

Dominion Nuclear Connecticut, Inc.
Millstone Power Station
Rope Ferry Road
Waterford, CT 06385



Dominion™

JUN 30 2003

Docket Nos. 50-245

50-336

50-423

B18926

RE: 10 CFR 50, Appendix E
10 CFR 50.47(b)(5)

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Millstone Power Station, Unit Nos. 1, 2 and 3
Revised Emergency Plan Procedures

In accordance with 10 CFR 50, Appendix E, Dominion Nuclear Connecticut, Inc. hereby notifies the U.S. Nuclear Regulatory Commission that the following Emergency Plan procedures have been implemented.

- MP-26-EPI-FAP01, "Control Room Emergency Operations," Major Revision 1, Minor Revision 3, and the following associated form are transmitted via Attachment 1:
 - MP-26-EPI-FAP01-001, "Control Room - Director of Station Emergency Operations (CR-DSEO)," Major Revision 1, Minor Revision 5.
- MP-26-EPI-FAP02, "Technical Support Center Activation and Operation," Major Revision 1, Minor Revision 2, and the following associated forms are transmitted via Attachment 2:
 - MP-26-EPI-FAP02-001, "Assistant Director Technical Support (ADTS)," Major Revision 1, Minor Revision 4;
 - MP-26-EPI-FAP02-003, "Manager of Radiological Consequence Assessments (MRCA)," Major Revision 0, Minor Revision 2; and
 - MP-26-EPI-FAP02-011, "Manager of Security (MOS)," Major Revision 0, Minor Revision 2.
- MP-26-EPI-FAP04, "Emergency Operations Facility Activation and Operation," Major Revision 1, Minor Revision 4, and the following associated forms are transmitted via Attachment 3:
 - MP-26-EPI-FAP04-001, "Director of Station Emergency Operations (DSEO)," Major Revision 1, Minor Revision 3;
 - MP-26-EPI-FAP04-002, "Assistant Director Emergency Operations Facility (ADEOF)," Major Revision 0, Minor Revision 3; and
 - MP-26-EPI-FAP04-003, "Manager of Radiological Dose Assessment (MRDA)," Major Revision 1, Minor Revision 2.

AD45

- MP-26-EPI-FAP08, "Evacuation and Assembly," Major Revision 1, Minor Revision 3, is transmitted via Attachment 4.
- MP-26-EPI-FAP09, "Radiation Exposure Controls," Major Revision 1, Minor Revision 1, is transmitted via Attachment 5.

There are no regulatory commitments contained within this letter.

If you should have any questions concerning this submittal, please contact Mr. David W. Dodson at (860) 447-1791, extension 2346.

Very truly yours,

DOMINION NUCLEAR CONNECTICUT, INC.



J. Alan Price
Site Vice President - Millstone

Attachments (5)

cc: H. J. Miller, Region I Administrator (2 copies)
R. J. Conte, Chief, Operational Safety Branch, Region I

cc: w/o attachments

D. G. Holland, NRC Project Manager, Millstone Unit No. 1
J. R. Wray, NRC Inspector, Region I, Millstone Unit No. 1
R. B. Ennis, NRC Senior Project Manager, Millstone Unit No. 2
V. Nerses, NRC Senior Project Manager, Millstone Unit No. 3
Millstone Senior Resident Inspector

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Attachment 1

Millstone Power Station, Unit Nos. 1, 2 and 3

Emergency Procedures Implementing (EPI) Functional Administrative Procedure (FAP)

MP-26-EPI-FAP01

**"Control Room Emergency Operations"
and Associated Form**

**Functional
Administrative
Procedure**



Millstone Station

Control Room Emergency Operations

MP-26-EPI-FAP01

Rev. 001-03

Approval Date: 5/21/03

Effective Date: 5/30/03

STOP

THINK

ACT

REVIEW

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1. PURPOSE

1.1 Objective

This procedure provides guidance to individuals located in the Control Room (CR) who become Station Emergency Response Organization (SERO) personnel during declared emergencies.

1.2 Applicability

This procedure is performed by CR personnel for emergency events classified as Unusual Event or higher.

1.3 Supporting Documents

EPI-FAP07, "Notifications and Communications"

EPI-FAP15, "Common Forms"

EPA-REF08B, "Millstone Emergency Plan Resource Book "

NRC Regulatory Issue Summary 2002-21, "National Guard and Other Emergency Responders Located in the Licensee's Controlled Area"

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1.4 Discussion

1.4.1 CR-DSEO Transition to MCRO

The CR-DSEO becomes the MCRO after being relieved by the on-call DSEO. The MCRO then reports directly to the ADTS.

For a Unit 1 event, the Unit 2 CR-DSEO becomes the MCRO .

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1.4.2 10 CFR 50.54(x) Invocation

As discussed in the Statements of Consideration to 10 CFR Part 50, emergencies can arise during which compliance with a license condition or a Technical Specification could prevent necessary action by the licensee to protect the public health and safety. Absolute compliance with the license during these emergencies can be a barrier to effective protective action.

Unanticipated circumstances can occur during the course of an emergency which may call for responses different from any previously considered during the course of licensing. Special circumstances requiring a deviation from license requirements are not necessarily limited to transients or accidents not analyzed in the licensing process. Special circumstances can arise during emergencies involving multiple equipment failures or coincident accidents where plant emergency procedures could be in conflict with or not applicable to the circumstances. In addition, an accident can take a course different from that which was addressed when the emergency procedure was written, thus requiring a protective response at variance with a procedure required to be followed by the licensee which may ultimately be contrary to current Technical Specifications or the license condition.

10 CFR 50.54(x) will permit the licensee to take reasonable action in an emergency even though the action departs from licensing conditions or plant Technical Specifications. This action may only be taken, however, if the following criteria are met:

- The action is immediately needed to protect the public health and safety, including plant personnel.
- No action consistent with the license conditions and Technical Specifications is immediately apparent that can provide adequate or equivalent protection.
- As a minimum, a licensed senior operator approves the action.

a. Applicability Determination

The NRC can amend Technical Specifications or license conditions. The §50.54(x) regulation is not intended to apply in circumstances during which time allows this normal process to be followed. The regulation applies only to those emergency situations in which immediate action is required by the licensee to protect public health and safety and this action is contrary to a Technical Specification or license condition.

Operating outside the boundaries of approved procedures or in the absence of procedures does not in and of itself meet the threshold for invocation of §50.54(x). Also, the existence of a safety analysis (§50.59) conducted for the purpose of determining whether an unreviewed safety question exists is not sufficient to determine whether application of §50.54(x) is appropriate. §50.54(x) is not intended for use as a general regulatory protective shield for all actions not addressed by current procedures. Even after §50.54(x) has been invoked, each subsequent action taken must be evaluated for §50.54(x) applicability with all necessary approvals and notifications being made for each invocation, as appropriate.

Additionally, the §50.54(x) and (y) amendments were not written for the purpose of establishing procedures and guidance (such as SAMG) that may be useful at some future date (e.g., preplanning and contingency actions). The determination to discontinue following plant operating procedures and/or EOPS, and to begin following SAMG, by itself, does not constitute a departure from a license condition or Technical Specification and, therefore, does not require invocation of §50.54(x). Note however, it is possible that the first action directed during SAMG implementation may actually require §50.54(x) invocation.

The threshold for invocation is met only if the action being taken is not consistent with current license conditions and Technical Specifications. Additionally, the action must meet the time and safety dependent criteria previously discussed. Then and only then should the invocation of §50.54(x) be considered for approval.

b. Approval

A licensed senior operator position is the minimum level within the organization, but not the only position, authorized to approve invocation of §50.54(x). 10 CFR 50.54(y) states, "Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator..." This wording makes it clear that such action must be approved at least by a licensed senior operator acting for the licensee. The regulation focuses on the responsibilities of facility licensees and only peripherally includes licensed senior operators. Under the provision, any licensed senior operator (licensed for the Unit involved) would be sufficient. However, during declared emergencies, more senior licensee personnel would eventually become available. The decision to depart from the license would then pass to these more senior personnel already identified in the Emergency Plan.

Ultimate responsibility for the health and safety of the general public and station personnel in an emergency resides in the highest authority in the chain of command. The persons responsible for the health and safety of the general public and station personnel are already identified in the facility license and implementing procedures. These persons include the ADTS and the DSEO following emergency response facility activation. If, however, an emergency should occur on a backshift, no licensee representative higher than a licensed senior operator in the chain of command is likely to be available. Therefore, the departure from a license condition or Technical Specification requires the approval of a licensed senior operator as a minimum.

To require any additional approvals or concurrence, such as from senior licensee representatives or the NRC, would defeat the purpose of §50.54(x). Concurrence or approval from the NRC is also not necessary, as this action would amount to a license amendment using procedures contrary to those existing for amendments. NRC concurrence would additionally shift the burden of responsibility for station safety from the licensee to the NRC.

c. Reportability

Deviations authorized pursuant to 10 CFR 50.54(x) are reportable as soon as practical and in all cases within one hour under 10 CFR 50.72(b)(1)(i)(B), or 10 CFR 50.73(a)(2)(i)(C), if not reported simultaneously with emergency notification under 10 CFR 50.72(a). When time permits, the notification is made before the protective action is taken; otherwise, it is made as soon as possible thereafter. Additionally, a Licensee Event Report will be generated and submitted to the NRC within 30 days.

d. Subsequent Actions

Following invocation of 50.54(x) and notification of the NRC, actions are taken as soon as practical to restore the plant to full compliance with Technical Specifications and all conditions of license.

1.4.3 Radiological Monitoring Team #1

During initial SERO activation, RMT #1 provides Control Room health physics support and conducts in-plant surveys and sample analysis. Upon full SERO activation, the MRCA assumes control of the RMT #1 members. An RMT #1 member will report to the MCRO for the duration of the event.

1.4.4 Initial Dose Assessment

The Initial Dose Assessment (IDA) computerized method provides the capability to perform a dose projection using effluent release information and real-time meteorology. For the purposes of calculating a total integrated TEDE, a default release duration of 2 hours may be assumed. This assumption corresponds to a period within which SERO activation will occur and a more refined dose assessment can then be performed.

This assessment is performed by a Chemistry Technician after a radiological release has occurred and all required actions critical to mitigating the plant event are completed or determined to be of a severity less than the need for performing an initial dose assessment. This is acceptable because initial EALs and PARs will be based upon plant conditions. IDA is used only as a supplement to the initial recommendations. Input provided to the CR-DSEO may be used to validate the initial protective action recommendation or classification.

Event classification, off-site agency notifications, and protective action recommendations made by the CR-DSEO should *not* be delayed by awaiting the results of this dose assessment.

1.4.5 OFIS

OFIS provides critical plant parameters to allow communication of plant data for analysis of plant conditions. OFIS may be accessed from LAN PCs.

1.4.6 Protective Actions for Offsite Emergency Responders Located at the Station

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to Security threats. The State of CT and Waterford Police department will be responsible for protective measures for these individuals, as needed (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA and upgrading exposures, issuing and tracking dosimetry). For an emergency, radiological or non-radiological, that does not involve a security threat, these forces would be considered non-essential to the event and evacuated from the site. However, they are still under the state's authority and the state may require they stay on site.

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1.4.7 Definitions and abbreviation are contained in Attachment 1.

1.4.8 Responsibilities are contained in Attachment 2.

2. INSTRUCTIONS

2.1 Refer To and complete the following, as applicable:

NOTE

Steps in the position specific checklists may be performed in any order, or more than once, as necessary.

- EPI-FAP01-001, "Control Room-Director of Station Emergency Operations (CR-DSEO)"
- EPI-FAP01-002, "Manager of Control Room Operations (MCRO)"
- EPI-FAP01-003, "Station Duty Officer (SDO)"
- EPI-FAP01-004, "Control Room Emergency Communicator" ②
- EPI-FAP01-005, "Radiological Monitoring Team (RMT) #1"
- EPI-FAP01-006, "Chemistry Technician"
- EPI-FAP01-007, "Control Room Data Coordinator (CRDC)"

2.2 IF an action is not appropriate under existing conditions or was not necessary for the event, enter N/A when completing documentation for submittal.

3. SUMMARY OF CHANGES

3.1 Revision 001-03

3.1.1 Added supporting document Regulatory Issue Summary 2002-21.

3.1.2 Added section 1.4.6 on protective actions for offsite emergency responders located at the station. (CR-03-00929/03000501-03/0300068-02)

3.2 Revision 001-02

3.2.1 Changed Shift Technician (ST) to Emergency Communicator.

3.3 Revision 001-01

3.3.1 Section 1.3 - changed Millstone Emergency Plan Resource Book from an EPUG to REF08B to support MP-26-MMM.

3.3.2 Section 1.4.1, changed the Unit 1 CFH to the Unit 2 CR-DSEO who becomes the MCRO.

3.4 Revision 001

3.4.1 Biennial review

3.5 Revision 000-01

3.5.1 Changed step 1.4.1 CR-DSEO Transition to MCRO for a Unit 1 event.

3.6 Revision 000

3.6.1 Original issue

Attachment 1

Definitions and Abbreviations

(Sheet 1 of 3)

Definitions

Activation - All functions, minimum staffing requirements, and turnovers have been completed and the senior SERO position in the facility declares it active.

