Status Board.</p>	
<p>5.0 Assist in clarifying Plant Parameter Information to EPM, TSC Manager and other members of the Technical Assessment Team.</p>	
<p>6.0 Work with other members of the Technical Assessment Team to provide support to the CCR to mitigate the effects of the event and return the plant to a safe condition.</p> <p>6.1 Provide recommendations on plant operations.</p> <p>6.2 Develop emergency procedures if needed</p> <p>6.3 Provide technical support to OSC teams as needed</p> <p>6.4 Look ahead for possible plant problems and solutions.</p>	

Attachment 4
Operations Advisor Checklist
Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>		<u>Notes</u>
7.0	When directed perform monitoring, assessment and evaluations as outlined in the Indian Point Severe Accident Management Guidelines.	
<u>Closeout Responsibility/Activity</u>		
8.0	Assist TSC personnel in returning all equipment to proper storage locations.	
9.0	Review all documentation the Operations Advisor(s) maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure all emergency procedures performed that deviate from normal station procedures are properly documented so that necessary actions can be taken for continuous plant operations or long term recovery activities.	
10.0	Provide all logs and records to the Technical Assessment Coordinator upon termination of the emergency and entry into the Recovery Phase.	

Attachment 5
Radiological Advisor Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Radiological Advisor.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with plant status.</p> <p>1.3 Discuss radiological conditions with the OSC RP Coordinator.</p> <p>1.4 Report readiness status to the Technical Assessment Coordinator or TSC Manager when prepared to assume the Radiological Advisor position.</p> <p>1.5 <u>IF</u> relieving another Radiological Advisor <u>THEN</u>. perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review TSC Status Boards and EDDS displays if available.</p> <p style="padding-left: 40px;">B. Review a current Essential Information Checklist (Form IP-1035-2)</p> <p style="padding-left: 40px;">C. Obtain a briefing from current Radiological Advisor on the emergency, plant conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">D. Relieve current Radiological Advisor</p> <p>1.6 Inform TSC staff that you are now the Radiological Advisor.</p>	

Attachment 5
Radiological Advisor Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the Technical Assessment Coordinator when temporarily leaving the work area.</p> <p>2.1 Designate an individual to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Monitor plant radiological conditions and any releases or potential releases of radioactive materials.</p> <p>3.1 Inform the ORAD in the EOF of any releases or potential releases offsite</p> <p>3.2 Inform the OSC RP Coordinator immediately of any change in conditions which may affect personnel in the field.</p>	
<p>4.0 Provide radiological status updates to TSC personnel.</p>	
<p>5.0 Assist OSC RP Coordinator in development of Emergency Radiation Work Permits.</p>	
<p>6.0 Assess plant radiological parameters and pass on information to other members of the Technical Assessment Team and the ORAD in the EOF.</p>	
<p>7.0 Assist the Emergency Plant Manager regarding decisions on Emergency Exposures Authorizations and the issuance of KI</p>	

Attachment 5
Radiological Advisor Checklist
Sheet 3 of 3

<u>Closeout Responsibility/Activity</u>		<u>Notes</u>
8.0	Assist TSC personnel in returning all equipment to proper storage locations.	
9.0	Review all documentation the Radiological Advisors maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Work with OSC RP Coordinator to ensure all emergency exposures and the issuance of KI are properly documented	
10.0	Provide all logs and records to the Technical Assessment Coordinator upon termination of the emergency and entry into the Recovery Phase.	

Attachment 6
Core Physics Engineer Checklist
Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Core Physics Engineer.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with plant status.</p> <p>1.3 Discuss Fission Product Barrier status with the Operations Advisor.</p> <p>1.4 Report readiness status to the Technical Assessment Coordinator or TSC Manager when prepared to assume the Core Physics Engineer position.</p> <p>1.5 <u>IF</u> relieving another Core Physics Engineer <u>THEN</u>. perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review TSC Status Boards and EDDS displays if available.</p> <p style="padding-left: 40px;">B. Review a current Essential Information Checklist (Form IP-1035-2)</p> <p style="padding-left: 40px;">C. Obtain a briefing from current Core Physics Engineer on the emergency, plant conditions, fission product barrier status and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">D. Relieve the current Core Physics Engineer</p> <p>1.6 Inform TSC staff that you are now the Core Physics Engineer.</p>	

Attachment 6
Core Physics Engineer Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the Technical Assessment Coordinator when temporarily leaving the work area.</p> <p>2.1 Designate an individual to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Monitor plant conditions for any indications of core damage.</p> <p>3.1 Perform and update core damage assessment based on current information using procedure NEP-1, Methodology for Assessment of Core Damage.</p> <p>3.2 Notify TSC Manager immediately of any changes in core status.</p> <p>3.3 Keep the Radiological Advisor informed on core status to assist in maintaining radiological controls for plant personnel.</p> <p>3.4 Keep the ORAD informed of the latest estimate of the amount of core damage</p> <p>3.5 Work with the Operations Advisor to maintain Fission Product Barrier Status board.</p>	
<p>4.0 Assist operations personnel in calculating and tracking core reactivity.</p>	
<p>5.0 Assist the ORAD in performance of dose projections by providing solutions to source term problems.</p>	
<p>6.0 Assist in clarifying core parameter information to other members of the Technical Assessment Team.</p>	

Attachment 6
Core Physics Engineer Checklist
Sheet 3 of 3

<u>Continuous Responsibility/Activity (cont.)</u>		<u>Notes</u>
7.0	Work with other members of the Technical Assessment Team to provide support to the CCR to mitigate the effects of the event and return the plant to a safe condition.	
7.1	Provide recommendations on plant operations.	
7.2	Assist in developing emergency procedures if needed	
<u>Closeout Responsibility/Activity</u>		
8.0	Assist TSC personnel in returning all equipment to proper storage locations.	
9.0	Review all documentation the Core Physics Engineers maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure any core parameters which were outside technical specifications during the event are properly documented so that proper actions can be taken during the recovery phase.	
10.0	Provide all logs and records to the Technical Assessment Coordinator upon termination of the emergency and entry into the Recovery Phase.	

Attachment 7

Mechanical and Electrical / I&C Engineer Checklist

Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of Mechanical or Electrical / I&C Engineer.</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.3 Report readiness status to the Technical Assessment Coordinator or TSC Manager when prepared to assume your engineering position.</p> <p>1.4 <u>IF</u> relieving another Engineer <u>THEN</u>. perform a formal turnover:</p> <p style="padding-left: 40px;">A. Review TSC Status Boards and EDDS displays if available.</p> <p style="padding-left: 40px;">B. Review a current Essential Information Checklist (Form IP-1035-2)</p> <p style="padding-left: 40px;">C. Obtain a briefing from current Electrical / I&C Engineer on the emergency, plant conditions and any actions that have been completed or are in progress.</p> <p style="padding-left: 40px;">D. Relieve the current Mechanical or Electrical / I&C Engineer</p> <p>1.5 Inform TSC staff that you are now the Mechanical or Electrical / I&C Engineer.</p>	

Attachment 7

Mechanical and Electrical / I&C Engineer Checklist

Sheet 2 of 3

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the Technical Assessment Coordinator when temporarily leaving the work area (such as to the restroom).</p> <p>2.1 Designate an individual to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p>A. Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p>B. Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Assist in clarifying Mechanical or Electrical / I&C information to other members of the Technical Assessment Team.</p>	
<p>4.0 Work with other members of the Technical Assessment Team to provide support to the CCR to mitigate the effects of the event and return the plant to a safe condition.</p> <p>4.1 Provide recommendations on equipment operations.</p> <p>4.2 Develop emergency procedures if needed</p> <p>4.3 Identify emergency repairs that can be undertaken to restore and maintain equipment operability and plant safety.</p>	
<p>5.0 Assist the OSC Maintenance and I&C Coordinators in preparing to send repair teams into the plant.</p> <p>5.1 Provide information on parts needed.</p> <p>5.2 Provide information on tools required</p> <p>5.3 Prepare ad hoc maintenance procedures for OSC Repair Teams</p> <p>5.4 Participate in team briefing if required</p>	

Attachment 7

Mechanical and Electrical / I&C Engineer Checklist

Sheet 3 of 3

<u>Closeout Responsibility/Activity</u>	
6.0 Assist TSC personnel in returning all equipment to proper storage locations.	
7.0 Review all documentation the Mechanical or Electrical / I&C Engineers maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure any equipment repairs which were performed outside normal requirements during the event are properly documented so that proper actions can be taken during the recovery phase.	
8.0 Provide all logs and records to the Technical Assessment Coordinator upon termination of the emergency and entry into the Recovery Phase.	

Attachment 8
TSC Data Coordinator Checklist
 Sheet 1 of 4

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of TSC Data Coordinator</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 <u>IF</u> the TSC has not been previously activated <u>THEN</u> perform the following steps:</p> <p style="padding-left: 20px;">A. Start the EDDS computers to display plant data.</p> <p style="padding-left: 40px;">1. Start computer</p> <p style="padding-left: 40px;">2. Log on to the network</p> <p style="padding-left: 40px;">3. Launch "Internet Explorer" from the windows desktop</p> <p style="padding-left: 40px;">4. From the "Favorites" menu select EDDS (Address http://epccrr/edds/!main.htm)</p> <p style="padding-left: 40px;">5. Select "Go To Trend Pages"</p> <p style="padding-left: 40px;">6. Select "Form 42A" for monitor labeled Form 42A</p> <p style="padding-left: 40px;">7. Adjust display to display entire form.</p> <p style="padding-left: 40px;">8. Return to step 1 and repeat for Forms 42B and 42C</p> <p style="padding-left: 20px;">B. Verify SAS Terminals are operational to display plant data (adjust brightness)</p> <p style="padding-left: 20px;">C. Verify Proteus Computer is operational to display plant data.</p> <p style="padding-left: 20px;">D. <u>IF</u> the proteus computer is not properly displaying data <u>THEN</u> refer to IP-1021, "Manual Update and Readout of Proteus Plant Parameter Data"</p> <p style="padding-left: 20px;">E. <u>IF</u> the Emergency Response Data System (ERDS) is not already transmitting data <u>THEN</u> start the ERDS to transfer information to the NRC</p> <p style="padding-left: 40px;">1. Start the ERDS computer</p> <p style="padding-left: 40px;">2. At the DOS prompt level type <ERDS> <u>AND</u> press the return key.</p> <p style="padding-left: 40px;">3. AFTER data starts collecting (approximately 5 seconds) press the F1 key to initiate transfer of data to the NRC</p>	

Attachment 8
TSC Data Coordinator Checklist
Sheet 2 of 4

<u>Initial Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>F. Direct Document Control Technician to assist Technical Assessment Team with obtaining drawings and procedures as needed.</p> <p>G. Enable the EOF Proteus Terminal.</p> <p>H. Verify that the CCR Communicator and CCR Data Logger are present in the CCR.</p> <p>I. Synchronized the TSC/OSC Clocks with the CCR and the EOF. Using the GPS Satellite clock in the EOF for the correct time.</p> <p>J. Direct TSC Clerical Staff to provide support as needed</p> <p>1.3 <u>IF</u> relieving another Data Coordinator <u>THEN</u>. perform a formal turnover:</p> <p>A. Obtain a briefing on the emergency, plant conditions and any actions that have been completed or are in progress.</p> <p>B. Relieve current TSC Data Coordinator</p> <p>1.4 Inform TSC staff that you are now the TSC Data Coordinator</p>	

Attachment 8
TSC Data Coordinator Checklist
Sheet 3 of 4

<u>Continuous Responsibility/Activity</u>	<u>Notes</u>
<p>2.0 Inform the TSC Manager when temporarily leaving the work area.</p> <p>2.1 Designate an individual to answer your phone while away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex <u>THEN</u></p> <p style="padding-left: 40px;">A Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return.</p> <p style="padding-left: 40px;">B <u>IF</u> you left TSC/OSC Complex <u>THEN</u> inform the OSC Team Coordinator you have returned.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Assist the Technical Assessment Team in obtaining plant data from the various TSC Computer systems</p>	
<p>4.0 Coordinate TSC Communicators, Document Controller and Clerical Staff to assist TSC operations.</p>	
<p>5.0 Ensure EDDS displays continue to operate properly.</p> <p><u>IF</u> EDDS displays are not functioning <u>THEN</u> perform the following:</p> <p style="padding-left: 40px;">A. Obtain Form 42A and 42C data printout from Proteus computer. <u>IF</u> Proteus computer is not operating <u>THEN</u> obtain form information from the Data Logger in the CCR</p> <p style="padding-left: 40px;">B. Assign Clerical Staff member to obtain Form 42B information from the Data Logger in the CCR</p> <p style="padding-left: 40px;">C. Have Clerical transcribe form data to TSC Status Boards AND fax form information to the EOF</p>	

Attachment 8
TSC Data Coordinator Checklist
Sheet 4 of 4

<u>Closeout Responsibility/Activity</u>	
<p>6.0 Direct TSC support personnel to return all equipment to pre emergency conditions:</p> <p>6.1 Erase TSC Status Boards</p> <p>6.2 Return plant drawings, procedures and other items obtained from the Document Control area.</p> <p>6.3 Turn off or dim computer display systems.</p>	
<p>7.0 Provide all logs and records to the Technical Assessment Coordinator upon termination of the emergency and entry into the Recovery Phase.</p>	

Attachment 9
TSC Communicator Checklist
 Sheet 1 of 3

<u>Initial Responsibility/Activity</u>	<u>Notes</u>
<p>1.0 Assume the position of TSC Communicator</p> <p>1.1 Sign in on the facility organization chart.</p> <p>1.2 Review facility status boards, EDDS information and any other available sources to become familiar with current plant status.</p> <p>1.3 IF an open phone line has not been established with the CCR and the EOF on the three-way ring down phone <u>THEN</u> establish open line:</p> <p style="padding-left: 20px;">A Remove handset from cradle (may use handset or headset to monitor phone line)</p> <p style="padding-left: 20px;">B Press button labeled (TSC-CCR-EOF)</p> <p style="padding-left: 20px;">C Press SIGNAL button to ring other locations</p> <p style="padding-left: 20px;">D Listen to ensure other parties pick up</p> <p style="padding-left: 20px;">E Inform all parties you are establishing open line from the TSC and are now monitoring line.</p> <p style="padding-left: 20px;">F Stay on line at all times or inform other parties when you will be off line.</p> <p>1.4 <u>IF</u> relieving another TSC Communicator <u>THEN</u>, perform a formal turnover:</p> <p style="padding-left: 20px;">A. Review TSC Communicator Log.</p> <p style="padding-left: 20px;">B. Obtain a briefing from current TSC Communicator on the emergency, plant conditions.</p> <p style="padding-left: 20px;">C. Relieve the current TSC Communicator</p> <p>1.5 Inform TSC Manager that you are now the TSC Communicator.</p>	

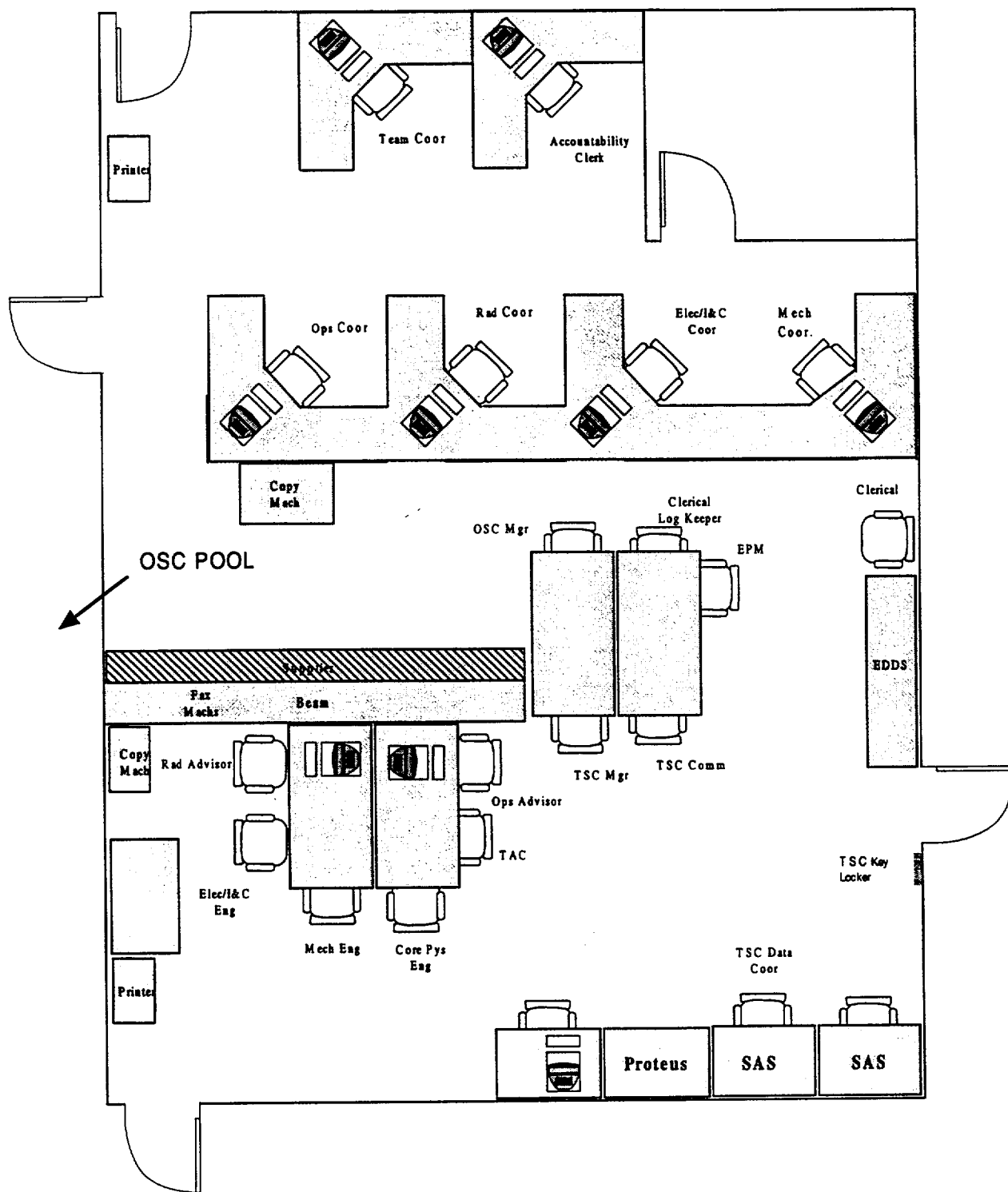
Attachment 9
TSC Communicator Checklist
Sheet 2 of 3

<u>Continuous Responsibility/Activity (cont.)</u>	<u>Notes</u>
<p>2.0 Inform the TSC Manager when temporarily leaving the work area (such as to the restroom).</p> <p>2.1 Request the TSC Operation Advisor monitor the open phone line to the CCR and EOF while you are away.</p> <p>2.2 <u>IF</u> you are leaving the TSC/OSC Complex (the restroom is within complex) <u>THEN</u></p> <p style="padding-left: 40px;">A Inform the OSC Team Coordinator when you leave, where you are going and when you expect to return. (for accountability purposes)</p> <p style="padding-left: 40px;">B Inform the OSC Team Coordinator when you return.</p> <p>2.3 Upon return, obtain a briefing on any events which have occurred while away.</p>	
<p>3.0 Use Form IP-1023-4, ERO Log Sheet, to maintain a log</p> <p>3.1 Log the time when you assumed the duties of TSC Communicator.</p> <p>3.2 Log significant communications pertaining to plant operations and all communications to individuals offsite</p>	
<p>4.0 Monitor communications from the CCR keeping aware of CCR personnel actions and procedures being implemented.</p>	
<p>5.0 Work with other members of the TSC Staff to provide support to the CCR to mitigate the effects of the event and return the plant to a safe condition.</p>	

Attachment 9
TSC Communicator Checklist
Sheet 3 of 3

<u>Closeout Responsibility/Activity</u>	
6.0 Assist TSC personnel in returning all equipment to proper storage locations.	
7.0 Review all documentation the TSC Communicators maintained during the emergency: A. Ensure logs, forms and other documentation are complete B. Ensure any equipment and procedure problems noted during the event are properly documented so that proper actions can be taken to correct them.	
8.0 Provide all logs and records to the TSC Manager upon termination of the emergency and entry into the Recovery Phase.	