Alpha or Bravo - State of Connecticut posture codes issued with a GENERAL EMERGENCY classification. A technical basis for developing a PAR as a result of that classification.

Calculated Dose Rate - A dose rate calculated for actual releases based on rates derived from effluent monitor or survey readings (usually in units of mR/hr or R/hr).

Delta Temperature - An indicator of atmospheric stability which affects plume dispersion.

Dose Assessment - the act of calculating dose commitment from the release of radioactivity.

Measured Dose Rate - Dose rate based on field survey results (usually in units mR/hr or R/hr).

Minimum Staff - Positions depicted above the line on the facility staffing board which are necessary before activation may occur.

Mission Specific Exposure Limits - Specific exposure limits based on job task assignments for emergency team members.

Plant Condition - A technical basis for developing a PAR as a result of actual or imminent loss of all 3 fission product barriers, or based on high containment radiation levels.

Projected Dose - A technical basis for developing a PAR as a result of an ongoing radiological release that is projected on either a measured dose rate, or a calculated dose rate for an expected release duration (usually in units of rem).

Protective Action Recommendation (PAR) - A recommendation issued to state and local decision makers for their consideration in making a protective action decision (i.e., shelter, evacuate).

Site Boundary - For dose assessment purposes, the 0.5 miles distant from the release point.

Unmonitored Release - A suspected or actual release of radioactive material to the environment without passing through an operational process or radiation monitor.

"What If" Dose Projection - A theoretical dose projection based on the premise that the accident sequence in progress will result in the partial or total release of an assumed quantity of core inventory (usually in units of Rem).

Attachment 1

Definitions and Abbreviations

(Sheet 2 of 3)

Wind Direction - The three digit number indicating the 000°-360° degree bearing (000° and 360° being north; 180° being south) from which the wind is blowing for the representative release elevation. Changes in wind direction may also constitute the technical basis for updating a PAR after the initial PAR has been issued.

Abbreviations

ADEOF - Assistant Director Emergency Operations Facility

ADTS - Assistant Director Technical Support

AMRDA - Assistant Manager of Radiological Dose Assessment

CDE - Committed Dose Equivalent for the thyroid (usually in units of Rem)

CR-DSEO - Control Room Director of Station Emergency Operations

DDE - Deep Dose Equivalent

EAL - Emergency Action Level

ENS - Emergency Notification System

EOF - Emergency Operations Facility

ERF - Emergency Response Facility

IDA - Initial Dose Assessment (computer program)

IRF - Incident Report Form

KI - Potassium Iodide

LAN - Local Area Network

MCRO - Manager of Control Room Operations

MOS - Manager of Security

MRDA - Manager of Radiological Dose Assessment

MTSC - Manager of Technical Support Center

OFIS - Off-Site Facilities Information System

Attachment 1
Definitions and Abbreviations
(Sheet 3 of 3)

PAR - Protective Action Recommendation

PC - Personal Computer

PPADs - Personal Protective Action Decisions

SERO - Station Emergency Response Organization

SSS - Security Shift Supervisor

TEDE - Total Effective Dose Equivalent

TIC - Technical Information Coordinator

TSC - Technical Support Center

Attachment 2 Responsibilities

(Sheet 1 of 2)

1. Control Room Director of Station Emergency Operations (CR-DSEO)

The CR-DSEO is responsible for the following activities, which cannot be delegated, until relieved by the EOF DSEO:

- Assuming command and control of station emergency response
- Classifying events
- Authorizing off-site notifications
- Initiating station emergency response
- Authorizing mitigation and repair activities
- Approving evacuations
- Authorizing emergency exposures
- Approving off-site Protective Action Recommendations
- Issuing KI

2. Manager of Control Room Operations (MCRO)

The MCRO is responsible for the following activities:

- Recommending corrective actions to the ADTS
- Providing current plant status to the ADTS
- Recommending event classification changes to the ADTS
- Coordinating actions to mitigate degradation of plant systems with the ADTS
- Coordinating Control Room actions and equipment operability and repair team activities with the MOSC

Attachment 2
Responsibilities
(Sheet 2 of 2)

3. Station Duty Officer (SDO)

The SDO is responsible for assisting the CR-DSEO by:

- Notifying the NRC of the event via the ENS line
- Assisting the Emergency Communicator in making notifications (e.g., Resident Inspector, Agencies) ②
- Assisting with precautionary dismissal, evacuation, or assembly of personnel

4. Emergency Communicator

The Emergency Communicator is responsible for making off-site notifications. ②

5. Radiological Monitoring Team (RMT) #1

The RMT #1 is responsible for the following activities:

- Providing Control Room habitability and additional health physics support
- Conducting in-plant surveys and analyzing samples

6. Chemistry Technicians

The Chemistry Technicians are responsible for the following activities:

- Providing Chemistry support
- Conducting initial dose assessments

7. Control Room Data Coordinator (CRDC)

The CRDC is responsible for the following activities:

- Activating OFIS
- Retrieving required plant parameter data
- Maintaining a chronological log of events in the Control Room

5/21/03

Approval Date

5/30/03

Effective Date

Control Room - Director of Station Emergency Operations (CR-DSEO)

NOTE

If the applicable unit is Unit 1, the Unit 2 SM/CFH will classify the event and become the CR-DSEO.

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Section A: Emergency Response Immediate Actions

1. Evaluate the conditions using EPI-FAP06, "Classification and PARs."

- ☐ Notify the SDO and Emergency Communicator to report to the control room and provide a briefing.
- ☐ Review the EAL tables:
 - For Unit 1, EPI-FAP06-001
 - For Unit 2, EPI-FAP06-002
 - For Unit 3, EPI-FAP06-003
- ☐ Evaluate the status of the fission product barriers.

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2. Declare the emergency.

- ☐ Announce the emergency declaration level and time to the CR staff and assume the role of CR-DSEO.

NOTE

Offsite notification shall be accomplished within 15 minutes of an emergency event classification.

- ☐ Direct the Emergency Communicator to initiate offsite notifications per EPI-FAP07, "Notifications and Communications."

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3. Go To the applicable section and perform the immediate actions.

- ☐ Unusual Event Section B
- ☐ Alert..... Section C
- ☐ Site Area Emergency..... Section D
- ☐ General Emergency Section E

Section B: Unusual Event Immediate Actions

1. Notifications

- ☐ Notify the unaffected unit control room of the event.

NOTE

1. During a security event, it may *not* be advisable to sound an alarm or make a PA announcement.
2. State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The SSS will notify the control room of any protective actions put in place.
3. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders located onsite as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- ☐ IF the event involves a situation where site personnel should be sheltered, Refer To EPI-FAP08, "Evacuation and Assembly," Sheltering, and perform actions.

- ☐ WHEN appropriate, announce termination of sheltering.

- ☐ IF sheltering actions are not being conducted, perform the following:

- ☐ Activate the outside speakers.

NOTE

The CR-DSEO may choose to activate or partially activate the Emergency Response Facility (Facilities) for an Unusual Event.

- ☐ Review the wording for the station notification message and announce the following over the station PA system:

Attention all personnel; attention all personnel. An Unusual Event has been declared at (Unit #) due to (brief description of event

). All members of the SERO monitor your radiopager for further instructions and information. All other personnel continue with your present duties.

- ☐ Repeat the PA message.

- ☐ Log time of announcement on EPI-FAP15-012, "SERO Log Sheet."

Section B: Unusual Event Immediate Actions

- ☐ Review and approve the Incident Report Form (IRF) for transmittal.
- ☐ Refer To EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," and complete.
- ☐ Obtain information from the SSS of offsite responders (i.e., National Guard) reporting to the site.
- ☐ IF the emergency event occurs off-hours (6:00pm to 4:00am) or on weekends, direct SDO to voice-record EPI-FAP15-001 information and fax completed form to EOF and TSC.

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2. NRC Notification

- ☐ Direct the SDO to notify the NRC via the ENS.
- ☐ Verify the Emergency Communicator or SDO has contacted the resident inspector.

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3. Loss of Power

- ☐ IF event is Loss of Off-Site Power (LOP), evaluate what loads are being carried and what loads are necessary.
- ☐ Within 4 hours of the LOP, evaluate the need to order emergency diesel generator fuel to extend on-site capacity and direct on-shift person to order fuel, as required.

- 4. IF no upgrade to classification is warranted, Go To Section F, "Routine and Follow-up Actions."

Section C: Alert Immediate Actions

1. Notifications

- ☐ Notify the unaffected unit control room of the event.
- ☐ Request Security to restrict site access and notify Waterford Police and CT State Police to prepare for a precautionary dismissal, as appropriate.

NOTE

1. Hazardous conditions or Security-related events may impact the ability to move personnel. If these conditions exist, it may be better to shelter personnel on site. During a security event, it may *not* be advisable to sound an alarm or make a PA announcement.
2. State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS)/SSS will notify the CR DSEO of any protective actions put in place.
3. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders located onsite as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- ☐ IF the event involves a situation where site personnel should be sheltered, Refer To EPI-FAP08, "Evacuation and Assembly," Sheltering, and perform actions.
 - ☐ WHEN appropriate, announce termination of sheltering.
 - ☐ WHEN appropriate, conduct full SERO activation and precautionary dismissal, as applicable.
- ☐ IF sheltering actions are not being conducted, perform the following:
 - ☐ Activate the outside speakers.
 - ☐ Review the wording for the station notification message and announce the following over the station PA system:

Attention all personnel; attention all personnel. An Alert has been declared at (Unit #) due to (brief description of event).

Section C: Alert Immediate Actions

- ☐ **IF the designated emergency response facilities are available, announce the following:**

All on-duty SERO members report to your designated emergency response facility. All off-duty SERO members report to your designated Assembly Area.

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- ☐ **IF either the EOF OR the TSC is unavailable, announce the following:**

The (EOF) (TSC) is unavailable at this time. All on-duty SERO members who report to the (EOF) (TSC), report to your backup locations. All off-duty SERO members report to your backup Assembly Area.

- ☐ Repeat the PA message(s).

- ☐ Log time of announcement on EPI-FAP15-012.

- ☐ Review and approve the Incident Report Form (IRF) for transmittal.

- ☐ Refer To EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," and complete.

- ☐ Inform the DSEO/ADTS of offsite responders (i.e., National Guard) responding to the site.

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- ☐ **IF the emergency event occurs off-hours (6:00pm to 4:00am) or on weekends, direct SDO to voice-record EPI-FAP15-001 information and fax completed form to EOF and TSC.**

2. NRC Notification

- ☐ Direct the SDO to notify the NRC via the ENS.

- ☐ Verify the Emergency Communicator or SDO has contacted the resident inspector.

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3. Precautionary Dismissal

CAUTION

Precautionary dismissal may **NOT** be desired during certain events (e.g., Security-related). These actions should be reviewed periodically and implemented as quickly as possible after the threat has been resolved.

- ☐ **IF precautionary dismissal is not desired due to the nature of the event (e.g., Security-related, weather), consider postponing until threat has been resolved.**

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- ☐ **IF no constraints exist, Refer To EPI-FAP08, "Evacuation and Assembly," and conduct a precautionary dismissal, as events warrant.**

Section C: Alert Immediate Actions

- ☐ **IF** offsite responders (i.e., National Guard) are onsite and considered non-essential to the event, request the SSS/MOS evacuate them also.

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4. **IF** no upgrade to classification is warranted, Go To Section F, "Routine and Follow-up Actions."

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Section D: Site Area Emergency Immediate Actions

1. Notifications

- ☐ Notify the unaffected unit control room of the event.
- ☐ Request Security to restrict site access.

NOTE

1. Hazardous conditions or Security-related events may impact the ability to move personnel. If these conditions exist, it may be better to shelter personnel on site. During a security event, it may *not* be advisable to sound an alarm or make a PA announcement. (2)
2. State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS)/SSS will notify the CR DSEO of any protective actions put in place. (5)
3. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders located onsite as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- ☐ **IF** the event involves a situation where site personnel should be sheltered, Refer To EPI-FAP08, "Evacuation and Assembly," Sheltering, and perform actions.
 - ☐ WHEN appropriate, announce termination of sheltering. (2)
 - ☐ WHEN appropriate, conduct full SERO activation and evacuation, as applicable.

Section D: Site Area Emergency Immediate Actions

- ☐ **IF** sheltering actions are not being conducted, perform the following:

- ☐ Activate the outside speakers.



Implementation of station evacuation shall not be delayed unless constraints are in place (e.g., Security-related) and doing so creates a threat to personnel safety.

②

- ☐ Review the wording for the station notification message and announce the following over the station PA system:

Attention all personnel; attention all personnel. A Site Area Emergency has been declared at (Unit # _____) due to (brief description of event: _____).

- ☐ **IF** the designated emergency response facilities are available, announce the following:

②

All on-duty SERO members report to your designated emergency response facility. All off-duty SERO members report to your designated Assembly Area.

- ☐ **IF** the EOF OR TSC is unavailable, announce the following over the station PA system:

The (EOF)(TSC) is unavailable at this time. All on-duty SERO members who report to the (EOF)(TSC), report to your backup locations. All off-duty SERO members report to your backup Assembly Area.

②

- ☐ Repeat the PA message(s).
- ☐ Log time of announcement on EPI-FAP15-012.
- ☐ Review and approve the Incident Report Form (IRF) for transmittal.