Addendum 1
TSC / OSC Layout
Sheet 1 of 1



Addendum 2
Normal TSC Staffing (Form IP-1035-1)
 Sheet 1 of 1

Normal TSC Staffing

No.	Positions	Number Present	Number Needed	Called
1	TSC Manager			
1	Technical Assessment Coordinator			
1	Operations Advisor			
1	Radiological Advisor			
1	Core Physics Engineer			
1	Electrical / I&C Engineer			
1	Mechanical Engineer			
1	TSC Data Coordinator			
1	TSC Communicator			
1	CCR Communicator			
1	CCR Data Logger			
1	Document Control Technician			
2	TSC Clerical Support			
14	Total number of individuals assigned to TSC			

TSC Manager should enter number of each position needed based on event.

Form IP-1035-1 Rev 0

Addendum 3

Essential Information Checklist (Form IP-1035-2)

Sheet 1 of 1

Essential Information Checklist

Emergency Classification: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Unusual Event <input type="checkbox"/> Alert <input type="checkbox"/> Site Area Emergency <input type="checkbox"/> General Emergency </div> <div> Time: _____ EAL #: _____ </div> </div>		Reactor: <input type="checkbox"/> At Power <input type="checkbox"/> Tripped RCS: Temp: _____ °F Pressure: _____ PSIG RVLIS / Pressurizer Level: _____ Subcooling: _____																									
Method of Core Cooling: <input type="checkbox"/> S/G <input type="checkbox"/> Safety Injection <input type="checkbox"/> RHR																											
Electrical Power Supply: <input type="checkbox"/> 138 KV <input type="checkbox"/> 13.8 KV <input type="checkbox"/> Diesel Generators																											
Event Description: _____ _____ _____ _____ _____																											
Major Equipment Problems: _____ _____ _____ _____																											
Current Priorities: _____ _____ _____ _____ _____ _____ _____ _____			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px;">High</th> <th style="padding: 2px;">Med</th> <th style="padding: 2px;">Low</th> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </table>	High	Med	Low																					
High	Med	Low																									
<input type="checkbox"/> No Release: <input type="checkbox"/> Release Release Status: <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> In Progress <input type="checkbox"/> Filtered <input type="checkbox"/> Monitored <input type="checkbox"/> Controlled </div> <div> <input type="checkbox"/> Expected <input type="checkbox"/> Unfiltered <input type="checkbox"/> Unmonitored <input type="checkbox"/> Uncontrolled </div> </div>		Other Items: _____ _____ _____ _____ _____ _____ _____ _____																									
Date / Time This Checklist was Completed: _____ / _____																											

Form IP-1035-2 Rev 0

ESTIMATION OF POPULATION DOSE WITHIN THE
TEN MILE EMERGENCY PLANNING ZONE

Prepared by: Burn 8/11/98 Technical Reviewer: Tony Curran 8/16/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 8/19/99 Reviewer: _____
Meeting No. Date Date

Approval: Tony Curran 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

CONTINUOUS USE

ESTIMATION OF POPULATION DOSE WITHIN THE TEN MILE EMERGENCY PLANNING ZONE

1.0 PURPOSE

- 1.1 To describe the method of determining the total integrated dose to the population at large within the ten mile Emergency Planning Zone (EPZ) from the release of airborne radioactive material.

2.0 DISCUSSION

- 2.1 Exposure computation is performed by first determining the whole body exposure as read from the TLDs which are located in each of the 16 sectors at APPROXIMATELY 1, 5 AND 10 mile distances. These exposures, which are for a specific zone in each of the sectors, are then related to exposures for the other zones by multiplying them by Xu/Q ratio obtained between the zone in question AND the TLD zone for the actual Pasquill Category during the release time. Addendum 8.1 contains the Xu/Qs for the midpoint of ALL ten miles for each Pasquill Category.
- 2.2 The sector/zone exposure is then multiplied by the population as listed for that sector/zone to obtain the integrated population dose for the sector/zone. IF the population had not been present during the entire exposure period due to evacuation, then the dose must be modified to compensate for it.
- 2.3 The total whole body exposure to the population in the ten mile EPZ is obtained by adding the 160 sector/zone exposures.
- 2.4 To obtain the estimated thyroid exposure, a ratio of the Noble Gas (NG) to the radioiodines (I) must be determined from vent samples AND environmental samples. WHEN the ratios are known a factor may be determined from Addendum 8.2 that WHEN multiplied by the estimated whole body exposure shall give the estimated thyroid exposure.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 The Offsite Radiological Assessment Director (ORAD) shall instruct the Nuclear Environmental Monitoring (NEM) Supervisor to collect the environmental TLDs AND replace them with new TLDs.
- 5.2 The NEM Supervisor shall direct his offsite monitoring teams to collect AND replace ALL TLDs, taking care to record the following information for EACH on FORM 3.
 - 5.2.1 Location (Sector/Zone).
 - 5.2.2 Date of pickup.
 - 5.2.3 Time of pickup.
 - 5.2.4 Name of individual.
- 5.3 The NEM Supervisor shall THEN have the TLDs read out onsite OR send to the Analytical Contractor for processing.
- 5.4 WHEN the NEM Supervisor receives the TLD read out data he shall give it to the ORAD.
- 5.5 The ORAD shall assign the Dose Assessment HP (DAHP) to complete the "Estimate of Population Dose" on FORM 29a through h.
 - 5.5.1 Record the TLD mRem next to the appropriate Sector/ Zones. These values should ALSO be entered in the "Interpreted mRem" column.
 - 5.5.2 Record in the Xu/Q column, the Xu/Qs for the Sector/Zones in question. Obtain these for the appropriate release time Pasquill Category in Addendum 8.1.
 - 5.5.3 Calculate the ratio correction factor (RCF) for ALL Sector/Zones in question (no TLD reading) AND enter in the appropriate space. The appropriate TLD Sector/Zone Xu/Q to use for EACH RCF calculation is the nearest LOWER valve e.x., use TLD Xu/Q for Sector/Zone 5 WHEN calculating RCF for Sector/Zone 7.

$$\text{RCF} = \frac{\text{Xu/Q for Sector/Zone in Question}}{\text{Xu/Q for TLD Sector/Zone}}$$

- 5.5.4 Calculate the interpreted mRem by multiplying the TLD Sector/Zone (used in RCF Calc.) mRem by the Ratio Correction Factor. Record in the appropriate space.
- 5.5.5 Determine IF a modifier number, OTHER THAN 1.0, is appropriate because the population was NOT exposed for the full time due to being evacuated. Record in appropriate column. Evacuation times may be obtained from the County Emergency Management Directors.
- 5.5.6 Multiply the interpreted mRem by the modifier number AND the population to obtain the estimated total population dose for EACH Sector/Zone. Record in appropriate column.
- 5.5.7 Add up exposure for EACH Sector AND record.
- 5.5.8 Add up the exposure for ALL Sectors to obtain the total estimated whole body population dose WITHIN the ten mile EPZ.
- 5.5.9 Determine what the ratios of Noble Gas to Iodine (131 AND 133) were during the release period from vent, main steam OR air ejector samples.
- 5.5.10 From Addendum 8.2, using the appropriate time period AND the NG/I ratios, determine the factors to multiply the whole body exposure to obtain the thyroid exposure for Iodine 131 AND 133.
- 5.5.11 Multiply the total estimated whole body population dose by the factors for Iodine 131 AND 133.
- 5.5.12 Add BOTH Iodine exposures to obtain the total estimated thyroid dose to the population WITHIN the ten mile EPZ.
- 5.6 The ORAD shall review the completed forms AND prepare a report to the State AND local authorities which is sent to the Recovery Manager for review AND authorization for transmittal.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

8.1 Zone Xu/Q vs. Pasquill Classification

8.2 Factors to Multiply Whole Body Exposure by to Obtain Thyroid Exposure

ADDENDUM 8.1
Page 1 of 1

ZONE Xu/Q PASQUILL CLASSIFICATION

<u>ZONE</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>
1	3.5 E-6	1.9 E-5	5.2 E-5	1.4 E-4	2.6 E-4	4.8 E-4	7.0 E-4
2	6.3 E-7	1.8 E-6	9.2 E-6	3.2 E-5	6.5 E-5	1.5 E-4	2.7 E-4
3	4.4 E-7	6.9 E-7	3.8 E-6	1.5 E-5	3.1 E-5	8.0 E-5	1.5 E-4
4	3.2 E-7	4.5 E-7	2.2 E-6	8.7 E-6	1.8 E-5	5.1 E-5	9.9 E-5
5	2.6 E-7	3.6 E-7	1.4 E-6	6.1 E-6	1.3 E-5	3.7 E-5	7.6 E-5
6	2.1 E-7	3.0 E-7	1.0 E-6	4.6 E-6	1.0 E-5	2.9 E-5	6.3 E-5
	1.9 E-7	2.6 E-7	7.8 E-7	3.6 E-6	8.6 E-6	2.3 E-5	5.3 E-5
8	1.7 E-7	2.3 E-7	6.3 E-7	3.1 E-6	7.5 E-6	2.0 E-5	4.6 E-5
9	1.5 E-7	2.1 E-7	5.2 E-7	2.6 E-6	6.5 E-6	1.8 E-5	4.1 E-5
10	1.4 E-7	1.9 E-7	4.4 E-7	2.2 E-6	5.7 E-6	1.6 E-5	3.6 E-5

NOTE: The zone Xu/Q is the value that corresponds to the midpoint of the zone, e.x., zone 5 is considered 4.5 miles from the reactor building.

**ADDENDUM 8.2
Page 1 of 1**

**FACTORS TO MULTIPLE WHOLE BODY EXPOSURE
BY TO OBTAIN THYROID EXPOSURE**

NG/I-131 RATIO	FACTOR vs. TIME AFTER SHUTDOWN				
	0 HOURS	2.5 HOURS	4.5 HOURS	6.5 HOURS	12.5 HOURS
10 ¹	3.0 X 10 ²	3.7 X 10 ²	5.2 X 10 ²	6.2 X 10 ²	1.33 X 10 ³
10 ²	3.0 X 10 ¹	3.7 X 10 ¹	5.2 X 10 ¹	6.2 X 10 ¹	1.33 X 10 ²
10 ³	3.0 X 10 ⁰	3.7 X 10 ⁰	5.2 X 10 ⁰	6.2 X 10 ⁰	1.33 X 10 ¹
10 ⁴	3.0 X 10 ⁻¹	3.7 X 10 ⁻¹	5.2 X 10 ⁻¹	6.2 X 10 ⁻¹	1.33 X 10 ⁰
10 ⁵	3.0 X 10 ⁻²	3.7 X 10 ⁻²	5.2 X 10 ⁻²	6.2 X 10 ⁻²	1.33 X 10 ⁻¹
10 ⁶	3.0 X 10 ⁻³	3.7 X 10 ⁻³	5.2 X 10 ⁻³	6.2 X 10 ⁻³	1.33 X 10 ⁻²

NG/I-131 RATIO	FACTOR vs. TIME AFTER SHUTDOWN				
	0 HOURS	2.5 HOURS	4.5 HOURS	6.5 HOURS	12.5 HOURS
10 ¹	1.0 X 10 ²	1.2 X 10 ²	1.7 X 10 ²	2.1 X 10 ²	4.5 X 10 ²
10 ²	1.0 X 10 ¹	1.2 X 10 ¹	1.7 X 10 ¹	2.1 X 10 ¹	4.5 X 10 ¹
10 ³	1.0 X 10 ⁰	1.2 X 10 ⁰	1.7 X 10 ⁰	2.1 X 10 ⁰	4.5 X 10 ⁰
10 ⁴	1.0 X 10 ⁻¹	1.2 X 10 ⁻¹	1.7 X 10 ⁻¹	2.1 X 10 ⁻¹	4.5 X 10 ⁻¹
10 ⁵	1.0 X 10 ⁻²	1.2 X 10 ⁻²	1.7 X 10 ⁻²	2.1 X 10 ⁻²	4.5 X 10 ⁻²
10 ⁶	1.0 X 10 ⁻³	1.2 X 10 ⁻³	1.7 X 10 ⁻³	2.1 X 10 ⁻³	4.5 X 10 ⁻³

OBTAINING OFFSITE REUTER-STOKES MONITOR DATA

Prepared by: B. Burns 9/22/98 Technical Reviewer: Tommy Ferrier 8/6/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
Reviewer: _____ Reviewer: _____
Date Date
SNSC Review: #2627 8/19/99 Reviewer: _____
Meeting No. Date Date
Approval: Tommy Ferrier Acting on by 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

OBTAINING OFFSITE REUTER-STOKES MONITOR DATA

1.0 PURPOSE

- 1.1 To describe the method for Control Room personnel to obtain radiation field readings from the 16 Reuter-Stokes pressurized ionization chambers located around the Indian Point Site by accessing the Meteorological Information Dose Assessment System (MIDAS) using the Control Room hard copy terminal or via modem with any Windows 95/98 computer terminal.

2.0 DISCUSSION

- 2.1 There are Reuter-Stokes pressurized ionization chambers, one in each of the 16 sectors, located at various distances from the site boundary to 2 miles. The mR/hr readings are telemetered over telephone lines to the MIDAS computer at Indian Point.
- 2.2 The Shift Manager may access this data and use it in the estimation of the whole body exposure to the offsite population and in comparison with radiation exposures calculated by MIDAS from release rate information inputted as per Reference 6.1.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

- 4.1 Texas Instruments, Silent 700/1200 BPS or Travel Mate 1200, data terminal.
- 4.2 Windows 95/98 computer terminal with modem.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 Obtaining Reuter-Stokes Monitor Data from MIDAS using hard copy terminal
- 5.1.1 Toggle the "UPPER CASE" switch "dot" side up. Toggle the "ON LINE" switch "dot" side down. Toggle the "LOCAL COPY" switch "dot" side up.

5.1.2 Place terminal power switch in "ON" position (located at back right corner of the terminal).

- a. Ensure the green "PRINT" light is on, IF NOT depress the "PRINT" key.

5.1.3 Check the terminal's configuration. Push the "CMD" THEN type "C" AND press "RTN". The first of six or seven lines of options is displayed. Options correspond to the characters in parenthesis. Verify that the last character in each line represents the correct option. Change the option by typing the character key below that option.

a. Configuration	CorrectOptions
Speed - High (1200 Baud), Low (300 Baud):	(H/L) H
Parity - Even, Odd, Space, or Mark:	(E/O/S/M) S
Print control characters:	(Y/N) N
Xon/Xoff enabled:	(Y/N) Y
Aural monitor enabled:	(Y/N) Y
Printer off at power up:	(YN) Y
Answer on Nth ring - N = :	(0-9) 1

5.1.4 Push the "CMD" key, THEN push the "D" key.

5.1.5 The system will ask for the dial number. Dial MIDAS by typing in the number listed in EPD Book 2, Appendix C, AND push the "RTN" key.

5.1.6 AFTER the system dials MIDAS, ringing is heard AND the "LINE RDY" light will blink.

5.1.7 The connection is made WHEN a high pitch signal is heard AND the "LINE RDY" light remains "ON".

5.1.8 The system will ask the following questions:

- a. System will ask for login. Type in "contrl" AND push "RTN" key.
- b. System will ask for password. Type "unit2" AND push "RTN" key.
- c. The following prompt will appear on the screen:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

- d. Enter "em" AND push "RTN" key.

- e. The following prompt will appear on the screen:

Enter: [U2] Con Ed Unit 2
[U3] NYPA Unit 3
[EX] Exit

- f. Enter "u2" AND push "RTN" key.

- g. The following prompt will appear on the screen:

WELCOME TO MIDAS
ENTER: [XX] FUNCTION OR TASK CODE
[XXXX] FUNCTION AND TASK CODE
[FM] FUNCTION MENU
[EX] EXIT

- h. Enter "oa" AND push "RTN" key.

- i. The following prompt will appear on the screen:

Enter: [AL] All 15 minute periods
[NN] One 15 minute period
[RETURN] Exit

- j. Enter "al" AND push "RTN" KEY.

- k. System will ask for "START AND END DATES"
(YRMODEYHRMNYRMODEYHRMN)

"START AND END DATES" (example 94070409009407041000) AND
push "RTN" key.

YR = Year
MO = Month
DY = DAY
HR = Hour
MN = Minute

- l. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.1.
- m. Advance paper as desired by pressing "PAPER ADV" key. Detach printed section by tearing up against the lucite edge.
- n. To Exit press "RTN"

o.	Prompt:	[XX]	TASK OR FUNCTION CODE
		[SO]	START OVER
		[LT]	LAST TASK
		[NT]	NEXT TASK
		[TM]	TASK MENU
		[FM]	FUNCTION MENU
		[ZZ]	EXIT

p. Enter "ZZ" AND push "RTN" key.

5.2 Obtaining Reuter-Stokes Monitor Data from MIDAS using Windows 95/98 computer terminal.

5.2.1 Computer terminal must have a modem properly connected to access MIDAS.

5.2.2 Click on the Start Button

5.2.3 From the Programs menu select the Accessories menu and click on the Hyper Terminal icon.

5.2.4 IF a MIDAS hyper terminal icon exists THEN double click on it.



5.2.5 To create a MIDAS hyper terminal perform the following:

a. Double click on the Hypertm.exe icon.



b. Type in terminal name (i.e. MIDAS1).

c. Click on OK

d. Type in the MIDAS number listed in EPD Book 2 and click on "OK".

5.2.6 Dial MIDAS by clicking on "DIAL".

5.2.7 AFTER the system dials MIDAS, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

5.2.8 The system will ask the following questions:

a. System will ask for login. Type in "contrl" AND push "ENTER" key. Use lower case letters.

b. System will ask for password. Type "unit2" AND push "ENTER" key.
Use lower case letters.

c. The following prompt will appear on the screen:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

d. Enter "em" AND push "ENTER" key.

e. The following prompt will appear on the screen:

Enter:	[U2]	Con Ed Unit 2
	[U3]	NYP& Unit 3
	[EX]	Exit

f. Enter "u2" AND push "ENTER" key.

g. The following prompt will appear on the screen:

WELCOME TO MIDAS		
ENTER:	[XX]	FUNCTION OR TASK CODE
	[XXXX]	FUNCTION AND TASK CODE
	[FM]	FUNCTION MENU
	[EX]	EXIT

h. Enter "oa" AND push "ENTER" key.

i. The following prompt will appear on the screen:

Enter:	[AL]	All 15 minute periods
	[NN]	One 15 minute period
	[RETURN]	Exit

j. Enter "al" AND push "ENTER" KEY.

- k. System will ask for "START AND END DATES"
(YRMODYHRMNYRMODEYHRMN)

"START AND END DATES" (example 94070409009407041000) AND
push "ENTER" key.

YR = Year
MO = Month
DY = DAY
HR = Hour
MN = Minute

- l. Read data from printout sheet as APPROPRIATE. Monitor status is included. See Addendum 8.1.

- m. To obtain a printout of data perform the following:

- 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen
- 2) Use the scroll bar on the right of the screen to display the data on the screen.
- 3) Use click and drag technique with your mouse to highlight the data.
- 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.

- n. To Exit press "ENTER"

- | | | |
|------------|------|-----------------------|
| o. Prompt: | [XX] | TASK OR FUNCTION CODE |
| | [SO] | START OVER |
| | [LT] | LAST TASK |
| | [NT] | NEXT TASK |
| | [TM] | TASK MENU |
| | [FM] | FUNCTION MENU |
| | [ZZ] | EXIT |

- p. Enter "ZZ" AND push "ENTER" key.

- q. To disconnect click on the disconnect button on the tool bar at the top of the screen.

- r. To reconnect click on the connect button on the tool bar at the top of the screen.

6.0 REFERENCES

- 6.1 IP-1047, "Obtaining Offsite Exposure Rates From MIDAS Via Control RoomTerminal"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

- 8.1 Radiation Data File (mR/hr) and Monitor Status

ADDENDUM 8.1
Page 1 of 1

RADIATION DATA FILE (MR/HR) AND MONITOR STATUS

RAW RADIATION DATA FILE

MON #	1 N	2 NNE	3 NE	4 ENE	5 E	6 ESE	7 SE	8 SSE
MON #	9 S	10 SSW	11 SW	12 WSW	13 W	14 WNW	15 NW	16 NNW
HRMN 8 0	0.0E+03 8.4E-03	7.6E-03 7.7E-03	8.0E-03 0.0E+00	7.4E-03 1.2E-02	6.9E-03 1.1E-02	7.9E-03 7.8E-03	7.4E-03 7.1E-03	7.5E-03 7.8E-03
815	0.0E+00 8.4E-03	7.6E-03 7.7E-03	8.0E-03 0.0E+00	7.3E-03 1.1E-02	6.7E-03 1.1E-02	7.9E-03 7.8E-03	7.4E-03 7.0E-03	7.4E-03 7.8E-03
830	0.0E+00 8.4E-03	7.5E-03 7.6E-03	7.9E-03 0.0E+00	7.3E-03 1.0E-02	6.9E-03 1.1E-02	7.8E-03 7.7E-03	7.4E-03 7.1E-03	7.5E-03 7.8E-03
845	0.0E+00 8.4E-03	7.4E-03 7.6E-03	8.0E-03 0.0E+00	7.4E-03 1.7E-02	6.8E-03 1.1E-02	7.9E-03 7.8E-03	7.4E-03 7.0E-03	7.5E-03 7.8E-03
9 0	0.0E+00 8.5E-03	7.5E-03 7.5E-03	8.0E-03 0.0E+00	7.4E-03 1.6E-02	6.6E-03 1.6E-02	7.8E-03 7.7E-03	7.4E-03 7.2E-03	7.5E-03 7.7E-03

MONITOR STATUS (0, 1000 = GOOD, ALL ELSE = BAD)

MON NO	1 N	2 NNE	3 NE	4 ENE	5 E	6 ESE	7 SE	8 SSE	9 S	10 SSW	11 SW	12 WSW	13 W	14 WNW	15 NW	16 NNW
1111	0	0	0	0	0	0	0	0	0	01111	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0	0	01111	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0	0	01111	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0	0	01111	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0	0	01111	0	0	0	0	0	0

OFFSITE CONTAMINATION CHECKS

Prepared by: ABurns 8/11/98 Date Technical Reviewer: Tommy Green 8/11/98 Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #2627 Date Reviewer: _____ Date
Meeting No. Donna Gynes 8/19/99 Date
Approval: Tommy Green / Admin. S. W. 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

OFFSITE CONTAMINATION CHECKS

1.0 PURPOSE

- 1.1 To describe the methods of performing offsite contamination checks to determine the levels of radioactive material deposited on the ground and exposed surfaces.

2.0 DISCUSSION

- 2.1 A release of radioactive airborne material from the plant during an accident has the potential to contaminate the environment (e.g. airborne, waterborne and surface contamination). The release may be any combination of noble gases, radioiodines AND particulates.

NOTE:

BETA READINGS COULD INDICATE HIGH CONTAMINATION LEVELS.

- 2.2 Radioiodine and particulate contamination ONLY are addressed in this procedure. This contamination can contain long lived isotopes such as Cesium-137 as well as shorter lived radioiodines. Deposition of the particulates and iodines can be measured by the following two methods.

2.2.1 Smear checks.

2.2.2 Field Readings (beta AND gamma).

- 2.3 Significant iodine AND particulate releases causing area contamination would ONLY occur during a core melt sequence WITH a breach of containment integrity.
- 2.4 A deposition of particulates AND iodines to a level of 1 millicurie/m² would give an APPROXIMATE field reading, 1 meter above ground, of 4 mR/hr. This is a very rough estimate AND is dependent upon the mixture of the nuclides deposited (Reference 6.1).

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C AND D OF EPD BOOK NO. 2.

5.1 Field Readings (FORM 10)

NOTE:

BETA FIELD READINGS ARE DETERMINED WITH THE SURVEY INSTRUMENT DETECTOR WINDOW SHIELDED (CW) AND UNSHIELDED (OW). SUBTRACT THE CW READING FROM THE OW READING. MULTIPLE THE DIFFERENCE BY 2 FOR MRAD/HR.

5.1.1 Check the operation of the ion chamber survey instrument using the 5 μ Ci Cs-137 source. In the beta plus gamma mode (OW) the instrument APPROXIMATE indication should be 15 mR/hr on contact.

5.1.2 Hold the ion chamber survey instrument 1 meter above the ground OR surface AND obtain an OW AND CW field reading. Record on FORM 10 indicating the 1 meter height in the remarks column.

5.1.3 Hold the ion chamber survey instrument as close to the ground OR surface as possible WITHOUT touching it AND obtain an OW AND CW reading. Record on FORM 10 indicating "contact" in the remarks column.

5.2 Smear Check (smooth surfaces only) (FORM 5)

NOTE:

USE A GLOVE ON THE HAND PERFORMING THE SMEAR.

5.2.1 Using a paper disk, smear an area 100 cm² in size.

5.2.2 Check the E-140N/HP-210 OR HP-260 background. Record CPM on FORM 5.

NOTE:

PERFORM THE CHECK AT A LOCATION WHERE THE BACKGROUND IS LESS THAN 500 CPM OR THE GROSS SAMPLE COUNT RATE IS GREATER THAN TWICE BACKGROUND.

- 5.2.3 Using an E-140N/HP-210 OR HP-260 probe, check the paper disk in contact with the G.M. tube. Record on FORM 5 in the smear plus background CPM column. Place the paper disk in an envelope OR other container, identify it (date, time, location) AND save for later isotopic identification.
- 5.2.4 Obtain the smear CPM by subtracting the BKGD CPM from the smear plus BKGD CPM. Record in appropriate column.
- 5.2.5 Multiply the smear CPM by 10 to determine DPM. Record on FORM 5 in the equivalent DPM/100 cm² column.

5.3 Evaluation

- 5.3.1 Submit ALL data AND samples to the NEM Supervisor OR ORAD as appropriate.

6.0 REFERENCES

- 6.1 Sandia Laboratories - Accident Scenario Manual

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

RELOCATION OF PERSONNEL DOSIMETRY FACILITIES

Prepared by: JS 9/11/98 Date 9/11/98 Technical Reviewer: Tommy Krumm 9/6/99 Date 9/6/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. Dennis L. Lerner Date _____
Approval: Tommy Krumm / Approved by 9/16/98 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

RELOCATION OF PERSONNEL DOSIMETRY FACILITIES

1.0 PURPOSE

- 1.1 To describe the methods to be used when radiological conditions during an emergency require the relocation of personnel dosimetry facilities.

2.0 DISCUSSION

- 2.1 During a SITE AREA or GENERAL emergency it may become necessary to move the existing dosimetry facilities (Dosimetry Office and Unit No. 1-2 Control Point) to the Technical Support Center (TSC) because radiation fields caused by the release of noble gases have reached a point that they will interfere with the interpretation of actual personnel exposure on the TLD badges. This will occur when the badge, either being stored on the TLD rack OR located in the dosimetry office, can receive significant exposure while not in use. Significant exposure, for purposes of this procedure is defined as 100 mrem OR GREATER in a 24 hour period.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Approval to relocate shall be obtained from the Rad Protection Coordinator.

4.0 EQUIPMENT AND MATERIALS

- 4.1 Active Exposure Data Register (EDR).
- 4.2 Blank forms for items listed above.
- 4.3 General Exposure Report.
- 4.4 Folder containing computer print out of "Rolodex Status".
- 4.5 Panasonic TLD Readers and associated hardware and software.
- 4.6 TLD's currently issued (Unit No. 1-2 Control Point) and spares (Dosimetry Office).
- 4.7 Spare TLD holders.
- 4.8 All readily available dosimeters and chargers.
- 4.9 RM-14 with HP-210 Probe.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 Utilize dosimetry personnel to assist in the relocation.
- 5.2 Obtain the equipment AND records listed in Section 4.0 AND move them to the TSC hallway outside the Computer Room.
- 5.3 Contact the Rad Protection Coordinator at the TSC AND obtain a Health Physics Technician to check ALL the equipment for contamination BEFORE bringing it into the Proteus Conference Room.
- 5.4 Set up the equipment in the Proteus Conference Room located within the TSC Computer Complex.
- 5.5 Notify the Rad Protection Coordinator WHEN the set up is complete.
- 5.6 Schedule 24 hour coverage for dosimetry issuance. Cask

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

USE OF THE TRITON FOR MONITORING RADIOGAS

Prepared by: [Signature] 9/14/98 Date Technical Reviewer: [Signature] 8/6/99 Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
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Meeting No. Denise Tyler 8/19/99 Date
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Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

USE OF THE TRITON FOR MONITORING RADIOGAS

1.0 PURPOSE

- 1.1 To describe the use of the TRITON radiogas monitor to determine the presence of radiogas in the ambient atmosphere.

2.0 DISCUSSION

- 2.1 The TRITON gas monitor is an ionization chamber instrument that draws the ambient air through a particulate prefilter into an ionization chamber WHERE the beta particles from the radiogas cause ionization within the chamber AND cause current to flow. The magnitude of the current is indicative of the radioactivity concentration for the mixture of gases.
- 2.2 During accident conditions the radiogas concentration may include isotopes of Xenon AND Krypton each of which has a different beta energy. Therefore, the instrument indication is NOT an exact value of the radioactive concentration for the mixture of gases. The true radiogas concentration may be considered to be approximately 1/5 of the meter indication. The flow rate through the monitor does NOT affect the sensitivity.
- 2.3 The TRITON monitor is gamma compensated for background radiation up to 5 mR/hr.
- 2.4 This implementation procedure covers the operation of three models of the TRITON (955, 1055, 111).

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Model 955

- 5.1.1 Set the "RANGE" switch to "ZERO". VERIFY that the filter holder contains a clean filter element.
- 5.1.2 Connect the power cord to 115 VAC.
- 5.1.3 PRESS, THEN release the "POWER" push-button. It will light up. Allow ten minutes for warm up.
- 5.1.4 Set the "MODE" switch to "GAMMA" OR "TRITIUM".
- 5.1.5 Zero the CRM with the "ZERO ADJUST" control.
- 5.1.6 Set the "RANGE" switch to the desired position AND allow one minute for stabilization.
- 5.1.7 Turn the "ALARM" switch to INTERNAL. IF the alarm sounds, press the "RESET" button. The alarm CANNOT be secured UNTIL activity drops BELOW preset CRM level AND the reset button is depressed.
- 5.1.8 Check operation of alarm AND set the alarm pointer (on the CRM) to the desired alarm level with the alarm "SET" knob.
- 5.1.9 To secure the alarm system, turn the "ALARM" switch to "OFF".
- 5.1.10 Check gamma background levels AND gas background (Tritium mode-pump off).
- 5.1.11 IF the "TRITIUM" mode was selected in Step 5.1.4, start the air pump by pressing the "PUMP" push-button.
- 5.1.12 IF the "GAMMA" mode was selected, the pump shall be left off. Once the proper "RANGE" switch setting has been selected, the instrument is ready to operate.

NOTE:

$$1 \mu\text{Ci}/\text{M}^3 = 1 \times 10^{-6} \mu\text{Ci}/\text{CC}$$

- 5.1.13 Read the gamma radiation level directly from the CRM. For radiogases, divide the indicated concentration by the factor 5.

5.2 Model 1055

- 5.2.1 Set the range switch to "ZERO". Verify that the filter holder contains a clean filter element.
- 5.2.2 Connect the power cord to 115 VAC OR operate on the battery. IF necessary, check the battery AND recharge it.
- 5.2.3 PRESS, THEN release the "POWER" push-button. It will light up. Allow ten minutes for warm up.
- 5.2.4 Set the mode switch to "GAMMA" OR TRITIUM".
- 5.2.5 Zero the CRM with the "ZERO ADJUST" control.
- 5.2.6 Set the range switch to the desired position AND allow one minute for stabilization.
- 5.2.7 Turn the "ALARM" switch to "ON". IF the alarm sounds, PRESS the "RESET" button. The alarm CANNOT be secured UNTIL activity drops BELOW preset CRM level AND the reset button is depressed.
- 5.2.8 Check operation of alarm AND set the alarm to the desired alarm level with the alarm "SET" knob.
- 5.2.9 To secure the alarm system, turn the "ALARM" switch to "OFF".
- 5.2.10 Check gamma background levels AND gas background (Tritium Mode-pump off).
- 5.2.11 IF the "TRITIUM" mode was selected in Step 5.2.4, start air pump by pressing the "PUMP" push-button.
- 5.2.12 IF the "GAMMA" mode was selected, the pump shall be left off. Once the proper ranges setting has been selected, the instrument is ready to operate.

NOTE:

$$1 \mu\text{Ci}/\text{M}^3 = 1 \times 10^{-6} \mu\text{Ci}/\text{CC}$$

- 5.2.13 Read the gamma radiation level directly from the CRM. For radiogases, divide the indicated concentration by the factor 5.

5.3 Model 111

- 5.3.1 Set the front panel controls as follows: BEFORE the instrument is plugged into the 115 VAC.
- a. Alarm OFF-ON-RESET to "OFF".
 - b. Function to "Zero" position.
 - c. Pump "OFF".
 - d. Power "OFF".
 - e. Offset control to "OFF" (fully CCW).
 - f. Zero control to fully CCW position.
- 5.3.2 Verify that the filter holder contains a clean filter element.
- 5.3.3 Plug the instrument into a 115 VAC outlet. Red light will indicate EITHER "on charge" OR "full charge" for the battery.
- 5.3.4 Move the POWER switch to the "ON" position.
- 5.3.5 With the FUNCTION switch on "ZERO" turn the zero control SLOWLY CW UNTIL the zero bar is indicating on scale at zero.
- 5.3.6 Move the FUNCTION switch to the "calibrate" position. The display should indicate 30 (29-31). The zero control affects this value. IF the calibration reading is NOT 30 (29-31) recheck the zero.
- 5.3.7 Move the FUNCTION switch to the desired range. Scale marking for the selected range will automatically be displayed.
- 5.3.8 Set the alarm level to a value HIGHER THAN the background reading for the scale selected. This is accomplished by moving the "OFF-ON-RESET" switch to the "ON" position. A separate black bar will be displayed on the scale AND indicates the alarm value.

NOTE:

THE AUDIBLE ALARM MAY BE RESET BY MOVING THE AUDIBLE RESET SWITCH TO THE RIGHT. THIS IS OF USE WHEN THE $\mu\text{CI}/\text{M}^3$ INDICATION IS ABOVE THE ALARM LEVEL.

WHEN THE $\mu\text{CI}/\text{M}^3$ INDICATION FALLS BELOW THE LEVEL; THE ALARM RESET SWITCH WILL RESET THE ALARM AND THE INSTRUMENT WILL BE READY TO ALARM AGAIN IF THE $\mu\text{CI}/\text{M}^3$ INDICATION RISES ABOVE THE ALARM LEVEL.

- 5.3.9 To increase OR decrease the alarm level, PRESS the ALARM SET switch to the "up" OR "down" position AND hold it there UNTIL the black bar reaches the desired value.
- 5.3.10 Start the sample pump by moving the PUMP switch to the "ON" position.

NOTE:

$$1 \mu\text{CI}/\text{M}^3 = 1 \times 10^{-6} \mu\text{CI}/\text{CC}$$

- 5.3.11 Read the radiogas concentration by dividing the indicated concentration by the factor 5.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1042
Rev. 6

IN-PLANT RADIOLOGICAL SURVEYS AND SAMPLING

Prepared by: Burn 9/14/98 Date 9/14/98 Technical Reviewer: Tony Krumm 9/6/99 Date 9/6/99
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Meeting No. _____ Date _____

Approval: Tony Krumm / Acting CR 9/16/99 9/1/99
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Reviewer/Date _____ Reviewer/Date _____

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FOR REFERENCE USE

IN-PLANT RADIOLOGICAL SURVEYS AND SAMPLING

1.0 PURPOSE

- 1.1 To describe the precautionary measures to be used when performing in-plant radiological surveys and sampling during ALERT, SITE AREA and GENERAL Emergencies.

2.0 DISCUSSION

- 2.1 The standard Health Physics procedures that personnel use on a daily basis WHEN performing routine surveys do NOT include special precautions during emergency conditions.
- 2.2 Airborne concentrations, surface contamination levels, beta and gamma radiation fields can be many orders of magnitude higher than is normally encountered, even during refueling outages. Routine personnel dosimetry and placement may be inadequate under emergency conditions WHEN operating in OR passing through areas that normally present NO radiological problem to the individual.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 The Health Physics Technician, as well as Operations and Maintenance personnel, shall be aware of the possibility of EXTREME high radiation levels AND take necessary precautions to have a survey performed BEFORE entry and work begins OR in conjunction with the entry. The Health Physics Technician should NOT needlessly expose himself/herself while taking readings. Refer to Reference 6.1 for emergency personnel exposures exceeding 5 Rem Total Effect Dose Equivalent (TEDE).
- 3.2 Piping, valves AND sample holders may have extremely high contact field readings. In the case of air and liquid samples, the filters WHEN removed from the filter holders present very high extremity exposures AND may require the use of extremity dosimetry AND remote handling tools.
- 3.3 Ambient atmosphere beta readings (NOT in close proximity to surfaces) are indicative of airborne radiogas AND radioiodine concentrations which may be interpreted to be an average value of 2 mrad/hr for a concentrations of 1×10^{-5} $\mu\text{Ci/cc}$ of Kr-85, Xe-133, I-131, OR I-133. While radiogases by themselves ONLY present a whole body exposure effect from the gamma and skin exposure from the beta AND are monitored by the TLD badge, their presence during accident conditions indicates the potential for radioiodines in the atmosphere. Therefore with radiogases present, iodine air sampling shall be performed.

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D IN EPD BOOK NO. 2.

5.1 General

5.1.1 Discuss the area to be entered with the Shift Manager, Radiation Protection Coordinator or Plant Operations Manager. Determine whether respirators OR KI shall be used. KI should be considered IF thyroid exposure could EXCEED 25 Rem CDE thyroid.

5.1.2 Determine IF there are ANY known liquid or gaseous release in the area.

5.1.3 Determine whether there are ANY known problem areas on the way to the area of interest.

5.1.4 Determine what surveys have already been performed for the area of interest and what, IF ANY, indication there is of radiological problems.

5.1.5 WHEN the survey is complete, notify the initiating individual what the results of the survey are, EITHER by phone OR in person.

5.2 Dosimetry

5.2.1 Health Physics personnel shall determine the dosimetry that is worn by personnel during emergencies.

5.2.2 Health Physics personnel shall determine the need for extremity badging.

5.2.3 Wear your TLD badge for whole body exposure.

5.2.4 Obtain and wear extremity badges (wrist, ankle or finger) WHEN required (e.g., WHEN removing hot sample filters that have high contact field readings).

5.3 Field Surveys

- 5.3.1 Select an adequately ranged survey instrument AND operationally check it with the 5 μCi Cs-137 button source with the instrument in the beta plus gamma mode AND the source on contact. Use the appropriate Health Physics survey forms.
- 5.3.2 Teletectors should be used for taking remote readings.
- 5.3.3 Ionization chamber (with open window) should be used WHEN performing beta surveys.
- 5.3.4 Maintain individual exposure ALARA. DO NOT EXCEED 5 Rem (TEDE) Limits UNLESS authorized as per Reference 6.1.
- 5.3.5 Give completed survey forms to the Radiation Protection Coordinator.

5.4 Ambient Air Contamination Surveys

- 5.4.1 Field survey area first (beta AND gamma). Low or non-existent beta readings indicate low or non-existent airborne contamination.
- 5.4.2 Set up air sample as quickly as possible AND leave area.

NOTE:

A 10 FT³ SAMPLE IS ENOUGH TO DETERMINE IODINE AND PARTICULATES AT DERIVED AIR CONCENTRATION (DAC) LEVELS WHEN COUNTER BACKGROUNDS ARE LESS THAN 300 CPM.

- 5.4.3 Sample ONLY as long as needed. The higher the suspected concentration the shorter the sampling time required.
- 5.4.4 Use silver/zeolite filters WHEN the beta field survey indicates GREATER THAN 50 mrad/hr OR WHEN the indicated radioiodine activity on a charcoal filter is GREATER THAN 10^{-3} $\mu\text{Ci/cc}$.
- 5.4.5 Identify the samples (date, time, volume, location), place them in a container AND save them for later counting.
- 5.4.6 Give completed survey forms to the Radiation Protection Coordinator.

5.5 Plant Vent AND VC Air Sampling

- 5.5.1 Evaluate vent AND VC airborne levels from Process Radiation Monitors.
- 5.5.2 Evaluate vent contact field surveys AND readout as appropriate.
- 5.5.3 For in place continuous samplers, such as on the plant vent, survey the filter holders BEFORE removing filters.
- 5.5.4 Do NOT touch hot filters (GREATER THAN 1 R/hr) with fingers. Use remote tool such as tweezers.
- 5.5.5 Use silver/zeolite filters to sample for radioiodines.
- 5.5.6 Follow the APPROPRIATE post-accident Chemistry sampling procedure.
 - a. Main Steam - Reference 6.2
 - b. Vent - Reference 6.3
 - c. VC - Reference 6.4

5.6 RCS Sampling

Follow instructions in the post-accident Chemistry procedure, Reference 6.5.