Station evacuation may not be desired during certain events (e.g., Security-related).

②

- ☐ **IF** station evacuation could endanger plant personnel, consider the following:

- Defer actions until the threat has been resolved.
- **WHEN** threat has been resolved, perform evacuation and accountability as quickly as possible.

Section D: Site Area Emergency Immediate Actions

- ☐ Refer To EPI-FAP08, "Evacuation and Assembly," and conduct evacuation. (2)
- ☐ IF offsite responders (i.e., National Guard) are onsite and considered non-essential to the event, request the SSS/MOS evacuate them also.

NOTE

The State of CT is responsible for issuing KI to offsite responders located onsite supporting the event. (5)

- ☐ Obtain information from the SSS/MOS on protective actions (issuance of KI) being implemented by offsite responders located at the site and log.
- ☐ Refer To EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," and complete.
- ☐ Inform the DSEO/ADTS of offsite responders (i.e., National Guard) responding to the site. (5)
- ☐ IF the emergency event occurs off-hours (6:00pm to 4:00am) or on weekends direct SDO to voice-record EPI-FAP15-001 information and fax completed form to EOF and TSC.

2. NRC Notification

- ☐ Direct the SDO to notify the NRC via the ENS.
- ☐ Verify the Emergency Communicator or SDO has contacted the resident inspector. (3)

3. IF no upgrade to classification is warranted, Go To Section F, "Routine and Follow-up Actions."

Section E: General Emergency Immediate Actions

1. Notifications

- ☐ Notify the unaffected unit control room of the event.
- ☐ Request Security to restrict site access.

NOTE

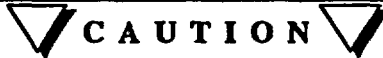
1. Hazardous conditions or Security-related events may impact the ability to move personnel. If these conditions exist, it may be better to shelter personnel on site. During a security event, it may *not* be advisable to sound an alarm or make a PA announcement. (2)
2. State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS)/SSS will notify the CR DSEO of any protective actions put in place. (5)
3. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders located onsite as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- ☐ IF the event involves a situation where site personnel should be sheltered, Refer To EPI-FAP08, "Evacuation and Assembly," Sheltering, and perform actions. (2)
 - ☐ WHEN appropriate, announce termination of sheltering.
 - ☐ WHEN appropriate, conduct full SERO activation and evacuation, as applicable.

Section E: General Emergency Immediate Actions

- ☐ **IF** sheltering actions are not being conducted, perform the following:

- ☐ Activate the outside speakers.



Implementation of station evacuation shall not be delayed unless constraints are in place (e.g., Security-related) and doing so creates a threat to personnel safety.

②

- ☐ Review the wording for the station notification message and announce the following over the station PA system:

Attention all personnel; attention all personnel. A General Emergency has been declared at (Unit # _____) due to (brief description of event

_____).

- ☐ **IF** the designated emergency response facilities are available, announce the following:

All on-duty SERO members report to your designated emergency response facility. All off-duty SERO members report to your designated Assembly Area.

②

- ☐ **IF** the EOF OR TSC is unavailable, announce the following over the station PA system:

The (EOF)(TSC) is unavailable at this time. All on-duty SERO members who report to the (EOF)(TSC), report to your backup locations. All off-duty SERO members report to your backup Assembly Area.

- ☐ Repeat the PA message(s).
- ☐ Log time of announcement on EPI-FAP15-012.
- ☐ Review and approve the Incident Report Form (IRF) for transmittal.

NOTE

The State must be notified within 15 minutes after a decision is made to issue a PAR.

- ☐ Review and develop PARs in accordance with EPI-FAP06, "Classification and PARs."
- ☐ **IF** PARs are warranted, issue them in accordance with EPI-FAP06-005, "Control Room Protective Action Recommendations."

②

Section E: General Emergency Immediate Actions

- ☐ **IF** the status of the fission product barriers or offsite radiological or meteorological conditions change, perform the following:

- Evaluate the impact on PARs per EPI-FAP06, "Classification and PARs."
- Provide changes to PARs to the State, as appropriate (non-delegable).

CAUTION

Station evacuation may not be desired during certain events (e.g., Security-related).

- ☐ **IF** station evacuation could endanger plant personnel, consider the following:

- Defer actions until the threat has been resolved.
- **WHEN** threat has been resolved, perform evacuation and accountability as quickly as possible.

- ☐ Refer To EPI-FAP08, "Evacuation and Assembly," and conduct evacuation.

- ☐ **IF** offsite responders (i.e., National Guard) are onsite and considered non-essential to the event, request the SSS/MOS evacuate them also.

NOTE

If emergency exposure upgrades are needed, the State of CT will authorize limits in accordance with EPA-400 guidelines.

- ☐ Obtain information from the SSS/MOS on protective actions being implemented by offsite responders located at this site and log.

- ☐ Refer To EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," and complete.

- ☐ Inform the DSEO/ADTS of offsite responders (i.e., National Guard) responding to the site.

- ☐ **IF** the emergency event occurs off-hours (6:00pm to 4:00am) or on weekends, direct SDO to voice-record EPI-FAP15-001 information and fax completed form to EOF and TSC.

2. NRC Notification

- ☐ Direct the SDO to notify the NRC via the ENS.

- ☐ Verify the Emergency Communicator or SDO has contacted the resident inspector.

Section F: Routine and Follow-up Activities

NOTE

The initial stages of any emergency may require CR personnel to perform several required tasks. If necessary, the CR-DSEO has the authority to reassign tasks (other than classification, PARs, and emergency exposure dose extensions) to other available CR individuals.

- ☐ 1. Log all activities and decisions on EPI-FAP15-012, "SERO Log Sheet."
- ☐ 2. IF a release of radioactive material is in progress or is imminent, direct the Chemistry Technician to perform initial on-shift dose assessment.
- ☐ 3. IF any of the following was deferred, consider performing at this time:
 - SERO activation and/or facility activation
 - Precautionary dismissal
 - Evacuation
 - Accountability
- ☐ 4. Continuously evaluate or direct the evaluation of the EAL tables and fission product barriers for changes in event status.
- ☐ 1. Ensure the NRC is notified within 60 minutes of any event classification and whenever significant changes in conditions occur during the emergency.
- ☐ 2. Ensure follow-up notifications are routinely provided to the State and local agencies as appropriate.
- ☐ 3. IF the status of the fission product barriers or offsite radiological or meteorological conditions change, perform the following:
 - Evaluate the impact on PARs per EPI-FAP06, "Classification and PARs."
 - Provide changes to PARs to the State, as appropriate (non-delegable).

NOTE

The State of CT/local agencies are responsible for upgrading exposures of offsite responders assigned to the station.

- ☐ 8. IF necessary, authorize extended emergency exposure limits (dose > 5 Rem is expected) in accordance with EPI-FAP09-001, "Increased Radiation Exposure Authorization," and log any extensions on SERO Log Sheet (non-delegable).

Section F: Routine and Follow-up Activities

- ☐ 9. IF suspension of safeguards and §50.54(x) action is invoked, ensure that the NRC is notified of the departure as soon as possible (but within one hour) using the ENS.
- ☐ 10. Direct the RMT #1 to perform control room and plant habitability surveys and sampling.

NOTE

The State of CT/local agencies are responsible for issuing KI to offsite responders assigned to the station.

⑤

- ☐ 11. IF necessary, issue KI tablets to control room staff in accordance with EPI-FAP09-003, "KI Tablet Issue Authorization and Tracking Sheet," and log time of issue on SERO Log Sheet (non-delegable).
- ☐ 12. Conduct periodic briefings with the control room staff.
- ☐ 13. IF events have been controlled to the point where termination of the emergency can be considered, Refer To EPI-FAP06, "Classification and PARs," for guidance.

①

Section J: Transfer of Command and Control

NOTE

Activation of the EOF and TSC/OSC should occur within 60 minutes of SERO notification.

During certain events (e.g., Security-related, toxic gases) immediate SERO activation may be deferred because of the threat to plant personnel. This could prevent activation of facilities within 60 minutes. (2)

The control room may transfer certain response functions (such as team dispatch, notification, etc.) to TSC or EOF individuals before the facilities are declared activated, provided command and control is maintained by the CR-DSEO.

It is preferred that turnover with the ADTS and the on-call DSEO be conducted at the same time but events may occur which require separate turnovers to be completed.

- ☐ 1. IF precautionary dismissal, and/or evacuation and accountability have been deferred due to certain constraints (e.g., Security-related, weather), perform the following: (2)
 - Discuss constraints with the EOF DSEO and the ADTS.
 - Consider whether deferred actions can be performed.
- ☐ 2. Conduct turnover with the EOF DSEO and the ADTS.

NOTE

For a Unit 1 event, the Unit 2 CR-DSEO becomes the MCRO. (1)

- ☐ 3. Upon formal relief by the DSEO, record turnover date and time in the logbook.
- ☐ 4. Conduct a briefing with the EOF DSEO and ADTS using EPI-FAP15-001, "DSEO/ADTS Briefing Sheet."
- ☐ 5. Go To EPI-FAP01-002, "Manager of Control Room Operations."

Prepared by: _____
Signature Print Date

Docket Nos. 50-245
50-336
50-423
B18926

Attachment 2

Millstone Power Station, Unit Nos. 1, 2 and 3

Emergency Procedures Implementing (EPI) Functional Administrative Procedure (FAP)
MP-26-EPI-FAP02
"Technical Support Center Activation and Operation"
and Associated Forms

**Functional
Administrative
Procedure**



Millstone Station

Technical Support Center Activation and Operation

MP-26-EPI-FAP02

Rev. 001-02

Approval Date: 5/21/03

Effective Date: 5/30/03



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MP-26-EPI-FAP02-004, "RMT #2 (NAP-HP and SAP-HP)"	
MP-26-EPI-FAP02-005, "Radiological Communicator - TSC"	
MP-26-EPI-FAP02-006, "Manager of Technical Support Center (MTSC)"	
MP-26-EPI-FAP02-007, "Technical Support Center Reactor Engineer (TSCRE)"	
MP-26-EPI-FAP02-008, "Technical Support Center Electrical Engineer (TSCEE)"	
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MP-26-EPI-FAP02-012, "TSC/OSC Emergency Repair/Procedure Change/Assessment Recommendations"	

1. PURPOSE

1.1 Objective

This procedure provides guidance to Station Emergency Response Organization (SERO) personnel who report to the Technical/Operations Support Center (TSC/OSC) during an event.

1.2 Applicability

Activation of the TSC/OSC is initiated upon declaration of an ALERT, State Posture Code Charlie-One, or higher event.

1.3 Supporting Documents

EPI-FAP08, "Evacuation and Assembly"

EPI-FAP09, "Radiation Exposure Controls"

EPI-FAP12, "Thermal Hydraulic Evaluation"

EPI-FAP15, "Common Forms"

OP 3315E, "Technical Support Center Ventilation"

SDI 612, "Security Reports"

SEP 5041, "Security During Emergencies"

SEP 5034, "Medical Emergencies"

C OP 204, "Response to Medical Emergencies"

RPM 1.5.4, "Response to a Contaminated Injured Person"

NRC Regulatory Issue Summary 2002-21, "National Guard and other Emergency Responders Located in the Licensee's Controlled Area"

②

1.4 Discussion

1.4.1 Control and Limitations of TSC Ventilation and Capacity

The TSC/OSC ventilation system is designed for 20 persons. Capacity may be exceeded (40 people for up to 6 hours) without exceeding CO₂ limits for team briefings, turnovers, ALARA, or if TSC/OSC is monitored.

1.4.2 10 CFR 50.54(x) Invocation

- a. As discussed in the Statements of Consideration to 10 CFR Part 50, emergencies can arise during which compliance with a license condition or a Technical Specification could prevent necessary action by the licensee to protect the public health and safety. Absolute compliance with the license during these emergencies can be a barrier to effective protective action.

- b. Unanticipated circumstances can occur during the course of an emergency which may call for responses different from any previously considered during the course of licensing. Special circumstances requiring a deviation from license requirements are not necessarily limited to transients or accidents not analyzed in the licensing process. Special circumstances can arise during emergencies involving multiple equipment failures or coincident accidents where plant emergency procedures could be in conflict with or not applicable to the circumstances. In addition, an accident can take a course different from that which was addressed when the emergency procedure was written, thus requiring a protective response at variance with a procedure required to be followed by the licensee which may ultimately be contrary to current Technical Specifications or the license condition.
- c. 10 CFR 50.54(x) will permit the licensee to take reasonable action in an emergency even though the action departs from licensing conditions or plant Technical Specifications. This action may only be taken however, if the following criteria are met:
- The action is immediately needed to protect the public health and safety, including plant personnel.
 - No action consistent with the license conditions and Technical Specifications is immediately apparent that can provide adequate or equivalent protection.
 - As a minimum, a licensed senior operator approves the action.
- d. Applicability Determination

The NRC can amend Technical Specifications or license conditions. The §50.54(x) regulation is not intended to apply in circumstances where time allows this normal process to be followed. The regulation applies only to those emergency situations in which immediate action is required by the licensee to protect public health and safety and this action is contrary to a Technical Specification or license condition.

Operating outside the boundaries of approved procedures or in the absence of procedures does not in and of itself meet the threshold for invocation of §50.54(x). Also, the existence of a safety analysis (§50.59) conducted for the purpose of determining whether an unreviewed safety question exists is not sufficient to determine whether application of §50.54(x) is appropriate. §50.54(x) is not intended for use as a general regulatory protective shield for all actions not addressed by current procedures. Even after §50.54(x) has been invoked, each subsequent action taken must be evaluated for §50.54(x) applicability with all necessary approvals and notifications being made for each invocation, as appropriate.

Additionally, the §50.54(x) and (y) amendments were not written for the purpose of establishing procedures and guidance (such as Severe Accident Management Guidelines (SAMG)) that may be useful at some future date (e.g., preplanning and contingency actions). The determination to discontinue following plant operating procedures and/or EOP, and to begin following SAMG, by itself, does not constitute a departure from a license condition or Technical Specification and, therefore, does not require invocation of §50.54(x). Note however, it is possible that the first action directed during SAMG implementation may actually require §50.54(x) invocation.

The threshold for invocation is met only if the action being taken is not consistent with current license conditions and Technical Specifications. Additionally, the action must meet the time and safety dependent criteria previously discussed. Then and only then should the invocation of §50.54(x) be considered for approval.

e. **Approval**

A licensed senior operator position is the minimum level within the organization, not the only position, authorized to approve invocation of §50.54(x). 10 CFR 50.54(y) states, "Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator..." This wording makes it clear that such action must be approved by at least a licensed senior operator acting for the licensee. The regulation focuses on the responsibilities of facility licensees and only peripherally includes licensed senior operators. Under the provision any licensed senior operator (licensed for the Unit involved) would be sufficient. However, during declared emergencies more senior licensee personnel would eventually become available. The decision to depart from the license would then pass to these more senior personnel already identified in the Emergency Plan.

Ultimate responsibility for the health and safety of the general public and station personnel in an emergency resides in the highest authority in the chain of command. The persons responsible for the health and safety of the general public and station personnel are already identified in the facility license and implementing procedures. These persons include the ADTS and the DSEO following emergency response facility activation. If however, an emergency should occur on a backshift, no licensee representative higher than a licensed senior operator in the chain of command is likely to be available. Therefore, the departure from a license condition or Technical Specification requires the approval of a licensed senior operator as a minimum.

To require any additional approvals or concurrence, such as from senior licensee representatives or the NRC, would defeat the purpose of §50.54(x). Concurrence or approval from the NRC is also not necessary, as this action would amount to a license amendment using procedures contrary to those existing for amendments. NRC concurrence would additionally shift the burden of responsibility for station safety from the licensee to the NRC.

f. Reportability

Deviations authorized pursuant to 10 CFR 50.54(x) are reportable as soon as practical and in all cases within one hour under 10 CFR 50.72(b)(1)(i)(B), or 10 CFR 50.73(a)(2)(i)(C), if not reported simultaneously with emergency notification under 10 CFR 50.72(a). When time permits, the notification is made before the protective action is taken; otherwise, it is made as soon as possible thereafter. Additionally, a Licensee Event Report will be generated and submitted to the NRC within 30 days.

g. Subsequent Actions

Following invocation of 50.54(x) and notification of the NRC, actions are taken as soon as practical to restore the plant to full compliance with Technical Specifications and all conditions of license.

1.4.3 On-Site Personnel Protective Action Decisions (PPADs)

The implementation of PPADs is an important function of the TSC/OSC. These PPADs include: evacuating or relocating on-site personnel, providing access control to on-site areas, issuing Potassium Iodide (KI), and/or radiological controls.

1.4.4 Control of On-Site Technical, Operational, Assessment, and Repair Staffs

The TSC/OSC provides an emergency response facility to control the on-site technical, operational, assessment and repair staffs. This includes performing analysis of plant conditions and corrective actions, providing guidance to the control room regarding returning the plant to a safe condition, providing accident management guidance, and prioritizing assessments for damage, repair and radiological activities.

Once an Alert or higher emergency is declared, Site Fire Protection relocates from Bldg. 410 (ROB) to the OSCAA. In the event of a fire, hazmat, or medical event after SERO activation, Site Fire Protection will be mobilized from the OSCAA. Request for dispatch could come directly from the Control Room via plant page or radio or from the TSC. Site Fire Protection should be considered a team and briefed accordingly. However, there is a need to dispatch Site Fire Protection as quickly as possible, given the nature of the events in progress. An HP Technician and/or OSC Assistant should be dispatched with Site Fire Protection to provide the communications interface back to the OSCAA. Site Fire Protection and the Fire Brigade Advisor should maintain their normal communication interfaces with the Control Room for fire, hazmat, or medical events. ①

Firewatch posts are automatically suspended upon declaration of an Alert or higher declaration. Firewatch personnel would follow instructions for non-essential personnel. After activation of the TSC, the ADTS will discuss the need for reestablishing Firewatch posts with the MCRO.

1.4.5 Protective Actions for Offsite Emergency Responders Located at the Station

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS)/SSS will notify the ADTS of any protective actions put in place. ②

For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider these offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

1.4.6 Definitions and abbreviations are contained in Attachment 1. Responsibilities are contained in Attachment 2.

2. **INSTRUCTIONS**

2.1 Refer To and complete the following, as applicable:

NOTE

Steps in the position specific checklists may be performed in any order, or more than once, as necessary.

- EPI-FAP02-001, "Assistant Director Technical Support (ADTS)"
- EPI-FAP02-002, "TSC Shift Manager (TSCSM)"
- EPI-FAP02-003, "Manager of Radiological Consequences Assistant (MRCA)"
- EPI-FAP02-004, "RMT #2 (NAP-HP and SAP-HP)"
- EPI-FAP02-005, "Radiological Communicator - TSC"
- EPI-FAP02-006, "Manager of Technical Support Center (MTSC)"
- EPI-FAP02-007, "Technical Support Center Reactor Engineer (TSCRE)"
- EPI-FAP02-008, "Technical Support Center Electrical Engineer (TSCEE)"
- EPI-FAP02-009, "Technical Support Center Mechanical Engineer (TSCME)"
- EPI-FAP02-010, "Accident Management Team (AMT)"
- EPI-FAP02-011, "Manager of Security (MOS)"
- EPI-FAP02-012, "TSC/OSC Emergency Repair/Procedure Change/Assessment Recommendations"

2.2 **IF** an action is not appropriate under existing conditions or was not necessary for the event, enter N/A when completing documentation for submittal.

3. SUMMARY OF CHANGES

3.1 Revision 001-02

3.1.1 Added supporting document Regulatory Issue Summary 2002-21.

3.1.2 Added section 1.4.5 on protective actions for offsite emergency responders located at the station.

3.2 Revision 001-01

3.2.1 Clarified reference to "all-call" vs. "subject-to-call."

3.2.2 Deleted reference to AMT-mechanical engineer.

3.2.3 Added information on Site Fire Protection activities during an emergency event. (CR-03-01689)

3.3 Revision 001

3.3.1 Biennial Review

3.3.2 Section 1.4.2.d, added acronym - SAMG

3.3.3 Attachment 1, added Charlie-one and Charlie-two definition

3.3.4 Attachment 1, added SAMG to abbreviation list

3.3.5 Attachment 2, added acronyms for 1 through 11

Attachment 1

Definitions and Abbreviations

(Sheet 1 of 2)

Definitions

Activation - All functions, minimum staffing requirements, and turnovers have been completed and the senior SERO position in the facility declares it active.

Alpha or Bravo - State of Connecticut posture codes issued with a GENERAL EMERGENCY classification. A technical basis for developing a PAR as a result of that classification.

Charlie-One - State of Connecticut posture code issued with an ALERT classification.

Charlie-Two - State of Connecticut posture code issued with a SITE AREA EMERGENCY classification.

Minimum Staff - Positions in the facility which are necessary before activation may occur.

Mission Specific Exposure Limits - Specific exposure limits based on job task assignments for emergency team members.

Plant Condition - A technical basis for developing a PAR as a result of actual or imminent loss of all 3 fission product barriers, or based on high containment radiation levels.

Unmonitored Release - A suspected or actual release of radioactive material to the environment without passing through an operational process or radiation monitor.

Abbreviations

ADEOF - Assistant Director Emergency Operations Facility

ADTS - Assistant Director Technical Support

AMRDA - Assistant Manager of Radiological Dose Assessment

CDE - Committed Dose Equivalent for the thyroid (usually in units of Rem)

CR-DSEO - Control Room Director of Station Emergency Operations

EAL - Emergency Action Level

EOF - Emergency Operations Facility

ERF - Emergency Response Facility

IRF - Incident Report Form

KI - Potassium Iodide

Attachment 1

Definitions and Abbreviations

(Sheet 2 of 2)

LAN - Local Area Network

MCRO - Manager of Control Room Operations

MOS - Manager of Security

MRDA - Manager of Radiological Dose Assessment

MTSC - Manager of Technical Support Center

OFIS - Off-Site Facilities Information System

OSC - Operations Support Center

PCs - Protective Clothing

PPADs - Personal Protective Action Decisions

SAMG - Severe Accident Management Guidelines

SERO - Station Emergency Response Organization

SSS - Security Shift Supervisor

TIC - Technical Information Coordinator

TSC - Technical Support Center

Attachment 2
Responsibilities
(Sheet 1 of 3)

1. Assistant Director Technical Support (ADTS)

The ADTS is responsible for directing and managing the MCRO, MTSC, MOSC, MRCA, and MOS. The ADTS reports to and assists the DSEO. The ADTS is responsible for the following:

- Providing event classification input to the DSEO
- Prioritizing damage assessment and repair activities of the TSC and OSC
- Coordinating and directing the TSC and OSC, and providing guidance to the control room(s)
- Returning the facility to a safe configuration
- Authorizing emergency reentry into radiological areas for assessment, repair, or search and rescue
- Authorizing emergency exposure upgrades up to 25 rem TEDE for emergency workers inside the Protected Area
- Authorizing the use of Potassium Iodide (KI) for emergency workers inside the Protected Area
- Evaluation of conditions and direction of entry into Severe Action Management Guidelines with the support of the MCRO

2. TSC Shift Manager (TSCSM)

The TSCSM reports to the ADTS in the TSC. The TSCSM is responsible for:

- Maintaining communications with the Control Room.
- Monitoring EAL tables and providing classification and barrier status recommendations to ADTS
- Monitoring Control Room progress in Emergency Operating Procedures (EOPs)
- Providing support to TSC personnel for determining success paths.

3. Manager of Radiological Consequence Assessment (MRCA)

The MRCA reports to the ADTS in the TSC. The MRCA is responsible for:

- Providing radiological guidance and support for site evacuation and emergency teams
- Coordinating on-site radiological surveys and assessment
- Informing the ADTS of abnormal or transient on-site radiation levels and conditions and recommending PPADs to the ADTS
- Advising the ADTS regarding authorizing exposure limit increase for emergency workers
- Providing recommendations to the ADTS for issuance of Potassium Iodide (KI) to emergency workers on-site

Attachment 2

Responsibilities

(Sheet 2 of 3)

4. Radiological Monitoring Team #2 (RMT #2)

RMT #2 reports to the MRCA in the TSC. Responsible for providing evacuee monitoring at the NAP and SAP, and performing on-site surveys, collecting radiological samples or providing HP support as assigned.

5. Manager of Technical Support Center (MTSC)

The MTSC reports to the ADTS. The MTSC is responsible for the following:

- Analyzing plant conditions and status
- Providing critical plant parameter information to the ADTS
- Resolving existing and potential engineering and technical problems to mitigate the consequences of the event
- Determining emergency event cause and corrective actions
- Developing action plans to mitigate emergency conditions
- Supervising the Accident Management Team (AMT) in performing analysis of plant conditions and corrective actions
- Providing technical support to the ADTS, MCRO, and MOSC
- Developing procedures or 10 CFR 50.54(x) deviations for approval
- Coordinating activities with the unaffected units

6. Technical Support Center Reactor Engineer (TSCRE)

The TSC Reactor Engineer reports to the MTSC. The TSC Reactor Engineer is responsible for reactivity management guidance and assistance of the AMT with thermal hydraulic calculations.

7. Technical Support Center Electrical Engineer (TSCEE)

The TSC Electrical Engineer reports to the MTSC. The TSC Electrical Engineer is responsible for providing the MTSC with electrical engineering and general support.

8. Technical Support Center Mechanical Engineer (TSCME)

The TSC Mechanical Engineer reports to the MTSC. The TSC Mechanical Engineer is responsible for providing the MTSC mechanical engineering and general support.

Attachment 2 Responsibilities

(Sheet 3 of 3)

9. Accident Management Team Leader and Thermal-Hydraulics Engineer

The AMTL reports to the MTSC. The AMT members report to the AMTL. The AMT is responsible for analyzing thermal hydraulic response of the plant and assisting the MTSC in developing accident response strategies, including severe accident management efforts.

10. Manager of Security (MOS)

The MOS reports to the ADTS in the TSC. The MOS is responsible for the following:

- Station security and access control
- Personnel accountability
- Personnel evacuation and assembly
- Security escorts.