6.0 REFERENCE

- 6.1 IP-1038, "Emergency Personnel Exposure"
- 6.2 IPC-E-004, "Post-Accident Sampling and Analysis of Main Steam Releases to Atmosphere"
- 6.3 IPC-E-003, "Post-Accident Sampling and Analysis of Plant Discharges For Noble Gas, Radioiodine and Particulate"
- 6.4 IPC-E-002, "Post-Accident Sampling and Analysis of the Vapor Containment Atmosphere"
- 6.5 IPC-E-001, "Post-Accident Sampling and Analysis of Reactor Coolant"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

RADIATION PROTECTION PROGRAM DURING EMERGENCIES

Prepared by: [Signature] 9/14/98 Technical Reviewer: [Signature] 9/16/99
Date Date
Reviewer: _____ Reviewer: _____
Date Date
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RADIATION PROTECTION PROGRAM DURING EMERGENCIES

1.0 PURPOSE

- 1.1 To describe the overall Radiation Protection Program during emergencies and the procedures that are used.

2.0 DISCUSSION

- 2.1 The Radiation Protection Program in force at Indian Point Unit No. 2 is contained within Health Physics Section procedures which aid Radiation Protection personnel in the performance of their routine duties. Controlled copies are located in the Health Physics Supervisor's Office and the Health Physics Technician's Office AND cover the following subject matter:

- 2.1.1 ALARA
- 2.1.2 Access Control
- 2.1.3 Surveys
- 2.1.4 Dosimetry
- 2.1.5 Instrumentation
- 2.1.6 Rad Material Control
- 2.1.7 Protective Equipment
- 2.1.8 Rad Waste Control
- 2.1.9 Records and Reports
- 2.1.10 Respiratory Protection

- 2.2 It is expected that the Health Physics Technicians working WITHIN the Protected Area fence would continue to use these procedures during an emergency. In situations where an apparent conflict arises BETWEEN the actions required by the Emergency Plan Immediate Action AND Implementation Procedures contained in the Emergency Procedures Document (EPD) AND Health Physics Section procedures, the EPD procedures take precedence.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Responsibility During Emergencies

5.1.1 The responsibility for the Radiation Protection Program during emergencies is divided BETWEEN the Plant Operations Manager AND the Emergency Director.

5.1.2 The Plant Operations Manager is in charge of Radiation Protection WITHIN the Protected Area fence AND shall make ALL decisions relative to changes from existing Health Physics Section or implementation procedures.

5.1.3 The Emergency Director is in charge of Radiation Protection outside the Protected Area fence, BOTH onsite AND offsite, for ALL personnel working out of the Emergency Operations Facility.

5.2 Availability of Health Physics Personnel

5.2.1 Watch Force

- a. The Unit No. 2 Watch HP Technician may be supplemented by the Unit No. 3 NYPA HP Technician IF requested by the Shift Manager.

5.2.2 60 Minute Minimum Staffing Level

- a. The Watch Force is supplemented by 13 additional individuals trained in Radiation Survey OR Protection to fill the positions of:
 - 1. Offsite Radiological Assessment Director (1) at EOF.
 - 2. Offsite monitoring team members (4) at EOF.

3. Onsite monitoring team members (2) at EOF.
4. Inplant Monitors (2) at OSC.
5. HP Tech for repair teams (4) at OSC.

5.2.3 Complete Mobilization for Site Area AND General Emergency

Other Radiation Protection personnel shall be activated to perform radiological evaluation for the Emergency Operations Facility, Technical Support Center and Control Room.

6.0 REFERENCES

NONE

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1045
Rev. 8

ACTIVATION OF ALTERNATE EMERGENCY OPERATIONS FACILITY

Prepared by: Burns 9/14/98 Date 9/14/98 Technical Reviewer: Tony Kerner 9/6/99 Date 9/6/99
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Reviewer: _____ Date _____ Reviewer: _____ Date _____
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FOR CONTINUOUS USE

ACTIVATION OF ALTERNATE EMERGENCY OPERATIONS FACILITY

1.0 PURPOSE

- 1.1 To describe the activation of the Alternate Emergency Operations Facility (AEOF) located in the Service Building of the Con Edison Eastview Service Center.

2.0 DISCUSSION

- 2.1 The Alternate Emergency Operations Facility is located at 315 Old Saw Mill River Road in the Eastview Service Center approximately 15 miles south of the Emergency Operations Facility at Indian Point. The Eastview Facility normally operates on 2 shifts. Supervisors are available from 8 a.m. to 12 midnight.
- 2.2 The decision to activate the AEOF shall be made by the Emergency Director.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

- 4.1 Refer to Sections 5.4 AND 5.5.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Notification To Westchester Division

5.1.1 Normal Workhours Eastview Manager.

5.1.2 Offhours Westchester Emergency Supervisor No. 9.

5.2 Entry to Facility

5.2.1 Access to the Eastview Facility, through the gate located on Old Saw Mill River Road, as follows:

- a. From 8 a.m. to 12 midnight, responding emergency personnel enter through the gate AND identify themselves to the Security Guard at the gate using their Con Edison Employee Identification Card, pick up AEOF keys at the guard shack AND THEN proceed to the parking area designated on Addendum 8.1.
- b. From 12 midnight to 8 a.m., the gate is kept closed. UPON arriving at the Eastview facility the emergency personnel inform the guard that an emergency exists at the Indian Point Site. Personnel show their Con Edison Employee Identification Card, pick up AEOF keys at the guard shack AND proceed to the parking area designated on Addendum 8.1.

5.3 Access to Storage Area And Office Area

5.3.1 The AEOF keys are stored in a lock box located in the main gate guard house of the Eastview Service Center. Open the lock box using the combination "AEO".

- a. Turn combination AT LEAST three times to the right to "A".
- b. Turn combination left directly to "E".
- c. Turn combination right directly to "O"

5.3.2 Remove ALL keys from the lock box to access the front door to the Service Center, the AEOF office area inside the building AND the AEOF equipment storage room.

5.4 Equipment Set Up

5.4.1 The equipment listed below (which is portable) shall be rolled out from the storage room (Addendum 8.1) to the AEOF work area AND setup.

- a. Bookcases
- b. Documentation, supplies AND nameplates
- c. Data terminal

- d. Status Boards AND Map Table
- e. Facsimile equipment (3)
- f. Overhead Projectors (3)

5.4.2 Plug in AND check out the radio sets at the locations depicted on Addendum 8.2.

5.4.3 Set up the data terminal at the MIDAS Operator desk. (See Addendum 8.2)

5.4.4 Locate Emergency Planning Zone (EPZ) maps AND layout adjacent to ED OR ORAD desk. (See Addendum 8.2)

5.4.5 Setup AND check fax machines AND overhead projection equipment at the location depicted on Addendum 8.2.

5.4.6 Set up the appropriate name plate for positions shown on Addendum 8.2.

5.4.7 Check the RECS system located on Positron set.

5.4.9 The AEOF may now be considered operational AND shall be maintained this way UNTIL closeout of the emergency.

5.5 Personnel Monitoring Center Setup

5.5.1 The Health Physics Technician shall obtain the equipment from the storage room AND set up the following areas as shown on the appropriate addendums.

a. Vehicle Check Area - refer to Addendum 8.1.

- 1. Stanchions (6)
- 2. Radiation boundary rope
- 3. Signs (3) "CAR CHECK AREA"

b. Radiological Check Point - refer to Addendum 8.3 AND 8.4.

- 1. Yellow Herculite (tagged for hallway)
- 2. Yellow Herculite (tagged for locker room)

3. Yellow tape - masking tape
 4. Blotting Paper Step Off Pad
 5. Stanchions (9)
 6. Radiation Boundary Rope
 7. Signs (6) "RADIOACTIVE CONTAMINATION"
 8. Sign (1) "DO NOT ENTER UNLESS CHECKED FOR CONTAMINATION"
 9. Signs (2) "DO NOT ENTER"
 10. Signs (2) "NO EXIT"
 11. Frisker with extension power cord
- c. Decon Bathroom - refer to Addendum 8.4.
1. Yellow Herculite (tagged for disrobing area)
 2. Two (2) plastic barrels
 3. Plastic liner bags for barrels
 4. Blotting Paper Step Off Pads (2)
 5. Sign (1) "EXIT"
 6. Sign (1) "DO NOT ENTER"
 7. Yellow tape - masking tape
 8. Frisker with extension cord
 9. Coveralls
 10. Socks (white)

11. Shoe Covers
 12. Contamination tags
 13. Surgeon's gloves
 14. Soap
 15. Towels
 16. Plastic bags for articles of clothing
- d. Main Entrance AND ALL Other Doors
1. Signs (8) "DO NOT ENTER"

5.6 Health Physics Technician Duties

5.6.1 At Rad Check Point

- a. Set up area as outlined in Section 5.5.1.b.
- b. Perform a contamination check on EACH person entering AND record data as outlined in Reference 6.1.
- c. Dispatch checked individuals to the AEOF, IF clean, OR to the Decon area, IF contaminated.

5.6.2 At Decon Room

- a. Set up area as outlined in Section 5.5.1.c.
- b. Perform clothing AND body checks.
- c. Tag AND bag contaminated clothing articles for saving.
- d. Decon body areas in shower AND record data (Reference 6.1).
- e. Supply coveralls, socks AND shoe covers as needed.
- f. Discharge the individual to clean area.

5.6.3 Vehicle Check Area

- a. Set up area as outlined in Section 5.5.1.a.
- b. Perform contamination check on EACH car parked in the check area AND record data as outlined in Reference 6.2.
- c. Release clean cars.
- d. Hold contaminated cars UNTIL the car wash area can be activated by the Manager of Support Operations, Westchester Division.

6.0 REFERENCES

- 6.1 IP-1008, "Personnel Radiological Check And Decontamination"
- 6.2 IP-1009, "Radiological Check And Decontamination Of Vehicles"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

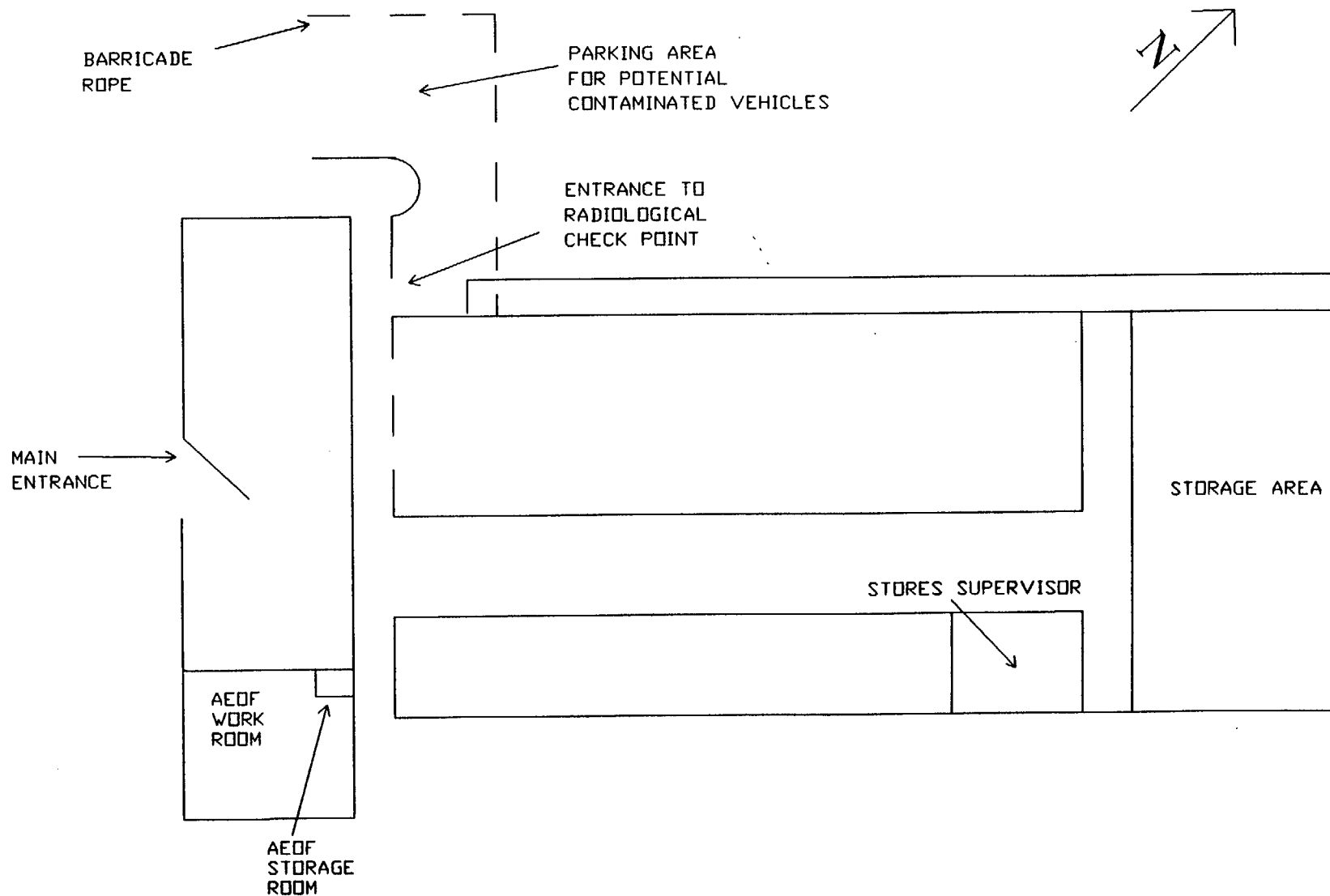
- 8.1 Eastview Service Building
- 8.2 AEOF Work Area
- 8.3 Radiological Check Point
- 8.4 Hallway/Locker Room Herculite Laydown Area
- 8.5 Decon Area

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IP-1045
Rev. 8

ADDENDUM 8.1
Page 1 of 1

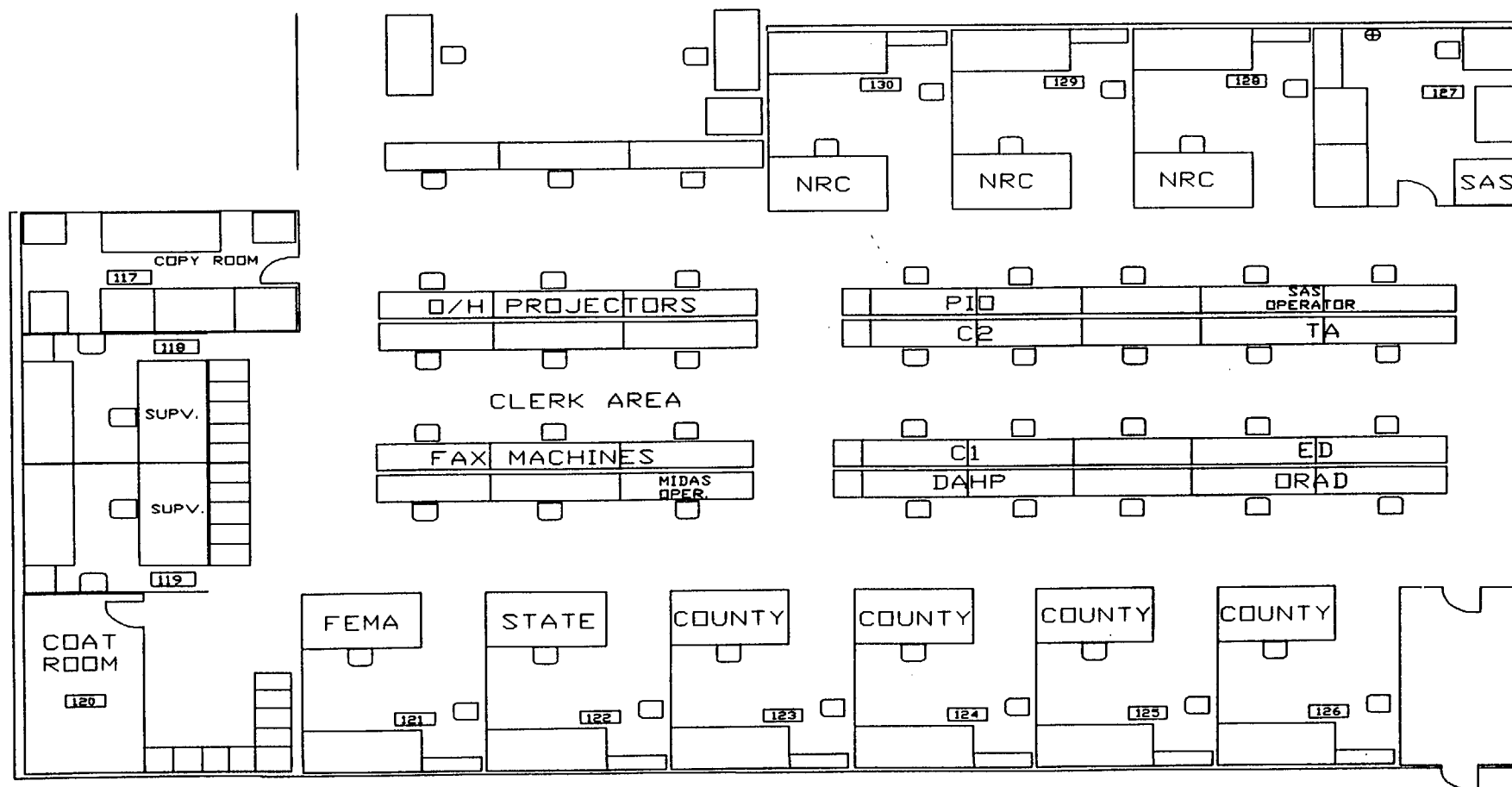
EASTVIEW SERVICE BUILDING



ADDENDUM 8.2

Page 1 of 1

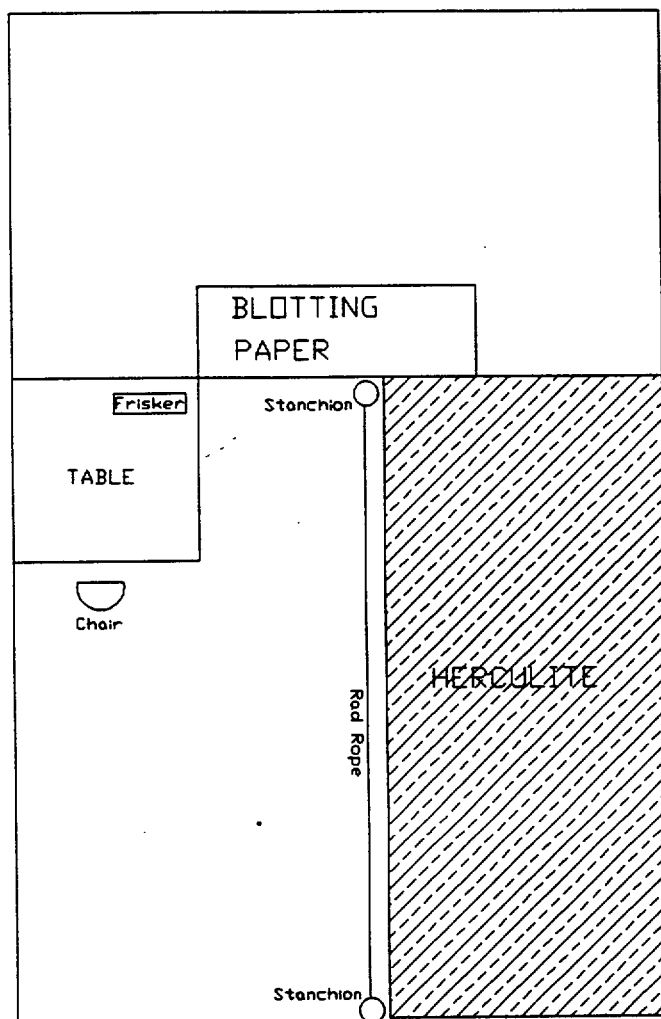
AEOF WORK AREA



- ORAD - Offsite Radiological Assessment Director
- ED - Emergency Director
- TA - Technical Advisor
- DAHP - Dose Assessment Health Physicist
- C1 - Communicator No. 1
- C2 - Communicator No. 2
- FEMA - Management Agency Advisor