The MOS also provides security support for the following, as needed:

- Emergency operations
- Search and rescue teams
- Reentry and recovery operations

11. Radiological Communicator (RADCOM)

The RADCOM reports to the MRCA and is responsible for:

- Communicating with on-site RMTs
- Updating status boards
- Providing necessary assistance to the ARPS

5/21/03

Approval Date

6/30/03

Effective Date

Assistant Director Technical Support (ADTS)

This form provides guidance to the ADTS for emergency response actions during a declared emergency that activates the SERO.

Section A: TSC/OSC Activation/Initial Actions

NOTE

TSC/OSC activation is not required to provide immediate support to the control room.

- ☐ 1. Key into TSC/OSC.
- ☐ 2. Sign in on TSC/OSC Staffing Board.
- ☐ 3. Obtain a copy of the Incident Report Form (IRF) from the fax machine or Control Room.
- ☐ 4. Obtain additional information from the following, as necessary:
 - Voice mail box
 - Additional faxes
- ☐ 5. Initiate a log of significant events and communications on EPI-FAP15-012, "SERO Log Sheet," and log date and arrival time.
- ☐ 6. Check TSC/OSC and OSCAA SERO response status as follows:
 - Verify minimum facility staff is present.
 - IF minimum staffing is not present, determine the ability of the SERO to activate as is and proceed as appropriate (i.e., all functional areas staffed).
- ☐ 7. Contact CRDSEO and discuss any significant changes since event declaration and obtain status of onsite protective actions and emergency team deployment.
 - IF offsite responders (i.e., National Guard, State Police) are onsite or responding to the site, obtain information on actions in progress, State protective actions being implemented, etc.
- ☐ 8. Refer To EPI-FAP15-001 "DSEO/ADTS Briefing Sheet" and obtain a briefing from the control room (CRDSEO or MCRO) and the DSEO in the EOF.
- ☐ 9. Formally relieve the CRDSEO of emergency team deployment and onsite protective action responsibilities and log the date and time of relief.

④

Section A: TSC/OSC Activation/Initial Actions

- ☐ 10. Declare the TSC/OSC and OSCAA activated and record activation time on the SERO Log Sheet.
- ☐ 11. Brief the TSC/OSC on plant status and control room priorities.

NOTE

The CR-DSEO may have chosen *not* to perform a precautionary dismissal or evacuation due to the nature of the event (e.g., Security related). These actions should be implemented as quickly as achievable when the threat has been resolved.

①

- ☐ 12. IF the precautionary dismissal or evacuation was not performed by the CRDSEO prior to turnover and no constraints exist, Direct CR to implement EPI-FAP08, "Evacuation and Assembly."

①

NOTE

For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders (i.e., National Guard) stationed at the site as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

④

- ☐ 13. IF offsite responders (i.e., National Guard) are onsite and considered non-essential to the event, request the MOS have them evacuated also.

Section B: Routine Activities

- ☐ 1. Track the response of additional Minimum Staffing and Full Staffing positions and direct the MOR to contact personnel for unfilled positions.
- ☐ 2. Direct non-assigned TSC/OSC personnel to go to the OSC Assembly Area.
- ☐ 3. Establish TSC/OSC priorities and direct the initial response.
- ☐ 4. Notify the DSEO of any recommended changes in event classification or barrier status.
 - IF conditions change, Refer To EPI-FAP06, "Classification and PARs," for the affected unit and immediately recommend classification changes to the DSEO, as appropriate.
 - WHEN the DSEO escalates the event classification, inform personnel in the TSC/OSC and OSC Assembly Area.

②

Section B: Routine Activities

NOTE

An evacuation and assembly may not be performed if doing so poses a threat to personnel safety. Sheltering may be the desired response.

①

- ☐ 5. **IF** Site Area Emergency or General Emergency is declared and no constraints exist, Direct Control Room to implement EPI-FAP08, "Evacuation and Assembly."
- ☐ 6. Update the DSEO on the status and priority of assessment and repair activities.
- ☐ 7. Direct and approve on-site PPADs considering the following:
 - **IF** time permits, discuss logistics for the on-site PPADs with the MTSC, MOSC, MOS, and MRCA.
 - **IF** there is a potential for an airborne radiological release affecting the TSC/OSC, announce that there will be no eating or drinking until further habitability is verified within the facilities.
 - **IF** there is a localized emergency (security, high radiation, fire), include its type and location in an announcement and instruct personnel to stand clear of the area.
 - Inform the DSEO of any implemented on-site PPADs.
- ☐ 8. Refer To EPI-FAP02-012, "TSC/OSC Emergency Repair/Procedure Change/ Assessment Recommendations," and authorize departure from normal station operations and maintenance procedures (50.54x activities).
- ☐ 9. Develop strategies with the MTSC to address the following:
 - Prevention of severe core damage
 - Increasing time to core uncover
 - Prevention of containment failure
 - Reduction and/or termination of radiological releases to the environment
- ☐ 10. Contact the MCRO and discuss the following:
 - Re-establishment of Firewatch posts
 - Procedure development for outside design basis operations
 - TSC/OSC Priorities
 - Core thermal hydraulic analysis and time to core uncover
 - Entry into Severe Accident Management Guidelines
 - Projected plant system degradation and event conditions

③

③

Section B: Routine Activities

- ☐ 11. Establish the following emergency assessment and repair actions:
 - Repair/evaluation priorities
 - Estimated repair times
 - Need to authorize mission specific emergency exposure upgrades to 25 Rem TEDE
 - Authorization for work assignments and reentry
- ☐ 12. Notify the DSEO of §50.54(x) use and of the requirement to notify the NRC of the departure as soon as possible.
- ☐ 13. Provide the DSEO with current and projected analyses of plant conditions and status on a routine basis.
- ☐ 14. Verify the MOSC has requested Site Fire Protection initiate monitoring of CO₂ levels in the TSC/OSC.
- ☐ 15. Brief the NRC Site Team of actions taken and planned upon their arrival in the TSC/OSC.

Section C: Emergency Exposure Controls

- ☐ 1. IF notified by the MRCA that implementation of EPI-FAP09, "Radiation Exposure Controls," is needed for emergency exposure increases or issuing KI to on-site SERO emergency workers, perform the following:
 - Evaluate the emergency condition.
 - IF KI is warranted, inform the DSEO that KI will be issued to on-site SERO emergency workers.
 - IF exposure upgrades up to 25 Rem are required, inform DSEO of increase.
 - IF exposure upgrades greater than 25 Rem are required, obtain DSEO approval.
 - Refer To EPI-FAP09-003 and sign and date appropriate form, indicating approval.

NOTE

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The MOS will notify the ADTS of any protective actions put in place.

- Request the MOS provide any information on protective actions being implemented by offsite responders located at the site, and notify the DSEO.

Section C: Emergency Exposure Controls

- ☐ 2. Coordinate the release of contaminated person from site to a designated decontamination location.
-

Section D: Event Termination and Recovery Actions

- ☐ 1. Monitor affected unit conditions and recommend termination to Recovery actions to the DSEO when appropriate.
- ☐ 2. IF long term damage to the plant has not occurred, perform the following:
- Brief TSC/OSC on plant conditions allowing termination.
 - Direct TSC/OSC staff to return facilities to pre-emergency state of readiness.
 - Record SERO termination in logbook.
- ☐ 3. IF long term damage to the plant has occurred and Recovery option is selected, perform the following:
- Brief TSC/OSC on plant conditions and entry into Recovery.
 - Refer To and implement EPI-FAP14, "Recovery."
 - Record SERO termination in logbook.

Prepared By: _____

Signature

Print

Date

5/21/03
Approval Date

5/30/03
Effective Date

Manager of Radiological Consequence Assessments (MRCA)

This form provides guidance to the MRCA for emergency response actions during a declared emergency that activates the SERO.

Section A: Initial Actions

- ☐ 1. Key into TSC.
- ☐ 2. Sign in on TSC Staffing Board.
- ☐ 3. Obtain a briefing from the ADTS and MOSC.
- ☐ 4. Initiate a log of significant events and communications on EPI-FAP15-012, "SERO Log Sheet," and log date and arrival time.
- ☐ 5. Ensure communications are established with the following personnel to determine event conditions and exposure potential for SERO members:
 - RMT #1
 - ARPS
 - MOS
 - EOF RADCOM
 - RMT #2 (NAP/SAP)
- ☐ 6. Direct the ARPS to assign HP Tech to conduct habitability for the TSC/OSC
- ☐ 7. Contact the FTDC and request any extra HP Technicians who responded to the EOF be sent to the OSCAA or other needed locations (e.g., NAP, SAP, etc.).

①

Section B: Recurring Activities

NOTE

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS) will notify the ADTS of any protective actions put in place.

②

- ☐ 1. If exposure upgrade or KI is needed, Refer To and implement EPI-FAP09, "Radiation Exposure Controls."

Section B: Recurring Activities

- ☐ 2. Upon receipt of air sample data, from the Control Room, perform the following:
 - If less than 30 minutes after the reactor trip, Go To Section G and determine recommended PPADs.
 - If greater than 30 minutes after the reactor trip, Go To EPI-FAP09-005.
- ☐ 3. Notify ADTS of recommended PPADs such as:
 - Relocation of an ERF (i.e., OSC AA, Control Room, CAS)
 - Use of KI
 - Security force relocation
 - Access control of affected areas of buildings
- ☐ 4. Notify the following of the appropriate level of radiation protection measures needed for personnel in the field:
 - MCRO
 - MOSC
 - Unaffected Control Room Shift Managers
 - MOS
- ☐ 5. WHEN isotopic analysis for measured I-131 is received, Refer To Section G and revise recommended PPADs, as necessary.
- ☐ 6. Ensure additional HP staff are available to perform the following tasks:
 - Habitability surveys (Control Rooms, EOF, TSC/OSC and OSC AA)
 - EOF Decontamination facility set-up and operation
 - EOF HP Control Point (portal monitor) monitoring
 - EOF Count room set-up and operation
 - Continuous air monitor (CAMS-3 or equivalent) startup
- ☐ 7. IF CAMs are *not* operable OR alarm, direct collection of grab samples at intervals warranted by any of the following:
 - Probability of release
 - Expected magnitude and duration of release
 - Release source, path, and wind direction
 - Observed air sample results or trends
 - Indications from other radiation monitors
 - MRCA judgement
- ☐ 8. Request additional HP staff from MOR, as necessary.
- ☐ 9. Direct MOS and MOR to establish controls for personnel responding to the station.

Section B: Recurring Activities

- ☐ 10. Review adequacy of PPADs.
- ☐ 11. Ensure the MOC is receiving radiological data in response to NRC requests.
- ☐ 12. Provide guidance to MOR for coordinating radiological control of on-site food and water supplies.
- ☐ 13. Consult with MRDA and MOR to determine need for off-site assistance for radiological monitoring and decontamination activities.
- ☐ 14. Determine if personnel require the following:
 - Whole body count
 - Medical referral (i.e., bioassays or hospitalization)

NOTE

If personnel are in hazardous areas or plant conditions are rapidly changing, communications with personnel should be maintained every 15-30 minutes. If conditions are more stable, communications may be maintained hourly or as dictated by the situation.

- ☐ 15. Inform HP staff of plant conditions, classification, and protective actions.
- ☐ 16. Ensure notifications for emergency exposures in excess of 4.5 Rem have been performed in accordance with EPI-FAP09, "Exposure Controls."

Section C: Control of On-Site Radiological Monitoring Teams

- ☐ 1. Ensure on-site RMTs and emergency repair teams are briefed on the following:
 - Plant conditions (current and projected)
 - Radiological conditions (current and projected)
 - Meteorological conditions (current and projected)
 - Survey locations
 - Low background areas
 - Access routes
 - Exposure limits and turnback values
 - Backup telephone number to TSC/OSC

Section C: Control of On-Site Radiological Monitoring Teams

NOTE

On-site teams may be deployed from the CR or OSC AA very early in the event. HP Technicians may also be deployed with emergency repair teams.

- ☐ 2. Designate on-site RMTs as follows:
 - Label the first RMT #1 as "RMT #1 A."
 - Label the second RMT #1 as "RMT #1 B."
 - Label RMT #2 located at NAP as "RMT NAP."
 - Label RMT #2 located at SAP as "RMT SAP."
- ☐ 3. Ensure the on-site Radiological Survey board is maintained current as survey results are reported by on-site RMTs.
- ☐ 4. Direct on-site RMTs to transport samples to onsite count rooms or the EOF for analysis, as necessary.

NOTE

The MRCA may delegate responsibility for I-131 calculations. It is recommended that results be communicated to the MRDA and ARPS.

- ☐ 5. Refer To and complete EPI-FAP09-005, "Calculation of I-131 Activity Worksheet Based on HP-210 Count," as necessary.
- ☐ 6. Refer To and complete EPI-FAP09-006, "Thyroid CDE Based on Field Air Samples," as necessary.
- ☐ 7. Provide ADTS, EOF RADCOM and OSC ARPS with on-site radiological survey results, paying particular attention to those areas where repair teams may be dispatched to implement mitigation strategies.

Section D: Sheltering, Evacuation, and Assembly

NOTE

If the potential exists for an increase in internal or external dose to personnel, the MRCA may recommend sheltering or evacuation of an area at any time. I-131 levels referenced in steps 1 and 2 are equal to 10 x DAC and 500 x DAC respectively.

①

- ☐ 1. IF radiation dose rates > 10 mRem/hr TEDE or I-131 levels > 2.0 E-7 $\mu\text{Ci/cc}$, recommend ADTS consider evacuation of affected areas. ①
- ☐ 2. IF radiation dose rates > 500 mRem/hr TEDE or I-131 levels > 1.0E-5 $\mu\text{Ci/cc}$, recommend the ADTS direct evacuation of affected areas. ①

Section E: Security Force and On-Site RMT Protection

- ☐ 1. IF protective measures are warranted, notify the following to advise their personnel:
 - MOS
 - ARPS
 - MCRO
- ☐ 2. Recommend protective measures consistent with station security and monitoring requirements for personnel assigned to the following functions:
 - Access road and parking lot traffic control
 - EOF access
 - Training building
 - Monitoring teams
 - Other personnel required to perform tasks in increased radiation level areas
- ☐ 3. Recommend measures to reduce exposure (ALARA) to affected managers and personnel.

Section F: Contaminated Individuals

- ☐ 1. Assign personnel to assist in the following activities:
 - Decontamination of individuals at designated locations
 - Transport of injured or contaminated personnel to treatment facilities
 - Decontamination
- ☐ 2. Refer To RPM 1.5.4, "Response to a Contaminated Injured Person," for the transportation of contaminated individuals.



3. Notify MRDA/EOF HP of contaminated individuals as deemed necessary.

Section G: Results of 5 Minute Silver Zeolite Air Samples @ 2.0 cfm Using E-140, HP-210, DIG-5

Net Counts * (24 sec count)	DEQ I-131 ($\mu\text{Ci/cc}$)	Thyroid CDE (if inhaled for 1 hr)	Recommended Protective Actions for CR Personnel
$\geq 5,000$	$\geq 7.7 \times 10^{-6}$	$\geq 10 \text{ rem}$	1. Evacuate non-essential personnel 2. Don respiratory protection 3. Send cartridge for isotopic analysis within 1 hour
$\geq 24,000$	$\geq 3.8 \times 10^{-5}$	$\geq 50 \text{ rem}$	Above actions plus: If iodine concentrations are confirmed by isotopic analysis, issue KI per EPI-FAP09
$> 95,000$ or off-scale	$> 1.5 \times 10^{-4}$	$> 200 \text{ rem}$	Above action plus: Evacuate all CR personnel, as necessary.
* The information in this column is to be used only during the first 30 minutes following a reactor trip.			

Section H: Termination

- ☐ 1. Ensure the Rad Communicators account for all on-site RMTs and secure the on-site Radio Net System.
- ☐ 2. Send emergency worker dosimetry records to HP.
- ☐ 3. Update exposure records.
- ☐ 4. Collect all forms completed by personnel that report to the MRCA.
- ☐ 5. Record SERO termination in MRCA Logbook.

Prepared by: _____

Signature

Print

Date

5/21/03

Approval Date

5/30/03

Effective Date

Manager of Security (MOS)

This form provides guidance to the Manager of Security for emergency response actions during an event that activates the SERO.

Section A: Initial Actions

- ☐ 1. Key into the TSC/OSC and sign in on TSC Staffing Board.
- ☐ 2. Notify ADTS of arrival in TSC/OSC and obtain a status briefing.
- ☐ 3. Initiate a log of significant events and communications on EPI-FAP15-012, "SERO Log Sheet," and log date and arrival time.
- ☐ 4. Verify access control of affected areas and buildings has been established, as appropriate.
- ☐ 5. Contact SSS and receive a turnover.
 - ☐ IF offsite responders (i.e., National Guard) are onsite, discuss any protective actions in effect with the SSS and inform the ADTS.
 - ☐ IF two-person integrity is established, ensure Security personnel are assigned to NRC Resident for first 4 hours.
- ☐ 6. Conduct an operational check of security base station radio in TSC.
- ☐ 7. Contact the CR-DSEO and determine if Security assistance is required.

NOTE

- 1. The Shift Manager may choose not to perform a precautionary dismissal or evacuation due to the nature of the threat (e.g., Security-related). These actions shall be implemented as quickly as achievable given the nature of the threat.
- 2. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

Section A: Initial Actions

- ☐ 8. Provide support for precautionary dismissal or evacuation actions to the CR-DSEO/ADTS, as requested. ①
 - a. IF alternate routes are being used, provide instructions to the CR-DSEO/ADTS.
 - b. IF offsite responders are onsite and considered "non-essential" to the event, request they be dismissed or evacuated. ②
- ☐ 9. Refer To and implement SEP 5041, "Security During Emergencies."
- ☐ 10. IF applicable, Refer To SDI 612, "Security Reports," and determine whether any NRC reportable conditions exist.
- ☐ 11. Establish an open line of communication with CAS and notify of any requirements in SEP 5041, "Security During Emergencies."
- ☐ 12. Establish and maintain security posts as directed by the ADTS and consult with MRCA regarding radiological conditions that might impact security operations.
- ☐ 13. Indicate locations of "staffed" security posts on Site Map.
- ☐ 14. Dispatch security personnel with vital area keys to the OSCAA to provide security support for emergency teams, as necessary.

NOTE

Suspension of safeguards measures should only be instituted when no other means of security compensatory measures are available.

- ☐ 15. IF suspension of safeguards measures becomes necessary, perform the following: ①
 - Consult ADTS on suspending safeguards measures.
 - IF suspension of safeguards measures is approved, notify CAS and request the MOC notify the NRC.

Section B: Recurring Actions

NOTE

The ADTS may order sheltering, local area evacuation, site evacuation, or other protective actions in accordance with EPI-FAP08, "Evacuation and Assembly." Advance notice to the security force should be provided. Evacuation may be deferred during certain situations (e.g., Security-related) until the threat is resolved; it should be performed as quickly as possible thereafter based on the nature of the threat.

①



A L A R A



Security posts may become classified as high radiation areas.

- ☐ 1. IF no constraints exist, Refer To EPI-FAP08, "Evacuation and Assembly," and perform Accountability when directed by the ADTS or upon the declaration of a Site Area Emergency or General Emergency.
- ☐ 2. Consult with MRCA for appropriate protective measures where security posts are located, if necessary.
- ☐ 3. Determine need to provide appropriate radiological protection equipment (such as, protective clothing, respirators, and radiological monitoring devices) to security personnel stationed in radiological hazard areas.
- ☐ 4. Refer To and implement SEP 5041, "Security During Emergencies," and perform the following:
 - Evacuate security posts that may become uninhabitable due to the event.
 - Update "staffed" status markings on Site Map as necessary.

①

①

NOTE

Personnel accountability results may be requested by the ADTS periodically during SERO activation.

- ☐ 5. Direct CAS to maintain accountability of personnel in the Protected Area while SERO is activated.
- ☐ 6. Maintain open lines of communication with CAS for updates on accountability.

Section B: Recurring Actions

- ☐ 7. IF the duration of the event continues into the next security shift, perform the following:
 - Direct CAS to prepare a security personnel shift rotation schedule.
 - Provide security personnel shift rotation schedule to the MOR.
- ☐ 8. IF necessary, implement shift rotation schedule.
- ☐ 9. Review emergency worker shift relief and resource plans with the MOR, MRCA, and ADTS considering the following:
 - The need to initiate access control to the site, (e.g., the gate outside the EOF).
 - Relocation of workers
 - Transportation and staging of workers and materials on site
- ☐ 10. Consult with the MRCA and ADTS to determine safe areas and conditions by evaluating the threat of hazard levels and hazardous area access restrictions.

Section C: Precautionary Dismissal and Site Evacuation

NOTE

1. A precautionary dismissal of personnel is automatically conducted at the Alert classification level unless constraints are in place. An evacuation will be automatically initiated at a Site Area Emergency or General Emergency unless constraints are in place. A Security-related event may dictate deferral of precautionary dismissal or evacuation until the nature of the threat has been determined. ①
2. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders located onsite as "non-essential" to the event and dismiss or evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site. ②

- ☐ 1. IF constraints are in place, discuss the following with the ADTS:
 - Deferring precautionary dismissal or evacuation until the constraint has been resolved.
 - Developing alternate evacuation routes as appropriate to the constraint.
 - Sheltering actions in place.①
- ☐ 2. Direct Security personnel to take positions at NAP/SAP to facilitate personnel egress from the Protected Area.
- ☐ 3. Consider the following:
 - Staggering release in groups of 20 to 100 to minimize road congestion and exposure.
 - Establishing traffic control at parking lots, on the access road, and at alternate egress locations, as applicable. ①
 - SERO personnel will be moving to and from the training/EOF area for about 2 hours following the Alert declaration.
- ☐ 4. Provide any special instructions to security personnel at NAP/SAP, or other defined areas of egress, to convey to personnel leaving the site. ①
 - Use bullhorns or parking lot speakers, as appropriate.
- ☐ 5. Direct Security personnel to monitor and report status of dismissals and evacuations (may use accountability reports).
- ☐ 6. Notify Local Police Dispatchers of a Site Evacuation.
- ☐ 7. IF personnel are not responding as expected, request the ADTS to repeat the plant page.

Section C: Precautionary Dismissal and Site Evacuation

- ☐ 8. Request Security personnel provide updates on the following:
 - Movement of personnel
 - Occupancy of sheltering
 - Assembly points
 - Potential or actual problems
 - Offsite responders dismissed or evacuated from the site
- ☐ 9. Develop station reentry plan with the MRCA for SERO personnel requiring site access.
- ☐ 10. IF offsite responders remain at the site, provide information on emergency exposure upgrades given to these responders as applicable.

②

②

Section D: Search and Rescue Actions

- ☐ 1. IF personnel injuries are reported and off-site emergency assistance is requested, inform the ADTS of the situation.

NOTE

Only the MOSC can deploy, direct, or redirect emergency teams once this responsibility has been taken over from the CRDSEO/MCRO.

①

- ☐ 2. Ensure the following:
 - MOSC has sufficient security personnel for search and rescue teams.
 - Security support for entry into Vital Areas has been arranged.
- ☐ 3. IF notified of a station request for an ambulance, Refer To and implement SEP 5034, "Medical Emergencies."
- ☐ 4. Notify the ADTS of ambulance-related developments.

Section E: SERO Termination

- ☐ 1. WHEN authorized by the ADTS, restore normal station security operations.
- ☐ 2. Ensure all security personnel are notified of the following:
 - SERO termination
 - Normal station security operation restoration

Section E: SERO Termination

- ☐ 3. Record SERO termination in MOS log sheet.
- ☐ 4. Restore facility and equipment to pre-emergency condition.

Prepared by: _____

Signature

Print

Date

Docket Nos. 50-245
50-336
50-423
B18926

Attachment 3

Millstone Power Station, Unit Nos. 1, 2 and 3

Emergency Procedures Implementing (EPI) Functional Administrative Procedure (FAP)
MP-26-EPI-FAP04
"Emergency Operations Facility Activation and Operation"
and Associated Forms

**Functional
Administrative
Procedure**



**Emergency Operations Facility Activation and
Operation**

MP-26-EPI-FAP04

Rev. 001-04

Approval Date: 5/21/03

Effective Date: 5/30/03

STOP

THINK

ACT

REVIEW

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MP-26-EPI-FAP04-001, "Director of Station Emergency Operations (DSEO)"

MP-26-EPI-FAP04-002, "Assistant Director Emergency Operations Facility (ADEOF)"

MP-26-EPI-FAP04-003, "Manager Radiological Dose Assessment (MRDA)"

MP-26-EPI-FAP04-004, "Assistant Manager Radiological Dose Assessment (AMRDA)"

MP-26-EPI-FAP04-005, "Radiological Assessment Engineer (RAE)"

MP-26-EPI-FAP04-006, "Field Team Data Coordinator (FTDC)"

MP-26-EPI-FAP04-007, "Radiation Monitoring Team #3, #4, #5"

MP-26-EPI-FAP04-008, "Radiological Communicator - EOF"

MP-26-EPI-FAP04-009, "EOF HP Technician"

MP-26-EPI-FAP04-010, "Meteorological Assistant"

MP-26-EPI-FAP04-011, "Manager of Resources (MOR)"

MP-26-EPI-FAP04-012, "Public Information Technical Advisor (PITA)"

MP-26-EPI-FAP04-013, "Manager of Communications (MOC)"

MP-26-EPI-FAP04-014, "Technical Information Communicator (TIC)"

MP-26-EPI-FAP04-015, "EOF Emergency Communicator"

MP-26-EPI-FAP04-016, "Station Emergency Preparedness Representative (SEPR)"

MP-26-EPI-FAP04-017, "Regulatory Liaison"

1. PURPOSE

1.1 Objective

This procedure provides guidance to Station Emergency Response Organization (SERO) personnel who report to the Emergency Operations Facility (EOF) during an event.

1.2 Applicability

Activation of the EOF is initiated upon declaration of an ALERT, Posture Code Charlie-One, or higher event.