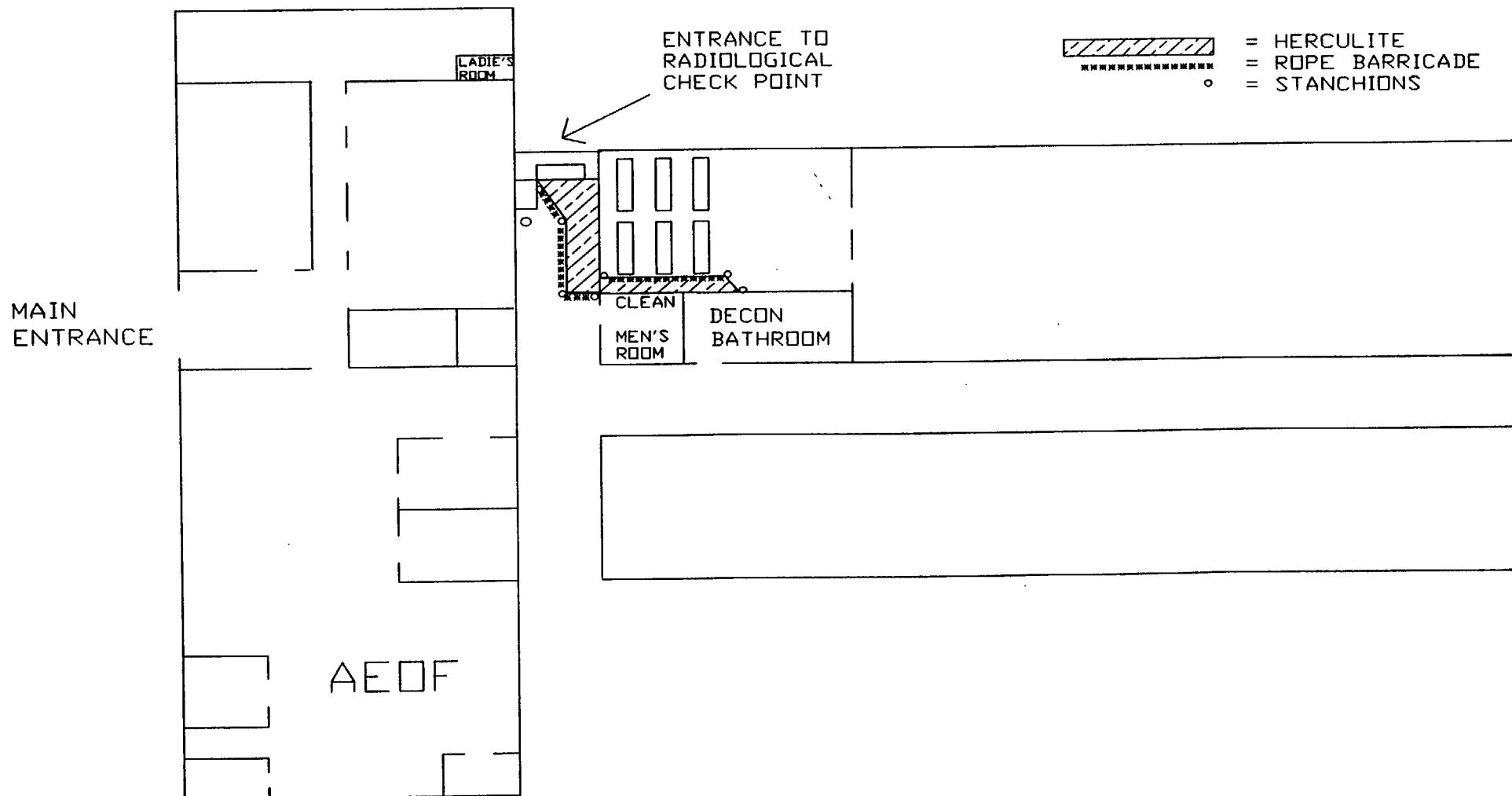
ADDENDUM 8.3
Page 1 of 1

RADIOLOGICAL CHECK POINT



ADDENDUM 8.4
Page 1 of 1

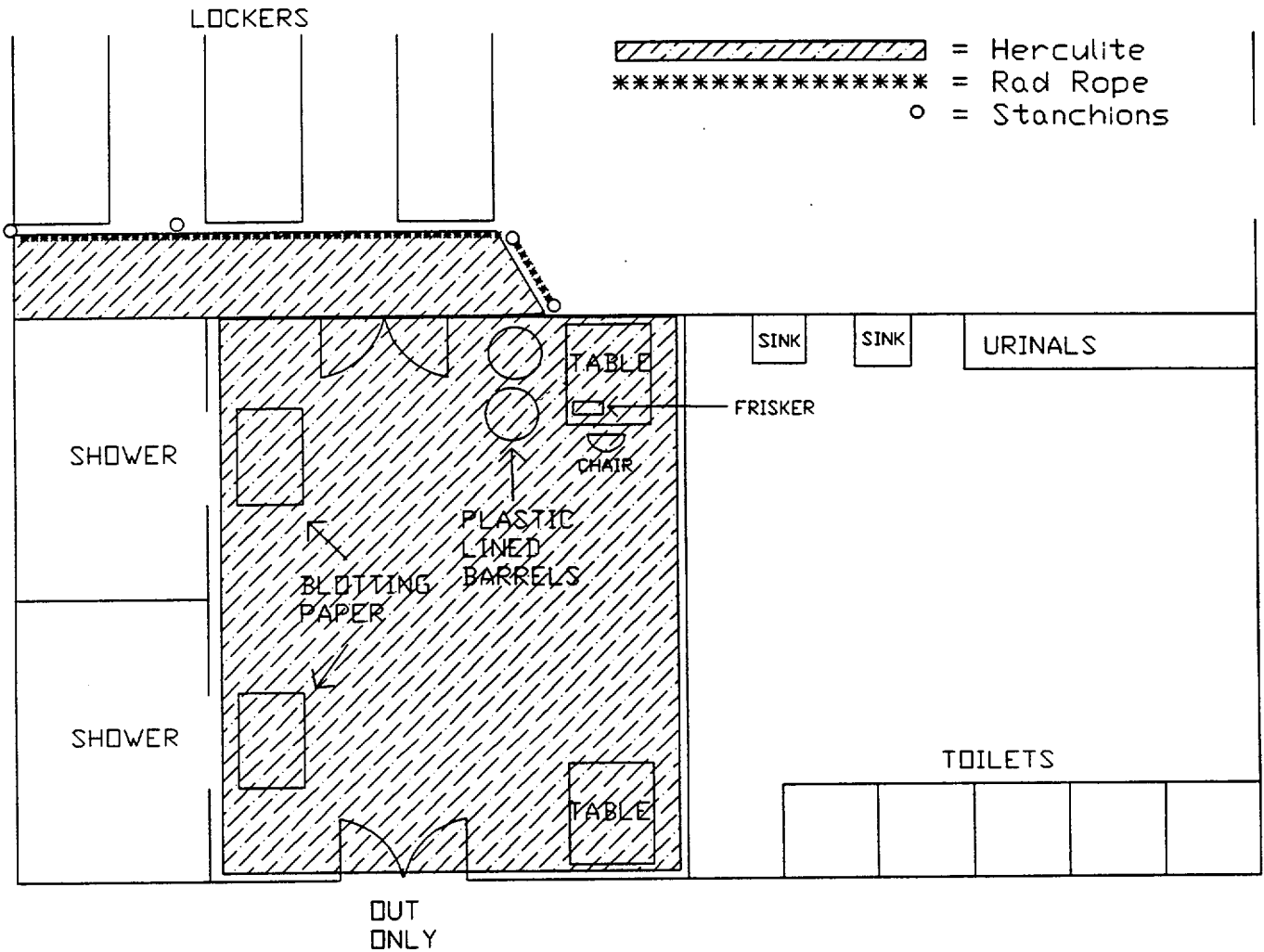
HALLWAY/LOCKER ROOM HERCULITE LAYDOWN AREA



ADDENDUM 8.5

Page 1 of 1

DECON AREA



RESPONSIBILITIES OF CON EDISON PERSONNEL
DURING EMERGENCIES AT UNIT NO. 3

Prepared by: Burn 2/19/99 Technical Reviewer: Tony Furrer 8/6/99
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
SNSC Review #2627 Dorinda Lyster 8/19/99 Reviewer: _____
Meeting No./Date QA
Approval: Tony Furrer / Acting EP in 8/16/99 9/1/99
Signature/Title Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

**RESPONSIBILITIES OF CON EDISON PERSONNEL
DURING EMERGENCIES AT UNIT NO. 3**

1.0 PURPOSE

- 1.1 To describe the responsibilities and actions of Con Edison personnel during ALERT, SITE AREA AND GENERAL emergencies at the NYPA Indian Point Unit No. 3.

2.0 DISCUSSION

- 2.1 IF an emergency is caused by conditions at Indian Point Unit No. 3, a Power Authority representative shall be designated the Emergency Director. It has been agreed, (See Reference 6.1) that ALL actions requested by the Emergency Director during the emergency shall be followed as quickly AND precisely as possible. This includes a request to shut down Unit No. 2, IF its operation is hampering emergency actions, AND the use of Con Edison Watch personnel such as Reactor Operator (RO), Health Physics AND Chemistry.
- 2.2 In addition, Con Edison shall provide four offsite monitoring team members to man the two Offsite Monitoring Team Vehicles.
- 2.3 Initial and subsequent notifications of emergency declarations shall be given to the Unit No. 2 RO by the Unit No. 3 RO as per NYPA procedures.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D CONTAINED IN EPD BOOK NO. 2.

5.1 Notification

- 5.1.1 The Unit No. 3 RO, or Communicator shall call the Unit No. 2 RO AND notify him of:

- a. Emergency Classification
 - b. Necessity to sound the Site Emergency Assembly Alarm.
- 5.1.2 The Unit No. 2 RO shall initiate the Unit No. 2 Site Emergency Assembly alarm IF instructed AND notify the Unit No. 2 Shift Manager (SM).
- 5.1.3 IF an alarm is sounded, the Unit 2 RO, using the paging system, shall make the following announcement three times:
- a. Attention all personnel.
 - b. A_____ has been declared at Unit No. 3.
 - c. ALL personnel report to your assembly areas.
- 5.1.4 The RO shall notify the following that the alarm has been sounded. See Appendix C for phone numbers.
- a. Command Guard House
 - b. Material Service Building
 - c. Old Simulator Building
 - d. Maintenance & Construction (M&C) Office
 - e. Service Center Supt. Office
- 5.1.5 The RO shall notify Central Information Group (See App C) of:
- a. Emergency at Unit 3.
 - b. Emergency Classification.

5.2 Assembly/Accountability

NOTE:

DURING OFF HOURS, THE SHIFT MANAGER SHALL ASSIGN A MEMBER OF THE WATCH FORCE TO PERFORM ACCOUNTABILITY. SEE REFERENCE 6.2.

- 5.2.1 Upon actuation of the Site Emergency Assembly Alarm, ALL personnel shall assemble at their assembly areas for accountability.
- 5.2.2 The Operational Support Center Manager shall set up at the Operational Support Center (OSC) to perform initial accountability. See Reference 6.2.
- 5.2.3 WHEN accountability is completed, the OSC Manager shall inform the RO.
- 5.2.4 The RO shall await direction from the Unit No. 3 Control Room on personnel movement OR evacuation.

5.3 Evacuation

- 5.3.1 Unit No. 3 Emergency Director shall give orders to evacuate ALL non-essential personnel using their own vehicles OR direct they to be dispatched to the Buchanan Service Center.
- 5.3.2 Unit No. 2 SM shall direct the OSC Manager to evacuate ALL non-watch personnel as per direction of the NYPA Emergency Director.

5.4 Request For Personnel

- 5.4.1 Upon request from the Unit No. 3 Shift Supervisor OR Control Room Operator for personnel to fill specified job functions, the Unit No. 2 Shift Manager, Reactor Operator OR designee shall mobilize the requested personnel as follows giving them reporting locations:
 - a. Unit Watch Personnel
 - 1. Page individuals.
 - b. EOF Personnel

1. Normal Working Hours - page OR phone individuals. Refer to Appendix A for names.
 2. Off Hours - obtain the names AND home phone numbers from Appendix A. Call enough personnel in to fill the required job functions.
- c. Offsite Monitors - (Primary)
1. Normal working hours - phone Emergency Planning office OR contact them via the Area Radio.
 2. Off Hours - obtain the names AND home phone numbers from Appendix A. Call in four individuals to man the two vehicles.

5.5 Replacement Of Personnel Sent To Unit No. 3 OR Watch Change

- 5.5.1 The SM shall call the Unit No. 3 Emergency Director to determine what restrictions are in force for Con Edison Unit No. 2 personnel entering for shift turn-over. This information should be given to the Security Supervisor.

NOTE:

DURING NORMAL WORKING HOURS REPLACEMENTS SHALL BE OBTAINED FROM THE WORK FORCE AT INDIAN POINT.

- 5.5.2 The SM shall assign someone to call in replacements for ALL watch personnel sent to Unit No. 3 as well as personnel for shift changes.

6.0 REFERENCES

- 6.1 Memorandum Of Understanding No. 28
- 6.2 IP-1027, "Site Personnel Accountability And Evacuation"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

OBTAINING OFFSITE EXPOSURE RATES FROM
MIDAS USING A DATA TERMINAL

Prepared by: ABurne 9/23/98 Date 9/23/98 Technical Reviewer: Tony Kerner 8/6/99 Date 8/6/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2027 Donna Lynne 8/19/99 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. _____ Date _____

Approval: Tony Kerner Acting EP 8/16/99 Signature/Title 8/16/99 Date 9/1/99 /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

OBTAINING OFFSITE EXPOSURE RATES FROM MIDAS USING A DATA TERMINAL

1.0 PURPOSE

- 1.1 Provide a method for obtaining offsite airborne radioactive release exposure rates from the Meteorological Information and Dose Assessment System (MIDAS) using the Control Room hard copy terminal or via modem with any Windows 95/98 computer terminal.

2.0 DISCUSSION

- 2.1 The manual and computerized (Modular Emergency Assessment and Notification System) methods for calculating offsite exposure rates, Reference 6.1, determines the Total Effective Dose Equivalent (TEDE) exposure rates for noble gases (Form 6b) and the Thyroid Total Organ Dose Equivalent (TODE) exposure rates for noble gasses and iodines (Form 6c). Exposure rates are calculated for the site boundary, 2 mile, 5 mile, and 10 mile radius.
- 2.2 The MIDAS computer can be used as an additional method of performing dose assessment calculations. The MIDAS computer ZCRISA task determines the TEDE exposure rates for noble gases and TODE exposure rates for noble gasses and iodines at the site boundary, 2 mile, 5 mile and 10 mile radius. The projected whole body and thyroid dose can also be calculated by entering an expected duration of the radioactive release.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 The default for the iodine to noble gas ration (I/NG) is 1/10,000 for all releases except a main steam line release with the value 1/100.

4.0 EQUIPMENT AND MATERIALS

- 4.1 Texas Instruments, Silent 700/1200 BPS or Travel Mate 1200, data terminal.
- 4.2 Windows 95/98 computer terminal with modem.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Obtaining offsite exposure rates using hard copy terminal

5.1.1 Toggle the "UPPER CASE" switch "dot" side up. Toggle the "ON LINE" switch "dot" side down. Toggle the "LOCAL COPY" switch "dot" side up.

5.1.2 Place terminal power switch in "ON" position (located at back right corner of the terminal).

a. Ensure the green "PRINT" light is on, IF NOT depress the "PRINT" key.

5.1.3 Check the terminal's configuration. Push the "CMD" THEN type "C" AND press "RTN". The first of six or seven lines of options is displayed. Options correspond to the characters in parenthesis. Verify that the last character in each line represents the correct option. Change the option by typing the character key below that option.

a. Configuration	Correct Options
Speed - High (1200 Baud), Low (300 Baud):	(H/L) H
Parity - Even, Odd, Space, or Mark:	(E/O/S/M) S
Print control characters:	(Y/N) N
Xon/Xoff enabled:	(Y/N) Y
Aural monitor enabled:	(Y/N) Y
Printer off at power up:	(YN) Y
Answer on Nth ring - N = :	(0-9) 1

5.1.4 Push the "CMD" key, THEN push the "D" key.

5.1.5 The system will ask for the dial number. Dial MIDAS by typing in the number listed in EPD Book 2, Appendix C. Preface (914) area code numbers with (9). Preface (212) area code numbers with (91). Push the "RTN" key.

5.1.6 AFTER the system dials MIDAS, ringing is heard AND the "LINE RDY" light will blink.

5.1.7 The connection is made WHEN a high pitch signal is heard AND the "LINE RDY" light remains "ON".

5.1.8 The system will ask the following questions:

a. System will ask for login. Type in "contrl" AND push "RTN" key.

b. System will ask for password. Type "unit2" AND push "RTN" key.

- c. The following prompt will appear:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

- d. Enter "em" AND push "RTN" key.

- e. The following prompt will appear:

Enter:	[U2]	Con Ed Unit 2
	[U3]	NYPA Unit 3
	[EX]	Exit

- f. Enter "u2" AND push "RTN" key.

- g. The following prompt will appear:

WELCOME TO MIDAS

ENTER:	[XX]	FUNCTION OR TASK CODE
	[XXXX]	FUNCTION AND TASK CODE
	[FM]	FUNCTION MENU
	[EX]	EXIT

- h. Enter "g" AND push "RTN" key.

- i. The following prompt will appear on the screen:

ENTER:	[ST]	STANDARD TIME OR
	[DT]	DAYLIGHT SAVING TIME

- j. Choose either standard OR daylight saving time. Standard time is preferred because meteorological data from MIDAS, the MET Display Panel, and data loggers are reported for standard time.

- k. Enter st OR dt AND push "RTN" key.

- l. The following prompt will appear:

ENTER TIME OF REACTOR SHUTDOWN ON 24 HOUR CLOCK
(HRMN)... PRESS RETURN KEY

- m. Enter the time of the reactor shutdown (HRMN) AND push "RTN" key.

- n. The time of reactor shutdown will then be displayed in the following format: (YRMODAHRMN)

YR = Year
MO = Month
DA = DAY
HR = Hour
MN = Minute

- o. IF the time of shutdown is correct THEN push "RTN" key. To change the time of shutdown enter the correct time AND press "RTN" key.

- p. The following prompt will appear:

ENTER: [YRMODAHRMN] TIME RELEASE STARTS
[RETURN] STARTS AT OR BEFORE CURRENT TIME

- q. Since the release has started press "RTN" key to accept default time.

NOTE:

THIS PROGRAM REQUIRES ENTRY OF VALUES FOR CPM (COUNTS /MINUTE), MR/HR, CFM (CU.FT./MIN), LBS/HR, ETC. NUMBERS CAN BE ENTERED DIRECTLY OR IN ENGINEERING NOTATION. EXAMPLES OF THE NOTATION TO BE ENTER IS AS FOLLOWS:

- 1) $1,400,000 = 1.4 \times 10^6 = 1.4E6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E6
- 2) $.0000014 = 1.4 \times 10^{-6} = 1.4E-6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E-6

- r. Select the accident release path AND press "RTN" at the following prompt:

SELECT THE ACCIDENT RELEASE PATH

1. PLNTVNT R-44
2. PLNTVNT R-27
3. PLNTVNT CONTACT
4. R EJTR R-45
5. T LNST MSL

ENTER: [N] (1-5) AND PRESS RETURN KEY OR
[EX] TO EXIT

- s. Select units which will be inputted AND press "RTN" at the following prompt:

SELECT UNITS WHICH WILL BE INPUTTED FROM...

1 = CPM

2 = UCI/SEC

3 = UCI/CC

ENTER (1-3) AND PRESS RETURN KEY

- t. Enter CPM, Noble Gas release rate OR effluent activity AND press "RTN".
- u. Enter the required effluent flow rate (CFM, Lbs/hr., GPM) AND press "RTN".
- v. IF Meteorological data is unavailable, THEN the following message is displayed:

TIME OF MET: YRMODAHRMN

SOME OR ALL MET DATA ARE BAD FOR
RELEASE POINT 1 GROUND RELEASE

- w. Manually enter the wind direction (DIR), wind speed (SPD) and delta temperature (DT) AND press "RTN". Refer to Reference 6.2 for other sources of data and conversions to the correct units. Wind speed must be meters/sec. (MS). Use the lower or ground delta temperature. The current values will then be displayed. To accept current values press "RTN". To correct current values re-enter values AND press "RTN".
- x. Check that the display continues with radiation monitor AND meteorological data in the format of Addendum 8.1. To restart press "S". To continue press "RTN".
- y. Check that the display continues with radiological data in the format of Addendum 8.1.
- z. Enter remaining duration of release (IF unknown, THEN enter the default value 4 hours) AND press "RTN" to obtain dose projections.. Press "RTN" to continue.
- aa. When requested to transfer report to broadcast file enter "no" AND press "RTN".

- bb. Enter "s" to stop dose projection program AND press "RTN".
- cc. Exit MIDAS by entering "zz" and press "RTN".
- dd. The telephone line is automatically disconnected.
- ee. Advance paper by pressing "PAPER ADV" key. Detach the printed section by tearing up against the lucite edge.