1.3 Supporting Documents

EPI-FAP01, "Control Room Emergency Operations"

EPI-FAP06, "Classification and PARs"

EPI-FAP07, "Notifications and Communications"

EPI-FAP08, "Evacuation and Assembly"

EPI-FAP09, "Radiation Exposure Controls"

EPI-FAP10, "Dose Assessment"

EPI-FAP11, "Core Damage Assessment"

EPI-FAP13, "News Releases"

EPI-FAP15, "Common Forms"

EPA-REF08B, "Millstone Emergency Plan Resource Book"

Meteorological Reference Manual for Support of Nuclear Plant Emergencies.

NRC Regulatory Issue Summary 2002-21, "National Guard and other Emergency Responders Located in the Licensee's Controlled Area"

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1.4 Discussion

1.4.1 Facility Activation

Facility activation should occur within 60 minutes of the time the SERO was notified. The EOF can be declared activated when the DSEO has relieved the CR-DSEO of command and control responsibilities AND minimum staffing requirements are met.

The DSEO has the discretion to relieve the CR-DSEO and authorize ERF activation with less than minimum staffing provided necessary functional areas are filled.

1.4.2 The major activities associated with the EOF are as follows:

- Event Classification and PARs- EPI-FAP06
- Event Notification and Communications - EPI-FAP07
- Radiological Dose Assessment/Sampling
- Exposure Control - EPI-FAP09
- Resources
- Rumor Control and News Releases - EPI-FAP13
- Coordination of Outside Agencies
- Recovery - EPI-FAP14

1.4.3 10 CFR 50.54(x) Invocation

- a. As discussed in the Statements of Consideration to 10 CFR Part 50, emergencies can arise during which compliance with a license condition or a Technical Specification could prevent necessary action by the licensee to protect the public health and safety. Absolute compliance with the license during these emergencies can be a barrier to effective protective action.
- b. Unanticipated circumstances can occur during the course of an emergency which may call for responses different from any previously considered during the course of licensing. Special circumstances requiring a deviation from license requirements are not necessarily limited to transients or accidents not analyzed in the licensing process. Special circumstances can arise during emergencies involving multiple equipment failures or coincident accidents where plant emergency procedures could be in conflict with, or not applicable to, the circumstances. In addition, an accident can take a course different from that which was addressed when the emergency procedure was written, thus requiring a protective response at variance with a procedure required to be followed by the licensee which may ultimately be contrary to current Technical Specifications or the license condition.
- c. 10 CFR 50.54(x) will permit the licensee to take reasonable action in an emergency even though the action departs from licensing conditions or plant Technical Specifications. This action may only be taken, however, if the following criteria are met:
 - The action is immediately needed to protect the public health and safety, including plant personnel.

- No action consistent with the license conditions and Technical Specifications is immediately apparent that can provide adequate or equivalent protection.
- As a minimum, a licensed senior operator approves the action.

d. Applicability Determination

The NRC can amend Technical Specifications or license conditions. The §50.54(x) regulation is not intended to apply in circumstances where time allows this normal process to be followed. The regulation applies only to those emergency situations in which immediate action is required by the licensee to protect public health and safety and this action is contrary to a Technical Specification or license condition.

Operating outside the boundaries of approved procedures or in the absence of procedures does not in and of itself meet the threshold for invocation of §50.54(x). Also, the existence of a safety analysis (§50.59) conducted for the purpose of determining whether an unreviewed safety question exists is not sufficient to determine whether application of §50.54(x) is appropriate. §50.54(x) is not intended for use as a general regulatory protective shield for all actions not addressed by current procedures. Even after §50.54(x) has been invoked, each subsequent action taken must be evaluated for §50.54(x) applicability with all necessary approvals and notifications being made for each invocation, as appropriate.

Additionally, the §50.54(x) and (y) amendments were not written for the purpose of establishing procedures and guidance (such as SAMG) that may be useful at some future date (e.g., preplanning and contingency actions). The determination to discontinue following plant operating procedures and/or EOPs, and to begin following SAMG, by itself, does not constitute a departure from a license condition or Technical Specification and, therefore, does not require invocation of §50.54(x). Note however, it is possible that the first action directed during SAMG implementation may actually require §50.54(x) invocation.

The threshold for invocation is met only if the action being taken is not consistent with current license conditions and Technical Specifications. Additionally, the action must meet the time and safety dependent criteria previously discussed. Then and only then should the invocation of §50.54(x) be considered for approval.

e. Approval

A licensed senior operator position is the minimum level within the organization, not the only position, authorized to approve invocation of §50.54(x). 10 CFR 50.54(y) states, "Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator..." This wording makes it clear that such action must be approved by at least a licensed senior operator acting for the licensee. The regulation focuses on the responsibilities of facility licensees and only peripherally includes licensed senior operators. Under the provision, any licensed senior operator (licensed for the Unit involved) would be sufficient. However, during declared emergencies more senior licensee personnel would eventually become available. The decision to depart from the license would then pass to these more senior personnel already identified in the Emergency Plan.

Ultimate responsibility for the health and safety of the general public and station personnel in an emergency resides in the highest authority in the chain of command. The persons responsible for the health and safety of the general public and station personnel are already identified in the facility license and implementing procedures. These persons include the ADTS and the DSEO following emergency response facility activation. If however, an emergency should occur on a backshift, no licensee representative higher than a licensed senior operator in the chain of command is likely to be available. Therefore, the departure from a license condition or Technical Specification requires the approval of a licensed senior operator as a minimum.

To require any additional approvals or concurrence, such as from senior licensee representatives or the NRC, would defeat the purpose of §50.54(x). Concurrence or approval from the NRC is also not necessary, as this action would amount to a license amendment using procedures contrary to those existing for amendments. NRC concurrence would additionally shift the burden of responsibility for station safety from the licensee to the NRC.

f. Reportability

Deviations authorized pursuant to 10 CFR 50.54(x) are reportable as soon as practical and in all cases within one hour under 10 CFR 50.72(b)(1), or 10 CFR 50.73(a)(2)(i)(C), if not reported simultaneously with emergency notification under 10 CFR 50.72(a). When time permits, the notification is made before the protective action is taken; otherwise, it is made as soon as possible thereafter. Additionally, a Licensee Event Report will be generated and submitted to the NRC within 30 days.

g. Subsequent Actions

Following invocation of 50.54(x) and notification of the NRC, actions are taken as soon as practical to restore the plant to full compliance with Technical Specifications and all conditions of license.

1.4.4 Off-Site Radiological Communications

The radio control console located in the Radiological Dose Assessment Area will be used to support MRDA communications. The FTDC and the off-site RMTs will use this radio net to communicate radiation findings. The RMT vehicles maintained at the EOF are equipped with permanently mounted radios. The radio console at the EOF is monitored by the FTDC. Spare portable radios are stored at the EOF to issue to additional field teams or replace vehicle radios that malfunction.

Off-site teams may be assigned to monitor and report dose assessment findings which occur over water (Long Island Sound). RMT radios which operate on the off-site radiological communications frequency are installed in the Millstone Environmental boat.

1.4.5 Off-Site Radiological Monitoring

Off-site RMTs obtain samples for airborne radioactive contaminants and radiation dose rates for specific points and areas outside the Millstone Station protected area. Off-site RMTs are controlled by the MRDA, who transfers all or portions of this responsibility to the AMRDA or FTDC upon their arrival in the EOF. The goal of the FTDC or designee is to ensure the RMTs are deployed within 60 minutes of event notification.

The RMTs provide the off-site survey information necessary for the plume phase. Environmental Services and HP field teams perform environmental sampling during the intermediate and relocation/ingestion pathway phases. The thermoluminescent dosimeters (TLD) and air filters can also provide information to help determine the past integrated dose.

1.4.6 Protective Actions for Offsite Emergency Responders Located at the Station

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS) will notify the ADTS of any protective actions put in place.

For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider these offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

1.4.7 Definitions and abbreviation are contained in Attachment 1. Responsibilities are contained in Attachment 2.

2. INSTRUCTIONS

2.1 Refer To and complete the following, as applicable:

NOTE

The steps in the checklists may be performed in any order, or more than once, as necessary.

- EPI-FAP04-001, "Director of Station Emergency Operations (DSEO)"
- EPI-FAP04-002, "Assistant Director Emergency Operations Facility (ADEOF)"
- EPI-FAP04-003, "Manager Radiological Dose Assessment (MRDA)"
- EPI-FAP04-004, "Assistant Manager Radiological Dose Assessment (AMRDA)"
- EPI-FAP04-005, "Radiological Assessment Engineer (RAE)"
- EPI-FAP04-006, "Field Team Data Coordinator (FTDC)"
- EPI-FAP04-007, "Radiation Monitoring Team #3, #4, #5"
- EPI-FAP04-008, "Radiological Communicator - EOF"
- EPI-FAP04-009, "EOF HP Technician"
- EPI-FAP04-010, "Meteorological Assistant"
- EPI-FAP04-011, "Manager of Resources (MOR)"
- EPI-FAP04-012, "Public Information Technical Advisor (PITA)"
- EPI-FAP04-013, "Manager of Communications (MOC)"
- EPI-FAP04-014, "Technical Information Communicator (TIC)"
- EPI-FAP04-015, "EOF Emergency Communicator"
- EPI-FAP04-016, "Station Emergency Preparedness Representative (SEPR)"
- EPI-FAP04-017, "Regulatory Liaison"

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2.2 IF an action is not appropriate under existing conditions or was not necessary for the event, enter N/A when completing documentation for submittal.

3. SUMMARY OF CHANGES

3.1 Revision 001-04

- 3.1.1 Added supporting document Regulatory Issue Summary 2002-21.
- 3.1.2 Added section 1.4.6 on protective actions for offsite emergency responders located at the station. (CR-03-00929/03000501-03/03000680-02)

3.2 Revision 001-03

- 3.2.1 Changed reference to the Shift Technical (ST) to the Emergency Communicator.
- 3.2.2 Deleted reference to the External Resources Coordinator (ERC) throughout.

3.3 Revision 001-02

- 3.3.1 Administrative change. Changed Manager of Public Information (MPI) to Public Information Technical Advisor (PITA). (CR-02-11198)
- 3.3.2 Deleted news release approval for DSEO in Attachment 2 (CR-02-11198)

3.4 Revision 001-01

- 3.4.1 Deleted PASS definition from Attachment 1.

3.5 Revision 001

- 3.5.1 Modified document number in Section 1.3 to reflect MP-26-MMM.
- 3.5.2 Clarified in step 1.4.1 that DSEO relieves the CR-DSEO.
- 3.5.3 Changed "non-SERO" to "non-essential" in Attachment 1.
- 3.5.4 Clarified the TIC responsibilities in Attachment 2.

Attachment 1

Definitions and Abbreviations

(Sheet 1 of 3)

Definitions

Alpha or Bravo Posture Code - A State response code that has expected or existing plant conditions relative to a radiological release as its basis. A technical basis for developing a PAR as a result of an EAL classification for all events short of the loss of all three fission product barriers, or high containment radiation.

Calculated Dose Rate (units of mRem/hr or Rem/hr) - A dose rate calculated for actual releases based on measured exposure rates from effluent monitor or survey readings (units of mR/hr or R/hr).

CDE - Committed Dose Equivalent for the thyroid (usually in units of Rem).

Measured Exposure Rate - Exposure rate based on field survey results (units of mR/hr or R/hr).

Operations Net - A communications network established for the TSC-SM, CRDC, TA, and TIC to apprise all Emergency Response Facilities of plant status and fast-breaking events; provide operational and technical input; and assist with classification.

Plant Conditions - A technical basis for developing a PAR as a result of actual or imminent loss of all three fission product barriers, or based on high containment radiation levels.

Precautionary Dismissal - A precautionary release of non-essential individuals from the site conducted at the ALERT classification.

Protective Action Recommendation (PAR) - A recommended course of action to take that affects the general population. Issued to state and local decision makers for their consideration in making a protective action decision.

Projected Dose - A calculated exposure received over the duration of the accident. A technical basis for developing a PAR as a result of an ongoing radiological release that is projected on either a measured exposure rate, or a calculated exposure rate for an expected release (units of Rem).

TEDE - Total Effective Dose Equivalent (usually in units of Rem).

"What If" Dose - A theoretical dose projection based on the premise that the accident sequence in progress will result in the partial or total release of an assumed quantity of core inventory (usually in units of Rem).

Wind Direction - The three digit number indicating the degree bearing (000 and 360 being north, 180 being south) from which the wind is coming at the release elevation (Changes in wind direction may constitute the technical basis for updating a PAR).