5.2 Obtaining offsite exposure rates using Windows 95/98 computer terminal.

5.2.1 Computer terminal must have a modem properly connected to access MIDAS.

5.2.2 Click on the Start Button

5.2.3 From the Programs menu select the Accessories menu and click on the Hyper Terminal icon.

5.2.4 IF a MIDAS hyper terminal icon exists THEN double click on it.

5.2.5 To create a MIDAS hyper terminal perform the following:



a. Double click on the Hypertrm.exe icon.

b. Type in terminal name (i.e. MIDAS1).



c. Click on OK

d. Type in the MIDAS number listed in EPD Book 2 and click on "OK".

5.2.6 Dial MIDAS by clicking on "DIAL".

5.2.7 AFTER the system dials MIDAS, ringing is heard AND a high pitch signal is heard. The modem speaker will then turn off. Press the "RETURN" key to continue.

5.2.8 The system will ask the following questions:

- a. System will ask for login. Type in "contrl" AND push "ENTER" key. Use lower case letters.
- b. System will ask for password. Type "unit2" AND push "ENTER" key.

Use lower case letters.

- c. The following prompt will appear on the screen:

Enter:	[em]	EMERGENCY MENU
	[dm]	DRILL MENU
	[ex]	EXIT

- d. Enter "em" AND push "ENTER" key.

- e. The following prompt will appear on the screen:

Enter:	[U2]	Con Ed Unit 2
	[U3]	NYPA Unit 3
	[EX]	Exit

- f. Enter "u2" AND push "ENTER" key.

- g. The following prompt will appear on the screen:

WELCOME TO MIDAS

ENTER:	[XX]	FUNCTION OR TASK CODE
	[XXXX]	FUNCTION AND TASK CODE
	[FM]	FUNCTION MENU
	[EX]	EXIT

- h. Enter "g" AND push "RTN" key.

- i. The following prompt will appear on the screen:

ENTER:	[ST]	STANDARD TIME OR
	[DT]	DAYLIGHT SAVING TIME

- j. Choose either standard OR daylight saving time. Standard time is preferred because meteorological data from MIDAS, the MET Display Panel, and data loggers are reported for standard time.

- k. Enter st OR dt AND push "RTN" key.

- l. The following prompt will appear:

ENTER TIME OF REACTOR SHUTDOWN ON 24 HOUR CLOCK
(HRMN)... PRESS RETURN KEY

- m. Enter the time of the reactor shutdown (HRMN) AND push "RTN" key.

- n. The time of reactor shutdown will then be displayed in the following format: (YRMODAHRMN)

YR = Year
MO = Month
DA = DAY
HR = Hour
MN = Minute

- o. IF the time of shutdown is correct THEN push "RTN" key. To change the time of shutdown enter the correct time AND press "RTN" key .

- p. The following prompt will appear:

ENTER: [YRMODAHRMN] TIME RELEASE STARTS
[RETURN] STARTS AT OR BEFORE CURRENT TIME

- q. Since the release has started press "RTN" key to accept default time.

NOTE:

THIS PROGRAM REQUIRES ENTRY OF VALUES FOR CPM (COUNTS /MINUTE), MR/HR, CFM (CU.FT./MIN), LBS/HR, ETC. NUMBERS CAN BE ENTERED DIRECTLY OR IN ENGINEERING NOTATION. EXAMPLES OF THE NOTATION TO BE ENTER IS AS FOLLOWS:

- 1) $1,400,000 = 1.4 \times 10^6 = 1.4E6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E6
- 2) $.0000014 = 1.4 \times 10^{-6} = 1.4E-6$
FOR THIS EXAMPLE, ENTRY WOULD BE 1.4E-6

- r. Select the accident release path AND press "RTN" at the following prompt:

SELECT THE ACCIDENT RELEASE PATH

1. PLNTVNT R-44
2. PLNTVNT R-27
3. PLNTVNT CONTACT
4. R EJTR R-45
5. T LNST MSL

ENTER: [N] (1-5) AND PRESS RETURN KEY OR
[EX] TO EXIT

- s. Select units which will be inputted AND press "RTN" at the following prompt:

SELECT UNITS WHICH WILL BE INPUTTED FROM...

1 = CPM

2 = UCI/SEC

3 = UCI/CC

ENTER (1-3) AND PRESS RETURN KEY

- t. Enter CPM, Noble Gas release rate OR effluent activity AND press "RTN".
- u. Enter the required effluent flow rate (CFM, Lbs/hr., GPM) AND press "RTN".
- v. IF Meteorological data is unavailable, THEN the following message is displayed:

TIME OF MET: YRMODAHRMN

SOME OR ALL MET DATA ARE BAD FOR
RELEASE POINT 1 GROUND RELEASE

- w. Manually enter the wind direction (DIR), wind speed (SPD) and delta temperature (DT) AND press "RTN". Refer to Reference 6.2 for other sources of data and conversions to the correct units. Wind speed must be meters/sec. (MS). Use the lower or ground delta temperature. The current values will then be displayed. To accept current values press "RTN". To correct current values re-enter values AND press "RTN".
- x. Check that the display continues with radiation monitor AND meteorological data in the format of Addendum 8.1. To restart press "S". To continue press "RTN".
- y. Check that the display continues with radiological data in the format of Addendum 8.1.
- z. Enter remaining duration of release (IF unknown, THEN enter the default value 4 hours) AND press "RTN" to obtain dose projections.. Press "RTN" to continue.

- aa. To obtain a printout of data perform the following:
 - 1) Set the Font to 8 using the Font option in the View pull down menu at the top of the screen
 - 2) Use the scroll bar on the right of the screen to display the data on the screen.
 - 3) Use click and drag technique with your mouse to highlight the data.
 - 4) Use the print option in the File pull down menu at the top of the screen to print the highlighted data.
- bb. When requested to transfer report to broadcast file enter "no" AND press "RTN".
- cc. Enter "s" to stop dose projection program AND press "RTN".
- dd. Exit MIDAS by entering "zz" and press "RTN".
- ee. To disconnect click on the disconnect button on the tool bar at the top of the screen.
- ff. To reconnect click on the connect button on the tool bar at the top of the screen.

6.0 REFERENCE

- 6.1 IP-1007, "Dose Assessment"
- 6.2 IP-1016, "Obtaining Meteorological Data"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

- 8.1 Summary of Meteorological and Release and Radiological Data
- 8.2 Calculated Offsite Dose Projections

ADDENDUM 8.1
Page 1 of 2

SUMMARY OF METEOROLOGICAL AND RELEASE AND RADIOLOGICAL DATA

*** METEOROLOGICAL DATA PROCESSING IN PROGRESS ***

CALCULATIONS IN PROGRESS

*** SUMMARY OF METEOROLOGICAL DATA ***

TIME OF MET: 9903231414

GROUND SPEED - METERS/SEC 1.30 M
GROUND DIRECTION - DEGREES (FROM) 145. M

TEN MILE MAP OVERLAY IDENTIFICATION COLOR LETTER
 ____ ____
 YELLOW D

PASQUILL STABILITY CATEGORY
BASED ON DELTA T D

*** SUMMARY OF RELEASE DATA ***

TIME OF REACTOR SHUTDOWN 9903231414

RELEASE DATA
PLNTVNT N/A
R-27 (UCI/SEC) 3.20E-05
ENTER RETURN TO ERASE AND CONTINUE, S TO RESTART ,EX TO EXIT

ADDENDUM 8.1
Page 2 of 2

SUMMARY OF METEOROLOGICAL AND RELEASE AND RADIOLOGICAL DATA

SUMMARY OF RADIOLOGICAL DATA

ISOTOPE RELEASE RATE CI/SEC

NOBLE GAS	RADIOIODINE
3.20E-12	3.20E-16

NORMALIZED DILUTION FRACTION (XU/Q)

SITE BOUNDARY (1432. MTRS)	2 MILES (3218 MTRS)	5 MILES (8046 MTRS)	10 MILES (16093 MTRS)
6.2E-05	1.9E-05	5.1E-06	2.1E-06

CONCENTRATION (UCI/CC)

	SITE BOUNDARY	2 MILES	5 MILES	10 MILES
NOBLE GAS	1.5E-16	4.8E-17	1.3E-17	5.1E-18
RADIOIODINE	1.5E-20	4.8E-21	1.3E-21	5.1E-22

OFFSITE DOSE RATE (MREM/HR)

	SITE BOUNDARY	2 MILES	5 MILES	10 MILES
TEDE	7.2E-11	2.2E-11	3.5E-12	1.2E-12
TODE	8.4E-11	2.6E-11	4.5E-12	1.6E-12

TIME AFTER SHUTDOWN(HOURS) .00

TEDE DOSE FACTORS

	SITE BOUNDARY	2 MILES	5 MILES	10 MILES
	4.7E+05	4.7E+05	2.8E+05	2.3E+05
TRAVEL TIME(HOURS)	.31	.69	1.72	3.44

ENTER REMAINING DURATION OF RELEASE(HRS) FOR DOSE PROJECTIONS
RETURN TO STOP

ADDENDUM 8.2
Page 1 of 1

CALCULATED OFFSITE DOSE PROJECTIONS

*** DOSE PROJECTIONS ***

*** DOSE PROJECTIONS ***

PROJECTION TIME PERIOD (HRS FROM NOW) (NOW=9903231435) CLOCK TIME (ST)	TIME				PLUME ARVL/ LEAVE TIME (ST)	FROM NOW TO REACH PAG* (ST)
	.4	1.4	3.4	7.4		
	1500	1600	1800	2200		
SITE BDRY					231728/ 231853	DAHRMN (HOURS)
TEDE (REM)	0.0E+00	0.0E+00	3.8E-14	1.0E-13		NOT REACHED
TODE (REM)	0.0E+00	0.0E+00	4.4E-14	1.2E-13		NOT REACHED (NR) (NR)
2 MILES					231751/ 231916	
TEDE (REM)	0.0E+00	0.0E+00	3.3E-15	3.2E-14		NOT REACHED
TODE (REM)	0.0E+00	0.0E+00	3.8E-15	3.7E-14		NOT REACHED (NR) (NR)
5 MILES					231853/ 232018	
TEDE (REM)	0.0E+00	0.0E+00	0.0E+00	5.0E-15		NOT REACHED
TODE (REM)	0.0E+00	0.0E+00	0.0E+00	6.4E-15		NOT REACHED (NR) (NR)
10 MILES					232036/ 232201	
TEDE (REM)	0.0E+00	0.0E+00	0.0E+00	1.6E-15		NOT REACHED
TODE (REM)	0.0E+00	0.0E+00	0.0E+00	2.2E-15		NOT REACHED (NR) (NR)

*PAG - TEDE = 1 REM, TODE = 5 REM

*PAG - TEDE = 1 REM, TODE = 5 REM

CLOSEOUT/DE-ESCALATION OF EMERGENCY
AND INITIATION OF RECOVERY

Prepared by: ASG 9/2/98 Date 9/2/98 Technical Reviewer: Tommy Grewer 8/16/99 Date 8/16/99
Reviewer: _____ Date _____ Reviewer: _____ Date _____
Reviewer: _____ Date _____ Reviewer: _____ Date _____
SNSC Review: #2627 Date 8/19/99 Reviewer: _____ Date _____
Meeting No. Donna Tyrer Date 8/19/99 Reviewer: _____ Date _____
Approval: Tommy Grewer / Acty. EP Mgr 9/16/99 Signature/Title Date 9/1/99 /Effective Date

Biennial Review

Reviewer/Date	Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR CONTINUOUS USE

CLOSEOUT/DE-ESCALATION OF EMERGENCY AND INITIATION OF RECOVERY

1.0 PURPOSE

- 1.1 To describe the criteria and guidance to initiate the recovery stage or to de-escalate to a lower level emergency classification.
- 1.2 To describe the method of complying with the requirements for a written summary to offsite authorities within 24 hours after the verbal closeout of an NUE or within eight hours after the verbal closeout or class reduction of an Alert, Site Area or General Emergency.

2.0 DISCUSSION

- 2.1 It is possible to initiate the Recovery Stage even though the RCS and Fuel Clad barriers are not intact. Refer to Section 5.3 for the procedure steps.
- 2.2 The emergency organization becomes the recovery organization at the turnover. The Recovery Manager has the option of maintaining this organization OR modifying it as he sees fit.
- 2.3 It is possible to de-escalate to a lower class emergency (SAE OR ALERT) when the fission product barriers are restored i.e., RCS leakage stopped OR containment integrity reestablished. Refer to section 5.1 for the procedure steps.
- 2.4 For electrical/equipment failures AND hazards the classification can be de-escalated (SAE OR Alert) when normal conditions are restored AND NO higher classification exists.
- 2.5 Reference 6.1 requires an oral summary to be given by the licensee to State and Local Government Authorities to closeout or reduce in class EACH of the four emergency classifications (NUE, Alert, Site Area AND General). In addition, Reference 6.1 requires a written summary be received by the same offsite authorities within 24 hours of the verbal closeout for NUE AND within eight hours of the verbal closeout for Alert, Site Area OR General Emergencies.
- 2.6 The Shift Manager (for an NUE) AND the Emergency Director (for Alert, Site Area AND General Emergencies) have the responsibility for completing the written closeout summary in a timely manner such that the local authorities receive the summary within the specified time.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Under NO circumstances reduce a higher status emergency classification to an NUE.
- 3.2 IF AFTER going to the recovery stage a new Emergency Action Level (EAL) is reached that requires the declaration of an emergency, declare it.

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

- 5.1 To De-escalate to Lower Emergency Class determine that;

5.1.1 Barrier breach condition is NO longer a factor.

- a. De-escalating from a general emergency to a site area emergency requires EITHER termination of RCS leakage OR re-establishment of containment integrity. Indication of containment integrity include hydrogen concentration <4% AND containment pressure EITHER stable OR decreasing in a controlled manner. Containment pressure decreasing due to fan cooler unit operation is an example of a controlled decrease in containment pressure.
- b. De-escalating from a site area emergency to an alert emergency requires BOTH the termination of RCS leakage AND re-establishment of containment integrity. Indication of containment integrity include hydrogen concentration <4% AND containment pressure EITHER stable OR decreasing in a controlled manner. Containment pressure decreasing due to fan cooler unit operation is an example of a controlled decrease in containment pressure.

5.1.2 Radiation levels for all in-plant areas are stable OR are decreasing WITH time.

- 5.1.3 Releases of radioactive materials to the environment from the plant have ceased.
 - 5.1.4 Offsite conditions should NOT limit access of personnel AND support resources.
 - 5.1.5 For electrical/equipment failures AND hazards the classification can be de-escalated (SAE OR Alert) when normal conditions are restored AND NO higher classification exists.
- 5.2 Reporting Emergency Class Reduction
- 5.2.1 The Emergency Director (ED) shall fill out FORM 30a, PART I, using Addendum 8.1 as an illustration.
 - 5.2.2 The ED shall have a Communicator transmit the information contained on FORM 30a, PART I, via RECS (Local Government Radio or telephone can be used for backup) within APPROXIMATELY 15 minutes of the classification reduction.
 - 5.2.3 The ED shall have FORM 30a, PART I, faxed to the New York State AND County Emergency Operations Centers AS SOON AS POSSIBLE. See Appendix B for Fax numbers.
- 5.3 To initiate Recovery Stage determine that:
- 5.3.1 Containment integrity is assured.
 - 5.3.2 Indication of containment integrity include hydrogen concentration <4% AND containment pressure EITHER stable OR decreasing in a controlled manner. Containment pressure decreasing due to fan cooler unit operation is an example of a controlled decrease in containment pressure.
- NOTE:
- THIS CONDITION CAN BE VALID, EVEN THOUGH THE RCS AND FUEL CLADDING BARRIERS REMAIN BREACHED.
- 5.3.3 Reactor plant is stable AND in a long term safe shutdown condition WITH heat removal equal to OR exceeding the decay heat with NO foreseeable danger of losing heat removal capacity.
 - 5.3.4 RCS temperature LESS THAN 200°F.

- 5.3.5 Releases of radioactive materials to the environment from the plant have ceased.
- 5.3.6 Radiation levels for all in-plant areas are stable OR are decreasing with time.
- 5.3.7 Offsite conditions should NOT limit access of personnel AND support resources.
- 5.3.8 Recovery Center is habitable. (See Reference 6.2)

5.4 Closing Out an NUE

- 5.4.1 The Shift Manager (SM) shall fill out FORM 30a, PART I, using Addendum 8.2 as an illustration.
- 5.4.2 The SM shall fax the FORM 30a, PART I, to the New York State AND County Emergency Planning Operations Centers WITHIN 24 hours. See Appendix B for FAX numbers.
- 5.4.3 The SM shall send the FORM 30a, PART I, to the Emergency Planning manager OR his designee AFTER the faxing is completed.
- 5.4.4 The Manager, Site Protection OR his designee shall follow up the closeout on the following normal working day WITH a call to New York State AND County Officials.

5.5 Closing Out an Alert, Site Area OR General Emergency

- 5.5.1 The Emergency Director (ED) shall complete FORM 30a, PART I, using Addendum 8.2 as an illustration.
- 5.5.2 The ED shall have a Communicator transmit the information contained on FORM 30a via RECS (Local Government Radio or telephone can be used for backup) WITHIN 15 minutes of the closeout.
- 5.5.3 The ED shall have FORM 30a, Part 1, faxed to the New York State AND County Emergency Operations Centers AS SOON AS POSSIBLE. See Appendix B for FAX numbers.

6.0 REFERENCES

6.1 NUREG-0654, Appendix I

6.2 EP-S-7-7.02, Recovery

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

8.1 Illustration of a class reduction using "New York State Radiological Emergency Data Form - PART I (FORM 30a)"

8.2 Illustration of a closeout using "New York State Radiological Emergency Data Form - PART I (FORM 30a)"

ORM 30a

New York State Radiological Emergency Data Form

Part 1 - General Information		Instructions: Circle or Fill-in information as appropriate	
1. This message is being transmitted on: <u>7/8/10</u> at: <u>1906</u> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM <input type="checkbox"/> REC'S <input type="checkbox"/> Other			
2. This is: <input checked="" type="radio"/> NOT an Exercise <input type="radio"/> An Exercise			
3. THE FACILITY PROVIDING THIS INFORMATION IS: <input checked="" type="radio"/> INDIAN POINT NUMBER 2 <input type="radio"/> INDIAN POINT NUMBER 3			
4. The Emergency Classification is: <input type="radio"/> Unusual Event <input type="radio"/> Site Area Emergency <input type="radio"/> Emergency Terminated <input type="radio"/> Recovery <input type="radio"/> Transportation Incident			
5. This Emergency Classification declared on: <u>7/8/10</u> at: <u>1835</u> <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM			
6. Release of Radioactive Materials <input checked="" type="radio"/> No Release (Above Technical Specifications limits) <input type="radio"/> Release to the Atmosphere (Above Technical Specifications limits) <input type="radio"/> Release to a Body of Water (Above Technical Specifications limits)			
7. Protective Action Recommendations <input checked="" type="radio"/> No need for Protective Actions outside the site boundary <input type="radio"/> EVACUATE the following ERPAS: <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;">1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20</div> <div style="width: 50%;">21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40</div> <div style="width: 50%;">41 42 43 44 45 46 47 48 49 50 51</div> </div> <input type="radio"/> SHELTER all remaining ERPAS			
8. BSAE: <input type="checkbox"/> As of 1835 hours the core is in a coolable condition. Heat removal ability exceeds the amount of heat generated. We are reducing the classification from an SBAE to an ALERT Brief Event Description: _____ _____ _____			
9. The Plant Status is: <input checked="" type="radio"/> Stable <input type="radio"/> Degrading <input checked="" type="radio"/> Cold Shutdown <input type="radio"/> Improving <input type="radio"/> Hot Shutdown			
10. Reactor Shutdown: <input type="radio"/> Not Applicable 8. <u>7/8/10</u> at: <u>0708</u> <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM (Date) (Time)			
11. Wind Speed: <u>3.4</u> Meters/Second at elevation <u>10</u> meters.			
12. Wind Direction: (From) <u>168</u> Degrees at elevation <u>10</u> meters.			
13. Stability Class: A B C <input checked="" type="checkbox"/> E F G			
14. Reported By: <u>JOHN/JOHN COMMUNICATOR</u> at Tel. Number (914) 737-8929 (Communicator's Name)			
Message Received by: _____		Message Sent At: _____	

ED Review: JOHN/JOHN E.D.

FORM 30a

New York State	
Radiological Emergency Data Form	
Part I - General Information Instructions: Circle or Fill-in information as appropriate	
1. This message is being transmitted on: <u>7/5/18</u> at <u>1430</u> <input type="checkbox"/> AM <input checked="" type="checkbox"/> RECS (Date) (Time) <input type="checkbox"/> PM VIA: <input type="checkbox"/> Other	
2. This is..... <input checked="" type="radio"/> NOT an Exercise <input type="radio"/> An Exercise	
3. THE FACILITY PROVIDING THIS INFORMATION IS: <input checked="" type="radio"/> INDIAN POINT NUMBER 2 <input type="radio"/> INDIAN POINT NUMBER 3	
4. The Emergency Classification is: <input type="radio"/> Unusual Event <input type="radio"/> Site Area Emergency <input checked="" type="radio"/> Emergency Terminated <input type="radio"/> Recovery <input type="radio"/> Alert <input type="radio"/> General Emergency <input type="radio"/> Transportation Incident	
5. This Emergency Classification declared on <u>7/5/18</u> at <u>1420</u> <input type="checkbox"/> AM (Date) (Time) <input checked="" type="checkbox"/> PM	
6. Release of Radioactive Materials <input checked="" type="radio"/> No Release (Above Technical Specifications limits) <input type="radio"/> Release to the Atmosphere (Above Technical Specifications limits) <input type="radio"/> Release to a Body of Water (Above Technical Specifications limits)	
Protective Action Recommendations 7. <input checked="" type="radio"/> No need for Protective Actions outside the site boundary <input type="radio"/> EVACUATE the following ERPAs: <div style="margin-left: 40px;"> 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 </div> <input type="radio"/> SHELTER all remaining ERPAs	
EAL#: All offsite power is fully restored. Reactor power is stable. No unusual conditions exist.	
8. Brief Event Description <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; height: 15px;"></div>	
9. The Plant Status is: <input checked="" type="radio"/> Stable <input type="radio"/> Degrading <input checked="" type="radio"/> Cold Shutdown <input type="radio"/> Improving <input type="radio"/> Hot Shutdown	
10. Reactor Shutdown: <input type="radio"/> Not Applicable B. <u>7/3/18</u> at <u>0700</u> <input type="checkbox"/> AM (Date) (Time) <input checked="" type="checkbox"/> PM	
11. Wind Speed: <u>2.1</u> Meters/Second at elevation <u>10</u> meters.	
12. Wind Direction: (From) <u>120</u> Degrees at elevation <u>10</u> meters.	
13. Stability Class: A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G	
14. Reported By: <u>JAVE/JOHN COMMUNICATOR</u> at Tel. Number (914) 737-8029 <small>(Communicator's Name)</small>	
Message Received by: <div style="border-bottom: 1px solid black; height: 15px;"></div>	Message Ended At: <div style="border-bottom: 1px solid black; height: 15px;"></div>

ED Review: JAVE/JOHN ED

RECOVERY

Prepared by: Benn 2/19/99 Technical Reviewer: Ben Kurr 8/16/99
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
Reviewer: _____ Reviewer: _____
SNSC Review #2627 Donna J. 8/19/99 Reviewer: _____
Meeting No./Date QA
Approval: Ben Kurr Acting EP Mgr 8/16/99 9/1/99
Signature/Title Effective Date

Biennial Review

Reviewer/Date Reviewer/Date

Temporary Procedure Changes:

Change No. Date

CONTROLLED

FOR CONTINUOUS USE

RECOVERY

1.0 PURPOSE

- 1.1 To enable the Recovery Manager to establish a recovery organization, activate the Recovery Center, outline a recovery plan and manage the recovery organization.

2.0 DISCUSSION

- 2.1 This procedure shall be used by Recovery Manager AFTER being notified by the Emergency Director of the intention to de-escalate the emergency AND enter the recovery phase.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 The procedure is intended to be used as an aid AND is NOT intended to be a prescriptive document.

4.0 EQUIPMENT AND MATERIALS

- 4.1 The "Vice President, Nuclear Power," office complex, located on the 72' Elevation of the Technical Support Center, shall serve as the central Recovery Center. Other offices in the Technical Support Center shall be used as necessary during recovery.
- 4.2 The Toddville Training Center serves as an alternate Recovery Center, IF necessary.

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Recovery Manager - Report to the EOF/AEOF

5.1.1 Meet WITH the Emergency Director to discuss shift recovery AND check:

- a. Emergency Classification - IF any.
- b. Radiological conditions onsite.
- c. Radiological conditions offsite.

- d. Status of plant equipment.
- e. Offsite interfaces.
- f. Sampling programs in process.
- g. Administration AND Logistics efforts underway through the Corporate Response Center (CRC).
- h. NRC interface.
- i. Emergency facility status.

5.2 Recovery Manager - Activate the Recovery Center

5.2.1 Have the EOF Communicator notify the following facility managers AND key personnel to meet at the Recovery Center. Use the page system OR the telephone numbers on Appendix A, B, OR C.

- a. Emergency Director (ED) - EOF
- b. Offsite Radiological Assessment Director (ORAD) - EOF
- c. Technical Advisor (TA) to ED - EOF
- d. EOF Information Liaison - EOF
- e. TSC Manager - TSC
- f. Core Physics Engineer - TSC
- g. Plant Operations Manager (POM) - CCR
- h. Rad Protection Coordinator - TSC
- i. Maintenance Coordinator - TSC
- j. I&C Coordinator - TSC
- k. Schedule AND Planning Coordinator
- l. Project Management Specialist
- m. Department Manager Site Services

- n. Secretary of Site Services
- o. Nuclear Safety & Licensing (NS&L)
- p. Westinghouse Representative - See Appendix B.

5.3 Recovery Manager - Hold initial meeting - Order of steps below are at the Recovery Manager's discretion.

5.3.1 Assess current plant conditions - TSC Manager AND POM.

- a. What is likelihood of conditions degrading?
- b. What compensatory actions are being taken in anticipation?

5.3.2 Discuss radiological condition onsite - Rad Protection Coordinator AND ORAD.

5.3.3 Discuss offsite radiological conditions - ORAD.

5.3.4 Have a secretary setup a conference call WITH the four County Executives AND Chairman of the Disaster Preparedness Commission OR his designee to discuss action plans for re-entry.

5.3.5 IF necessary have secretary establish AND maintain communication WITH the following facilities:

Corporate Response Center
Control Room
TSC
ENC
NRC Region 1 Office
INPO
Westinghouse
Chairman's Office - (Call CIG)

NYPA Management - (Call Unit No. 3 CCR)
VP of Nuclear Power Generation
VP of Engineering
Plant Manager

5.3.6 IF necessary, establish a mechanism to maintain the facilities on a 24-hour basis. See Reference 6.1 for the names AND phone numbers of personnel to effect relief. (Appendix A, EP Book No. 2)

- 5.3.7 Provide needed information to EOF Information Liaison - Ask about support needed for extended use of Joint News Center.
- 5.3.8 Discuss possible support needed by offsite for re-entry - ORAD AND ED.
- 5.3.9 Discuss potential security AND training requirements WITH the Manager, Site Services.
- 5.3.10 Discuss the need for corporate support obtained through the CRC.
 - a. Security
 - b. Communications
 - c. Administrative
 - d. Finance
 - e. Accommodations
 - f. Commissary
 - g. Law
 - h. Human Resources
 - i. Risk Management
 - j. Transportation
 - k. Purchasing
 - l. System & Information Processing
- 5.3.11 Discuss Westinghouse support WITH the Westinghouse Representative.
- 5.3.12 Discuss SNSC requirements AND provisions - Nuclear Safety & Licensing.
- 5.3.13 Determine whether ALL 10 CFR requirements are met - Nuclear Safety & Licensing.
 - a. Does this constitute an "Extraordinary Nuclear Occurrence"? (10CFR140.83)

- 5.3.14 Determine from Nuclear Safety & Licensing whether ALL reporting requirements have been met.
 - a. ALL SAO-124 AND 125 as well as Emergency Plan notifications.
- 5.3.15 Establish a mechanism to meet all future reporting requirements - Nuclear Safety & Licensing.
- 5.3.16 Ensure QA and Nuclear Safety & Licensing are involved in modifications AND other recovery actions TSC Manager.
- 5.3.17 Call for an NFSC meeting to discuss plant conditions.
- 5.3.18 Establish priority items - Recovery Manager.
- 5.4 Recovery Manager - Ongoing operations - Review at each briefing.
 - 5.4.1 Establish AND maintain status boards.
 - 5.4.2 Stay apprised of plant conditions through Control Room, Status Boards, SAS (Plant Parameters), AND Emergency Data Display System.
 - 5.4.3 Assess plant conditions WITH NRC, Technical Support Center Manager, AND Plant Operations Manager.
 - 5.4.4 Evaluate WITH NRC, Technical Support Center Manager, AND Plant Operations Manager, action (including schedules, procedures, decontamination, equipment, etc.) to shutdown plant OR restores it to normal operating condition. Coordinate/direct APPROPRIATE actions AND ensure that adequate resources AND personnel are available to facilitate these required actions.
 - 5.4.5 Stay apprised of planned radiological releases AND radiological releases which occurred during the emergency.
 - 5.4.6 Evaluate, WITH ORAD, the meteorological conditions AND radiological releases which occurred during the emergency.
 - 5.4.7 Establish radiation survey AND re-entry requirements - ORAD.
 - 5.4.8 Assess data from re-entry radiation survey operations - ORAD.

- 5.4.9 Evaluate, WITH ORAD, NRC, AND offsite Authorities, recommendations for offsite response.
- 5.4.10 Stay apprised of the offsite response - ORAD.
- 5.4.11 Coordinate, WITH JNC Director and Information Liaison, press releases, interviews, AND press briefings.
- 5.4.12 Direct/coordinate, WITH the Administration AND Logistics Manager, support activities.
- a. Security
 - b. Communications
 - c. Administrative
 - d. Finance
 - e. Accommodations
 - f. Commissary
 - g. Law
 - h. Human Resources
 - i. Risk Management
 - j. Transportation
 - k. Purchasing
 - l. System & Information Processing
- 5.4.13 Evaluate overall recovery effort AND modify as necessary.
- 5.4.14 Direct/coordinate overall recovery effort including:
- a. Plant shutdown, radiological monitoring, offsite recommendations, repairs, modifications, radwaste processing, decontamination, AND radwaste shipment.

- b. Coordinate construction efforts WITH the Engineering AND Construction Support Manager; radwaste efforts WITH the Radwaste Supervisor.

5.4.15 Keep a written log of ALL actions taken, time of actions AND by whom.

5.4.16 Deactivate in part OR completely, recovery organization when it is NO longer required. Revert back to normal site AND corporate organizations.

6.0 REFERENCES

6.1 Appendix A of EPD Book No. 2

7.0 ATTACHMENTS

7.1 Recovery Manager Worksheet

8.0 ADDENDUM

8.1 NONE

ATTACHMENT 7.1
Page 1 of 2
RECOVERY MANAGER WORKSHEET

At start of Recovery

I. At EOF secure following information.

A. Emergency Classification - ask ED: _____

B. On-site Radiological conditions - ask ORAD

Sector 1-_____, 2-_____, 3-_____, 4-_____, 5-_____,
6-_____, 7-_____, 8-_____, 9-_____, 10-_____,
11-_____, 12-_____, 13-_____, 14-_____, 15-_____,
16-_____.

C. Offsite Radiological Condition - ask ORAD: _____

D. Equipment Status - ask Technical Advisor:

E. Government Interfaces - ask ED:

NRC	-	_____
NYS	-	_____
Westchester	-	_____
Rockland	-	_____
Orange	-	_____
Putnam	-	_____
Other	-	_____

F. Sampling in Progress - ask ORAD: _____

ATTACHMENT 7.1
Page 2 of 2

RECOVERY MANAGER WORKSHEET

G. Emergency Response Facilities Status - ask ED:

EOF/AEOF	-	_____
TSC	-	_____
CCR	-	_____
OSC	-	_____
ENC	-	_____
CRC	-	_____
NRC Ops Ctr	-	_____
NYS EOC	-	_____
County EOCs	-	_____

II. Current Emergency Organization: See Appendix D of Emergency Planning Procedure Book No. 2. (Form 17a & 17b)

NOTE:

HAVE COMMUNICATOR NOTIFY RECOVERY STAFF TO REPORT TO RECOVERY CENTER.

III. At Recovery Center

A. Staffing - Are the following people present? If not, have Secretary contact them using phone number in Appendix A, B & C in the Emergency Planing Procedure Book No. 2.

_____	1.	Emergency Director	_____
_____	2.	ORAD	_____
_____	3.	Tech Advisor to ED	_____
_____	4.	EOF Info Liaison	_____
_____	5.	TSC Manager	_____
_____	6.	Core Physics Eng	_____
_____	7.	POM	_____
_____	8.	Rad Protection Coordinator	_____
_____	9.	Maint Coordinator	_____
_____	10.	I&C Coordinator	_____
_____	11.	Sched & Planning Coordinator	_____
_____	12.	Proj Management Specialist	_____
_____	13.	Manager Site Services	_____
_____	14.	Secretary	_____
_____	15.	Nuclear Safety & Licensing Representative	_____
_____	16.	Westinghouse Representative	_____

B. Cover items in Section 5.3 of this procedure.

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IAP-10
Rev. 14

SHIFT MANAGER

Prepared by: Burn 3/16/00 Technical Reviewer: C. Vellu 3/16/00
Reviewer: A. J. Horn 3/20/00 Date
Reviewer: _____ Date
Reviewer: _____ Date
SNSC Review: 2706 5/16/00 Date
Meeting No. Date
Approval: Grand 3/22/00 3/28/00
Signature/Title Date /Effective Date

Extensively Revised

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

Reference
Use

SHIFT MANAGER (SM)**1.0 PURPOSE**

- 1.1 To describe the immediate actions required of the Shift Manager (SM).

2.0 DISCUSSION

- 2.1 The actions AND responsibilities listed in this procedure are intended to assist the SM in the performance of his role. The format is designed for quick scrutiny to insure the completion of duties.
- 2.2 Expanded explanations are contained in implementation procedures. Where appropriate implementation procedures are referenced.
- 2.3 Some actions are performed once. Others are repeated many times over the duration of the accident. It is the responsibility of the SM during an accident to periodically review this procedure in order to determine what actions may be appropriate at the time.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS**NOTE:**

THE EMERGENCY TELEPHONE DIRECTORY AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN THE SHIFT MANAGER ERO POSITION BINDER.

5.1 Classify Emergency Conditions

- 5.1.1 Authority to classify and declare an emergency may NOT be delegated.
- 5.1.2 Evaluate plant conditions AND parameters.
- 5.1.3 Utilizing IP-1024, Emergency Classification, determine whether one of the four emergency classifications (NUE though GE) exists.
- 5.1.4 Declare it. Announce the classification to the Control Room personnel.

5.2 Mobilize Personnel (NUE)

- 5.2.1 For any NUE where the SM determines that the Emergency Response Organization is needed, have the CCR Communicator request the Site Security Supervisor to call in personnel as indicated on the **CCR NUE Notification Checklist (Form IP-1002-1)**.
- 5.2.2 Use a qualified Operator as Communicator OR request a Communicator from the Security Force

5.3 Mobilize On-Shift Personnel (ALERT, SAE, GE)

- 5.3.1 The Support Facility NPO should serve as the CCR Communicator unless the fire brigade is summoned, in which case a qualified communicator from the Security Force shall assume CCR Communicator duties.
- 5.3.2 On-shift Watch Health Physics Technician reports to CCR
- 5.3.3 On-shift Watch Chemistry Technician reports to CCR
- 5.3.4 On-shift Field Support Supervisor reports to CCR
- 5.3.5 On-shift NPOs report to CCR

5.4 Notify ERO, State AND Local Authorities (Initial Notification).

- 5.4.1 Decision to notify offsite authorities may NOT be delegated.
- 5.4.2 Ensure State and local authorities are notified WITHIN 15 minutes of declaration.
- 5.4.3 Determine recommended offsite protective actions, when appropriate, using IP-1013, Protective Action Recommendations. This authority cannot be delegated.
- 5.4.4 Fill out and sign **NYS Radiological Emergency Data Form, Part I** for transmittal.
- 5.4.5 Direct CCR Communicator to perform notifications using IP-1002, Emergency Notification and Communication.

5.5 Release of Airborne Radiological Effluent

- 5.5.1 Have the Watch Chemistry Technician sample RCS AND perform an isotopic analysis.

5.5.2 Determine Site Boundary Dose Estimate:

- a. Obtain from MIDAS using IP-1047, Obtaining Offsite Exposure Rates from MIDAS

OR

- b. IP-1007, Dose Assessment

5.5.3 WHEN release duration CANNOT be estimated, use 4 hours as a default value.

5.5.4 Obtain Reuter-Stokes Rad Monitors readings. Refer to IP-1037, Obtaining Offsite Reuter-Stokes Monitor Data.

5.5.5 Determine recommended offsite protective actions. Refer to IP-1013, Protective Action Recommendations. This authority cannot be delegated.

NOTE:

WARNING POINTS RECEIVE THE **NYS RADIOLOGICAL EMERGENCY DATA FORM, PART I ONLY**. **PART II** IS TRANSMITTED TO THE STATE/COUNTY EOCs ONLY WHEN THEY ARE ACTIVATED. ONCE THE ED TAKES CHARGE AT THE EOF NO FURTHER TRANSMITTAL BY THE CCR IS NECESSARY.

5.5.6 Fill out a **NYS Radiological Emergency Data Form, PART II** in addition to **PART I**.

5.5.7 Assign offsite teams sampling points WHEN teams become available.

5.5.8 Assign HP Technician to survey Protected Area under plume.

5.5.9 Consider issuance of KI WHEN expected thyroid exposure is GREATER THAN 25 Rem.

5.6 Notify NRC (Initial Notification).

5.6.1 Ensure NRC notified WITHIN one hour of declaration of emergency.

5.6.2 Have communicator identify that the event is being reported pursuant to Section 50.72 of 10 CFR 50.

5.6.3 Maintain communications with the NRC on the ENS WHEN requested and UNTIL the NRC notifies you to close the communications channel.

5.7 Radiological Control of Control Room.

5.7.1 HP Technician to set up WITH your permission, a Step Off Pad (SOP) AND frisker at;

- a. Entrance from turbine floor to FSS Office.
- b. Side door to the Control Room.

5.7.2 Consider issuance of KI to the Watch Force during core melt sequences WHEN expected thyroid exposure is GREATER THAN 25 Rem.

5.7.3 The Health Physics Technician should determined whether respirator protection is required as per RS-10.001, Issuance of Respiratory Protection Devices.

5.8 Radiological Control of Plant Environs.

5.8.1 Internal exposure tracking should be initiated when an individual entering an airborne area is expected to receive an intake of more than 4 Derived Air Concentration (DAC)-hours in a day or 10 DAC-hours in a week.

5.9 Determine Meteorological Conditions AND Evaluate.

5.9.1 Overlay selection - use schematic on overlay folder.

5.9.2 Plume involvement

- a. EOF
- b. Assembly areas
- c. Guard posts

5.9.3 Relocate personnel AND guards WHEN fields reach 100 mR/hr.

5.10 Notification of Emergency Classification Changes and Periodic Updates

5.10.1 Notification of emergency classification changes and periodic update notifications shall be directed by the Shift Manager until relieved of Emergency Director duties by the Emergency Plant Manager. Notification to offsite authorities shall continue from the Central Control Room until the Emergency Director assumes responsibilities in the Emergency Operations Facility.

5.10.2 Perform periodic updates to State and counties using IP-1002, Emergency Notification and Communication. Update approximately once every 30 minutes.

5.10.3 Announce each emergency classification change AND the Emergency Action Level description requiring classification to the Control Room personnel.

- 5.10.4 Determine recommended offsite protective actions using IP-1013, Protective Action Recommendations. This authority CANNOT be delegated.
- 5.10.5 IMMEDIATELY fill out **NYS Radiological Emergency Data Form, PART I**
- 5.10.6 Have **NYS Radiological Emergency Data Form, PART I** transmitted via RECS to State/ county authorities.
- 5.10.7 IF there has been a release to the environment, have the data on **NYS Radiological Emergency Data Form, PART II** completed AND hold UNTIL State AND county authorities activate their Emergency Operations Centers.
- 5.10.8 Fax copies of **NYS Radiological Emergency Data Form, PART I** and **Part II** to State and county Emergency Operations Centers.
- 5.10.9 Notify NRC using the ENS.
- 5.10.10 Give all completed forms to the EPM when he/she arrives.
- 5.11 Accountability.
 - 5.11.1 Accountability shall be performed as specified in IP-1027, Personnel Accountability and Evacuation.
 - 5.11.2 Assign an individual to perform accountability actions of IP-1027, Personnel Accountability and Evacuation.
- 5.12 Initiate Search and Rescue Teams if Necessary.
 - 5.12.1 When accountability is completed, IF any individuals are missing THEN direct available personnel and Security to conduct search and rescue operations to locate missing persons.
- 5.13 Initiate Repair and Corrective Action if Necessary.
 - 5.13.1 IF emergency repairs are needed THEN ensure proper radiological controls are observed and direct available personnel to perform necessary repairs.
- 5.14 Personnel Exposure Control.
 - 5.14.1 If necessary, authorize emergency exposures as specified on **Form IP-1023-6, Emergency Exposure Authorization**
- 5.15 Keep Emergency Plant Manager and TSC Manager Informed.
 - 5.15.1 Plant conditions.
 - 5.15.2 Release rate changes.

5.16 Personnel Emergencies

5.16.1 Refer to IP-1012, On-Site Medical Emergency

5.16.2 Report to the scene of the accident WITH First Aid/ Decon Suite Key.

5.16.3 Evaluate situation.

5.16.4 Direct CRO to follow notification procedure in IP-1012, On-Site Medical Emergency

5.17 Fire or Explosion.

5.17.1 Direct Watch Force as appropriate.

5.17.2 Determine from Field Support Supervisor necessity to call Fire Department.

5.17.3 Notify HP Technician of fires in the Controlled Area.

5.17.4 IF Fire Department is called notify Security Force.

5.18 Natural Phenomena Beyond Usual Levels.

5.18.1 Flooding - flood condition watch, A-28.0.4, Plant Flooding – Conventional Side

5.18.2 Hurricane – A-28.0.7, Hurricane Alert.

5.18.3 Air Raid Alert – IP-1031, Air Raid Alert

5.19.4 Tornado – IP-1032, Tornado Emergency

5.19.5 Earthquake – A-28.0.8, Earthquake Emergency

5.19 Transportation Accidents Involving Radioactive Material.

5.19.1 On site - have the HP Technician survey the accident scene AND report the results of his survey to you AND to the Operations Manager.

5.19.2 Offsite - notify the Operations Manager – A-28.0.9, Transportation Accidents Involving Radioactive Material

5.20 Security Compromises AND Attempted OR Actual Sabotage.

5.20.1 Notify the Security Supervisor.

5.21 Notification for Unclassified Events

5.21.1 SAO-124, Reporting of Significant Events and Items of Interest

5.22 Emergency Closeout.

5.22.1 De-escalation of emergency – IP-1048, De-escalation of Emergency and Initiation of Recovery

5.22.2 Emergency Closeout - IP-1048, De-escalation of Emergency and Initiation of Recovery

6.0 REFERENCES

- 6.1 IP-1024, "Emergency Classification".
- 6.2 IP-1001, "Mobilization of Onsite Emergency Organization".
- 6.3 IP-1002, "Emergency Notification and Communication".
- 6.4 IP-1047, "Obtaining Offsite Exposure Rates From MIDAS".
- 6.5 IP-1007, "Dose Assessment".
- 6.6 IP-1037, "Obtaining Offsite Reuter-Stokes Monitor Data".
- 6.7 IP-1013, "Protective Action Recommendations".
- 6.8 IP-1011, "Repair and Corrective Action".
- 6.9 IP-1010, "Search and Rescue Teams".
- 6.10 IP-1038, "Emergency Personnel Exposure".
- 6.11 IP-1012, "On-Site Medical Emergency".
- 6.12 A-28.0.4, "Plant Flooding - Conventional Side".
- 6.13 A-28.0.7, "Hurricane Alert".
- 6.14 IP-1031, "Air Raid Alert".
- 6.15 IP-1032, "Tornado Emergency".
- 6.16 A-28.0.8, "Earthquake Emergency".
- 6.17 SAO-124, "Reporting of Significant Events and Items of Interest".
- 6.18 IP-1048, "De-escalation of Emergency and Initiation of Recovery".
- 6.19 RS-10.001, "Issuance of Respiratory Protection Devices".
- 6.20 A-28.0.9, "Transportation Accidents Involving Radioactive Material".

6.21 IP-1027, "Personnel Accountability and Evacuation"

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IAP-12
Rev. 8

WATCH HEALTH PHYSICS TECHNICIAN (WHPT)

Prepared by: ABurns 9/5/98 Technical Reviewer: Tom Fennell 8/4/99
Date Date
Reviewer: _____ Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #26-29 8/19/99 Reviewer: _____ Date
Meeting No. Date Date
Approval: Tom Fennell / Adj. Dir. 8/16/99 9/1/99
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

FOR REFERENCE USE

WATCH HEALTH PHYSICS TECHNICIAN (WHPT)

1.0 PURPOSE

- 1.1 To describe the immediate actions that should be required of the Watch Health Physics Technician (WHPT).

2.0 DISCUSSION

- 2.1 The actions AND responsibilities listed in this procedure are intended to assist the WHPT in the performance of his/her role. The format is designed for quick scrutiny to insure the completion of duties. Expanded explanations are contained in implementation procedures. Where necessary the appropriate implementation procedure is referenced. Some items are performed once. Others are repeated many times over the duration of the accident. It is the responsibility of the WHPT during an accident to periodically review this procedure in order to determine what actions may be appropriate at the time.

3.0 PRECAUTIONS AND LIMITATIONS

NONE

4.0 EQUIPMENT AND MATERIALS

NONE

5.0 INSTRUCTIONS

NOTE:

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE IN APPENDICES A, B, C, AND D OF EPD BOOK NO. 2.

5.1 Personnel Emergency in Controlled Area (Reference 6.1)

- 5.1.1 Report to the accident scene as identified by the Control Room Operator. Bring HP Plant Medical Emergency Kit. The kit is stored in the HPT Office/Counting Room Area.

5.1.2 Follow the instructions in Section 5.4 of Reference 6.1.

- a. Immediate actions at scene
- b. Immediate actions at First Aid/Decon Suite
- c. Immediate actions at the hospital
- d. Follow Up actions

5.1.3 Accompany the victim to the hospital AND provide Health Physics services for the hospital staff.

5.1.4 Bring the HP Hospital Medical Emergency Kit with you to the hospital.

5.2 Provide Radiological Protection

5.2.1 Search AND rescue team (Reference 6.2).

- a. Issue dosimetry
- b. Determine respiratory requirements
- c. Perform radiological surveys

5.2.2 Repair AND Corrective Action (Reference 6.3).

- a. Issue dosimetry
- b. Determine respiratory requirements
- c. Perform radiological surveys

5.3 Respond to Fire in Controlled Area

5.3.1 Evaluate radiological conditions.

- a. Perform radiological surveys
- b. Setup Continuous Air Monitoring (CAM)
- c. Evaluate potential radiological contamination

5.3.2 Specify protective clothing AND equipment.

- a. Determine respiratory requirements

5.3.3 Check out of Fire Department equipment (Reference 6.4).

- a. Perform radiological surveys of fire department equipment
- b. Decontamination of fire department equipment

5.3.4 Personnel monitoring devices for fireman (Reference 6.4).

- a. Perform radiological surveys of fire department personnel
- b. Decontamination of fire department personnel
- c. Record fire department personnel dosimetry readings

5.4 Radiological Control of Control Room

5.4.1 Set up control as soon AFTER the declaration of an ALERT, SAE OR GE as possible. Inform the SM of your intention.

5.4.2 Set up Step Off Pad (SOP) requiring shoe check AND frisker at entrance from turbine floor to SFS Office AND at the side door to the Control Room. Place the SOP in a position that does NOT preclude opening the door while standing on the SOP.

5.4.3 Perform periodic contamination surveys on BOTH sides of SOP AND WHEN frisker alarms. Record on FORM 9.

5.4.4 Perform periodic field surveys. Record on FORM 10.

5.4.5 Perform airborne contamination checks (Reference 6.5).

5.4.6 Set up SOP (REMOVE PROTECTIVE CLOTHING BEFORE STEPPING HERE), WHEN turbine floor contamination levels EXCEED 1000 dpm/100 cm².

5.4.7 Record surveys using appropriate forms.

5.5 Perform Surveys Requested By SM.

5.5.1 Plant vent contact field reading using portable survey instrument (evaluate remote readout BEFORE performing survey).

5.5.2 In-plant radiological surveys AND sampling Reference 6.6.

5.5.3 Beta AND gamma fields.

5.5.4 Airborne contamination (Reference 6.5).

5.5.5 Personnel contamination.

5.5.6 Tools AND equipment contamination.

5.6 Use PRM-ARM Instrumentation.

5.6.1 Evaluate for Radiological conditions of Plant.

5.7 Controlled Area Evacuation.

5.7.1 Determine who has NOT signed out by accessing the computer at HP1 (Option 3 main menu, option 1 sub-menu) AND report it to SM.

5.8 SM Requests Protected Area Fence Survey.

5.8.1 Evaluate using CCR Site map.

5.8.2 Discuss need for KI (GREATER THAN 25 Rem).

5.8.3 Wear TLD AND 1-2 k mrem dosimeter.

5.8.4 Wear charcoal respirator (S.G. Tube Rupture Release).

5.8.5 Wear coveralls, hat, gloves, shoe covers.

5.9 Respiratory Protection Guidelines For Control Room.

5.9.1 The Health Physics Technician should determine whether Respirator Protection is required as per Reference 6.7.

5.10 Supervise Personnel Decontamination.

5.11 Emergency Closeout OR Watch Changeover.

5.11.1 Originals of ALL forms AND data shall be considered the "record copy" AND so marked.

6.0 REFERENCES

- 6.1 IP-1012, "On-Site Medical Emergency".
- 6.2 IP-1010, "Search and Rescue Teams".
- 6.3 IP-1011, "Repair and Corrective Action".
- 6.4 IP-1025, "Handling Fire Department Personnel Fighting Fires in the Controller Area".
- 6.5 IP-1020, "Airborne Radioiodine Determination".
- 6.6 IP-1042, "In Plant Radiological Surveys and Sampling".
- 6.7 RS-10.001, "Issuance of Respiratory Protection Devices".

7.0 ATTACHMENTS

NONE

8.0 ADDENDUM

NONE

CON EDISON
INDIAN POINT STATION
EMERGENCY PLANNING

IAP-14
Rev. 0

RECOVERY MANAGER

Prepared by: William R. Kersch 6/2/97 Technical Reviewer: Donny Kersch 6/16/97
Reviewer: [Signature] 6/6/97 Date Reviewer: _____ Date
Reviewer: _____ Date Reviewer: _____ Date
SNSC Review: #2530 2/20/97 Date Reviewer: _____ Date
Meeting No. Date
Approval: [Signature] S.P.M. 6/30/97 7/10/97
Signature/Title Date /Effective Date

Biennial Review

Reviewer/Date

Reviewer/Date

Temporary Procedure Changes:

Change No. _____ Date _____

CONTROLLED

**Reference
Use**

RECOVERY MANAGER

1.0 PURPOSE

- 1.1 To enable the Recovery Manager to establish a recovery organization, activate the Recovery Center, outline a recovery plan and manage the recovery organization.

2.0 DISCUSSION

- 2.1 This procedure shall be used by Recovery Manager AFTER being notified by the Emergency Director of the intention to de-escalate the emergency AND enter the recovery phase.
- 2.2 This procedure replaces EP-S-7.702.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 NONE

4.0 EQUIPMENT AND MATERIALS

- 4.1 The "Vice President, Nuclear Power," office complex, located on the 72' Elevation of the Technical Support Center, shall serve as the central Recovery Center. Other offices in the Technical Support Center shall be used as necessary during recovery.
- 4.2 The Toddville Training Center serves as an alternate Recovery Center, IF necessary.

5.0 INSTRUCTIONS

NOTE

ALL PHONE NUMBERS AND FORMS SPECIFIED IN THIS PROCEDURE ARE LOCATED IN APPENDICES A, B, C AND D OF EPD BOOK NO. 2.

5.1 Recovery Manager Actions

- 5.1.1 Report to Emergency Operations Facility/Alternate Emergency Operations Facility (EOF/AEOF.)

- a. Meet with the Emergency Director to discuss shift recovery AND check:
 - 1. Emergency Classification - IF any.
 - 2. Radiological conditions onsite.
 - 3. Radiological conditions offsite.
 - 4. Status of plant equipment.
 - 5. Offsite interfaces.
 - 6. Sampling programs in process.
 - 7. Administration AND Logistics efforts underway through the Corporate Response Center (CRC).
 - 8. NRC interface.
 - 9. Emergency facility status.

5.1.2 Activation of Recovery Center.

- a. Have the EOF Communicator notify the following facility managers AND key personnel to meet at the Recovery Center. Use the page system OR the telephone numbers on Appendices A, B OR C.

PERSONNEL

- a. Emergency Director (ED)
- b. Offsite Radiological Assessment Director (ORAD)
- c. Technical Advisor (TA) to (ED)
- d. EOF Information Liaison
- e. TSC Manager
- f. Core Physics Engineer
- g. Plant Operations Manager (POM)

- h. Rad Protection Coordinator
- i. Maintenance Coordinator
- j. I & C Coordinator
- k. Schedule AND Planning Coordinator
- l. Project Management Specialist
- m. General Manager, Site Services
- n. Secretary designee
- o. Nuclear Safety & Licensing (NS&L)
- p. Westinghouse Representative - See Appendix B.

5.1.3 Hold initial meeting - the order of steps below are at the Recovery Manager's discretion:

- a. Assess current plant conditions with TSC Manager AND POM.
 - 1. What is the likelihood of conditions degrading?
 - 2. What compensatory actions are being taken in anticipation?
- b. Discuss radiological condition onsite with Rad Protection Coordinator AND ORAD.
- c. Discuss offsite radiological conditions with ORAD.
- d. Have a secretary setup a conference call with the four County Executives AND the Chairman of the Disaster Preparedness Commission OR his designee to discuss action plans for re-entry.
- e. IF necessary have a secretary establish AND maintain communication with the following facilities: (See Appendices A, B and C, EP Book #2).

Corporate Response Center
Control Room
TSC
Joint News Center (JNC)

NRC Region 1 Office
INPO
Westinghouse
Chairman's Office - (Call Central Information Group (CIG)
NYPA Management - (Call Unit No. 3 CCR)
VP of Nuclear Engineering
VP of Engineering
Plant Manager

- f. IF necessary, establish a mechanism to maintain the facilities on a 24-hour basis. See Reference 6.1 for the names AND phone numbers of personnel to effect relief. (Appendix A, EP Book No. 2)
- g. Provide needed information to EOF Information Liaison. Inquire about support needed for extended use of Joint News Center.
- h. Discuss possible support needed by offsite for re-entry with ORAD AND ED.
- i. Discuss potential security AND training requirements with the General Manager Site Services.
- j. Discuss the need for corporate support obtained through the CRC.
 - 1. Security
 - 2. Communications
 - 3. Administrative
 - 4. Finance
 - 5. Accommodations
 - 6. Commissary
 - 7. Law
 - 8. Human Resources
 - 9. Risk Management
 - 10. Transportation

- 11. Purchasing
- 12. System & Information Processing
- k. Discuss Westinghouse support with the Westinghouse Representatives.
- l. Discuss SNSC requirements AND provisions with Nuclear Safety & Licensing.
- m. Determine whether ALL 10 CFR requirements are met with Nuclear Safety & Licensing.
 - 1. Does this constitute an "Extraordinary Nuclear Occurrence"? (10CFR40.83)
- n. Determine from Nuclear Safety & Licensing whether ALL reporting requirements have been met.
 - 1. ALL SAO-124 AND 125 as well as Emergency Plan notifications.
- o. Establish a mechanism to meet all future reporting requirements with Nuclear Safety & Licensing.
- p. Assure Quality Assurance (QA) and Nuclear Safety & Licensing are involved in modifications AND other recovery actions with TSC Manager.
- q. Call for an NFSC meeting to discuss plant conditions.
- r. Establish priority items.

5.1.4 Ongoing Operations - Review the following at each briefing.

- a. Establish AND maintain status boards.
- b. Stay apprised of plant conditions through Control Room communication, Status Boards, SAS (Plant Parameters) AND the Plant Data System.
- c. Assess plant conditions with the NRC, Technical Support Center Manager AND Plant Operations Manager.

- d. Evaluate actions (including schedules, procedures, decontamination, equipment, etc.) to shutdown plant OR restore it to normal operating condition with the NRC, Technical Support Manager AND Plant Operations Manager, Coordinate/direct APPROPRIATE actions AND ensure that adequate resources AND personnel are available to facilitate these required actions.
- e. Stay apprised of planned radiological releases AND radiological releases which occurred during the emergency.
- f. Evaluate with ORAD, the meteorological conditions AND radiological releases which occurred during the emergency.
- g. Establish radiation survey AND re-entry requirements with ORAD.
- h. Assess data from re-entry radiation survey operations with ORAD.
- i. Evaluate recommendations for offsite response with ORAD, NRC AND offsite Authorities.
- j. Stay apprised of the offsite response with ORAD.
- k. Coordinate press releases interviews AND press briefings with JNC Director and Information Liaison.
- l. Direct/coordinate the following support activities with the Administration AND Logistics Manager.
 - 1. Security
 - 2. Communications
 - 3. Administrative
 - 4. Finance
 - 5. Accommodations
 - 6. Commissary
 - 7. Law
 - 8. Human Resources

- 9. Risk Management
- 10. Transportation
- 11. Purchasing
- 12. System & Information Processing
- m. Evaluate overall recovery effort AND modify as necessary.
- n. Direct/coordinate overall recovery effort including:
 - 1. Plant shutdown, radiological monitoring, offsite recommendations, repairs, modifications, radwaste processing, decontamination AND radwaste shipment.
 - 2. Coordinate construction efforts with the Engineering AND Construction Support Manager AND radwaste efforts with the Radwaste Supervisor.
- 5.4.15 Keep a written log of ALL actions taken, the time of the action AND who took the action.
- 5.4.16 Deactivate the recovery organization in part OR completely when it is NO longer required. Revert back to normal site AND corporate organizations.

6.0 REFERENCES

- 6.1 Appendix A of EPD Book No.2

7.0 ATTACHMENTS

- 7.1 Recovery Manager Worksheet

8.0 ADDENDUM

- 8.1 NONE

ATTACHMENT 7.1
Page 1 of 2
RECOVERY MANAGER WORKSHEET

At start of Recovery

I. At EOF secure following information.

A. Emergency Classification - request from ED: _____

B. On-site Radiological conditions - request from ORAD

Sector 1-_____, 2-_____, 3-_____, 4-_____, 5-_____,
6-_____, 7-_____, 8-_____, 9-_____, 10-_____,
11-_____, 12-_____, 13-_____, 14-_____, 15-_____,
16-_____.

C. Offsite Radiological Condition - request from ORAD: _____

D. Equipment Status - request from Technical Advisor:

E. Government Interfaces - request from ED:

NRC	-	_____
NYS	-	_____
Westchester	-	_____
Rockland	-	_____
Orange	-	_____
Putnam	-	_____
Other	-	_____

F. Sampling in Progress - request from ORAD: _____

ATTACHMENT 7.1
Page 2 of 2

RECOVERY MANAGER WORKSHEET

G. Emergency Response Facilities Status - request from ED:

EOF/AEOF	-	_____
TSC	-	_____
CCR	-	_____
OSC	-	_____
ENC	-	_____
CRC	-	_____
NRC Ops Ctr	-	_____
NYS EOC	-	_____
County EOCs	-	_____

- II. Current Emergency Organization: See Appendix D of Emergency Planning Procedure Book No. 2. (Form 17a & 17b)

NOTE:

HAVE COMMUNICATOR NOTIFY RECOVERY STAFF TO REPORT TO RECOVERY CENTER.

III. At Recovery Center

- A. Staffing - Are the following people present? If not, have Secretary contact them using phone number in Appendix A, B & C in the Emergency Planning Procedure Book No. 2.

_____	1.	Emergency Director	_____
_____	2.	ORAD	_____
_____	3.	Tech Advisor to ED	_____
_____	4.	EOF Info Liaison	_____
_____	5.	TSC Manager	_____
_____	6.	Core Physics Eng	_____
_____	7.	POM	_____
_____	8.	Rad Protection Coordinator	_____
_____	9.	Maint Coordinator	_____
_____	10.	I&C Coordinator	_____
_____	11.	Sched & Planning Coordinator	_____
_____	12.	Proj Management Specialist	_____
_____	13.	Manager Site Protection	_____
_____	14.	Secretary	_____
_____	15.	Nuclear Safety & Licensing Representative	_____
_____	16.	Westinghouse Representative	_____

- B. Cover items in Section 5.1.3 of procedure IAP-14.