Attachment 1

Definitions and Abbreviations

(Sheet 2 of 3)

Abbreviations

ADEOF - Assistant Director Emergency Operations Facility

ADTS - Assistant Director Technical Support

AMRDA - Assistant Manager Radiological Dose Assessment

AMT - Accident Management Team

AMTL - Accident Management Team Leader

CAS - Central Alarm Station

CBETS - Computer Based Exposure Tracking System

CTMT - Containment

DEP - Department of Environmental Protection

DSEO - Director of Station Emergency Operations

EAL - Emergency Action Level

EAS - Emergency Alerting System

EDAN - Environmental Data Acquisition Network

EPZ - Emergency Planning Zone

ERDS - Emergency Response Data System

FTDC - Field Team Data Coordinator

JMC - Joint Media Center

KI - Potassium Iodide

MCRO - Manager of Control Room Operations

MOC - Manager of Communications

MOR - Manager of Resources

Attachment 1

Definitions and Abbreviations

(Sheet 3 of 3)

MRDA - Manager of Radiological Dose Assessment

MTSC - Manager of Technical Support Center

NNM - Nuclear News Manager

OFIS - Off-Site Facility Information System

PAG - Protective Action Guideline

PAR - Protective Action Recommendation

PITA - Public Information Technical Advisor (PITA)

RAE - Radiological Assessment Engineer

RCS - Reactor Coolant System

RICC - Rumor and Inquiry Control Center

RMT - Radiological Monitoring Team

RDAT - Radiological Dose Assessment Team

SDO - Station Duty Officer

TEDE - Total Effective Dose Equivalent

TIC - Technical Information Coordinator

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Attachment 2 Responsibilities

(Sheet 1 of 4)

1. Director of Station Emergency Operations (DSEO)

After formally relieving the CR DSEO, the DSEO is responsible for the following non-delegable emergency response functions:

- Overall command and control of the station's emergency response.
- Event classification.
- General public Protective Action Recommendations to offsite officials.
- Formal off-site notification approval.
- Emergency exposure extension authorization.
- Federal assistance to support station response.

2. Assistant Director Emergency Operations Facility (ADEOF)

The ADEOF reports to the DSEO. The ADEOF is responsible for the following:

- Providing input for classification changes based on radiological conditions.
- Developing, recommending, and updating off-site PARs to the DSEO.
- Providing input for notification upgrades, updates, and termination, as necessary.
- Approving emergency exposure upgrades in excess of 10 CFR 20 limits.
- Authorizing potassium iodide (KI) for off-site personnel SERO personnel (e.g., Radiation Monitoring Teams).
- Overseeing off-site radiological assessment of the event.
- Coordinating communications of plant status to the NRC, State, and public.
- Authorizing contaminated personnel to leave the station.
- Reviewing news releases.
- Assuming DSEO responsibilities if DSEO becomes incapacitated.

Attachment 2 Responsibilities

(Sheet 2 of 4)

3. Manager of Radiological Dose Assessment (MRDA)

The MRDA reports to the ADEOF. The MRDA is responsible for the off-site dose assessment activities. This includes the following activities:

- Monitoring radiological conditions beyond the protected area and ensuring recommended protective actions provided to State officials are adequate to protect public health and safety in accordance with US EPA guidance.
- Providing key information to the ADEOF and DSEO that may influence classification as well as protective action decision making.
- Assessing radiological plant conditions and alerting the ADEOF and DSEO when information indicates there has been a significant change.
- Assessing the source term, determining the radiological release pathway, and obtaining meteorological data applicable to an actual or potential radiological release.
- Directing radiological and environmental field measurements be obtained.
- Directing dose assessment be performed.
- Directing core damage estimates be performed.
- Communicating with State dose assessment staff.
- Communicating with NRC dose assessment staff using the HPN circuit.
- Coordinating field team activities with the State DEP.

4. Assistant Manager, Radiological Dose Assessment (AMRDA)

Two AMRDAs report to the MRDA. They assist the MRDA as directed with dose assessment, RDAT strategies, HPN communications, etc.

5. Radiological Assessment Engineer (RAE)

The RAE reports to the MRDA in the EOF. Duties include evaluating actual and potential releases of radioactive material, and performing dose assessment calculations.

6. Field Team Data Coordinator (FTDC)

The FTDC reports to the MRDA in the EOF. Duties include coordinating the activities of the off-site RMTs, and distributing off-site RMT data.

7. Radiological Monitoring Teams #3, #4, #5 (RMT)

The RMTs report to the FTDC in the EOF. Duties include performing surveys and samples.

Attachment 2 Responsibilities

(Sheet 3 of 4)

8. Radiological Communicator

The Radiological Communicator reports to the MRDA. Duties include obtaining information on radiological conditions inside the protected area which may impact offsite monitoring and tracking activities.

9. Meteorological Assistant

The Meteorological Assistant reports to the MRDA. Duties include obtaining and preparing current meteorological data and providing forecast information and technical input in matters involving meteorology.

10. Manager of Resources (MOR)

The MOR reports to the ADEOF. The MOR is responsible for the following:

- Providing station personnel, equipment, or supplies requested by SERO managers
- Acquiring corporate and off-site resources
- Coordinating support requests from federal regulatory agencies that have responded to Millstone Station

11. Public Information Technical Advisor (PITA)

The PITA reports to the ADEOF in the EOF. The PITA is responsible for the following:

- Collecting information regarding the event
- Providing input for news releases
- Monitoring media activities
- Supporting the Nuclear News Manager, located at the Hartford Armory

12. Manager of Communications (MOC)

The MOC reports to the ADEOF in the EOF. The MOC is responsible for coordinating all EOF communications which includes Emergency Notification System (ENS) communications between the station and the NRC.

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Attachment 2 Responsibilities

(Sheet 4 of 4)

13. Technical Information Communicator (TIC)

The TIC reports to the DSEO. Duties include the following:

- Operating OFIS
- Providing requested plant parameter data
- Informing DSEO/ADEOF of critical parameters impacting classification and PARs
- Maintaining Chronology of Key Events status board
- Obtaining data from the CRDC, as necessary
- Providing information to the State EOC Technical Assistant and the TSC Staff, as requested.

14. EOF Health Physics (HP) Technician

The EOF HP Technician reports to the MRDA. The EOF HP Technician is responsible for providing HP support to the EOF.

15. EOF Emergency Communicator

The EOF Emergency Communicator reports to the ADEOF in the EOF. The EOF Emergency Communicator is responsible for notifying state and local officials, as directed.

3

16. Regulatory Liaison

The Regulatory Liaison reports to the ADEOF. The Regulatory Liaison is responsible for accommodating the NRC Site Team dispatched to the station, arranging site access for the NRC Team, providing adequate dosimetry, and responding to questions and comments.

5/21/03

Approval Date

5/30/03

Effective Date

Director of Station Emergency Operations (DSEO)

Section A: EOF Activation/Transfer of Command and Control

- ☐ 1. Sign in on the EOF Staffing Board and log date and arrival time on the SERO Log Sheet.
- ☐ 2. Obtain a copy of the Incident Report Form (IRF) from the fax machine or call Control Room for IRF information.
- ☐ 3. Obtain additional information from the following, as necessary:
 - Voice recording of briefing sheet
 - Additional faxes

NOTE

For a Unit 1 event, the Unit 2 SM is the CR-DSEO.

- ☐ 4. Contact CR-DSEO and discuss the following:
 - Any significant changes since event declaration
 - Current status on classification, notification, and PARs.
- ☐ 5. Check EOF SERO response status as follows:
 - Verify minimum facility staff is present.
 - IF minimum staffing is not present, determine the ability of the SERO to activate as is and proceed as appropriate (i.e., all functional areas staffed).
- ☐ 6. Contact the CR-DSEO and formally relieve him of Command and Control, classification, notification, and PAR responsibilities, and log the date and time of relief.
- ☐ 7. Declare the EOF activated and record EOF activation time on the SERO Log Sheet.
- ☐ 8. Announce the following message using the station paging system (repeat once):
 - Call Control Room and ensure outside speakers are activated.
 - Announce the following:

Attention all station personnel. This is (name), the DSEO. I am assuming command and control of the Station Emergency Response Organization. The EOF is declared activated at this time. Currently, Millstone Station is in (classification level: _____) for (Unit # _____) due to (brief description of event: _____).

Section A: EOF Activation/Transfer of Command and Control

NOTE

1. State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS) will notify the ADTS of any protective actions put in place. ③
2. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider these offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- ☐ 9. Perform an update briefing with the CR-DSEO and the ADTS using EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," as a guide.
 - Obtain information on offsite responders (i.e., National Guard) onsite or responding to the site and any protective actions in place. ③
- ☐ 10. Brief the EOF Managers on the event.
- ☐ 11. Establish contact with the Richmond Corporate Executive and provide input on the event.
- ☐ 12. Establish frequent communications with the ADTS and the Chief Technical Spokesperson (CTS). ①

Section B: Classification Upgrade Immediate Actions

1. Evaluate the conditions using EPI-FAP06, "Classification and PARs."
 - ☐ Review the initiating condition with the TIC and the ADTS for recommendations on plant-related EALs.
 - ☐ Consult with the MRDA for recommendations on radiological-related EALs.
 - ☐ Consult with the MOS for recommendations on security-related EALs.
2. Perform Station Notifications as follows:
 - ☐ Notify the ADTS of the classification upgrade.
 - ☐ Direct the Emergency Communicator to initiate offsite notifications.
 - ☐ IF a General Emergency has been declared, direct the ADEOF to develop PARs.
 - ☐ Announce the emergency declaration level and time to the station staff via plant page announcement as follows:

②

NOTE

During a security event, it may *not* be advisable to sound an alarm or make a PA announcement.

- Call Control Room and ensure outside speakers are activated.
- Announce the following over the station PA system:

Attention all personnel; attention all personnel. A (classification level) has been declared at (Unit #) due to (brief description of event)

- Repeat the PA message.
- Log the time of announcement.

- ☐ Announce that there will be no eating or drinking until further habitability is verified.
- ☐ Log time of completion.

3. Perform state notification as follows:

- ☐ Direct the ADEOF to assist in completing the IRF.
 - IF an offsite State of Emergency does not exist, approve the IRF for transmittal.

Section B: Classification Upgrade Immediate Actions

- IF an offsite State of Emergency does exist and the Governor has directed all future notifications be processed through the State EOC, approve the IRF and provide it only to the Chief Technical Spokesperson. | ②

☐ IF a General Emergency has been declared, review and approve PARs and directly notify the DEP.

4. Perform NRC notifications as follows:

☐ Verify the MOC notifies the NRC via the ENS.

☐ Direct the ADEOF to contact the resident inspector if he/she is not on site.

5. Perform additional notifications as follows:

☐ Inform the Chief Technical Spokesperson (CTS) of the event. | ② | ①

☐ IF NRC Site Team DSO is present, discuss the classification with him/her.

☐ Inform the Richmond Corporate Executive of the event.

Section C: Routine Activities

- ☐ 1. Track the response of additional minimum staffing and full staffing positions and direct the MOR to contact personnel for unfilled positions. ①
- ☐ 2. Direct the TIC to continuously man the Operations Net and review the EAL tables and fission product barriers for changes in event status.
- ☐ 3. Obtain periodic input from the ADTS on the following:
 - Plant status and mission priorities.
 - Fast-breaking events.
 - Impact on EALs.
- ☐ 4. Ensure updates of the event are routinely provided to the State and local agencies.
- ☐ 5. Approve all news releases forwarded from the ADEOF before issuing from the EOF. ①
- ☐ 6. Authorize the CTS to approve news releases once the State EOC is staffed and news releases are issued through the JMC.
- ☐ 7. IF the fission product barrier status, offsite radiological conditions, or meteorological conditions change, perform the following:
 - Refer to Section B and evaluate the conditions.
 - Direct the ADEOF to evaluate the impact on PARs.
 - Provide changes to PARs to the State, as appropriate.
- ☐ 8. Obtain the status on any precautionary dismissal, evacuation and accountability activities in progress from the MOS.
 - IF offsite resources are onsite, obtain status on activities and protective actions in place from the ADTS.

NOTE

The State of CT and Waterford Police are responsible for emergency exposure upgrades for offsite responders onsite. ③

- ☐ 9. Authorize extended emergency exposure limits for lifesaving actions (dose > 25 Rem is expected) as appropriate when recommended by the ADTS for onsite personnel and the ADEOF for offsite personnel.
- ☐ 10. IF suspension of safeguards or other §50.54(x) action is invoked, instruct the MOC to notify the NRC as soon as possible (not to exceed one hour).
- ☐ 11. Notify the SERO of any significant changes in conditions using the PA system.
- ☐ 12. Review and provide concurrence for any Severe Accident Management strategy that could potentially affect the general public or offsite activities.
- ☐ 13. Request assistance from federal authorities to support the station response efforts, as necessary.

Section C: Routine Activities

- ☐ 14. Approve relief schedules developed by the MOR.
- ☐ 15. Ensure EOF habitability controls have been considered for events involving increased radiation levels around the facility.
- ☐ 16. Conduct periodic briefings with the ADEOF and facility managers.
- ☐ 17. Periodically provide the CTS with the following information via the open communications line: ②
 - Event/Plant Status using EPI-FAP15-001, "DSEO/ADTS Briefing Sheet."
 - News releases prepared or in progress.
- ☐ 18. Refer To EPI-FAP15-001, "DSEO/ADTS Briefing Sheet," and periodically update the Richmond Corporate Executive on the event status.
- ☐ 19. Consult with the ADTS and ADEOF on the status of each unit and station conditions.
- ☐ 20. Before NRC Site Team arrival, direct the Regulatory Liaison to prepare information for NRC briefing.
- ☐ 21. Periodically discuss conditions and events with the NRC Site Team Leader or Director of Site Operations.
- ☐ 22. IF events have been controlled to the point where termination of the emergency can be considered, Refer To EPI-FAP06 for guidance.

Prepared by: _____

Signature	Print	Date
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5/21/03

Approval Date

5/30/03

Effective Date

Assistant Director Emergency Operations Facility (ADEOF)

This form provides guidance to the ADEOF for emergency response actions during an event which activates the SERO.

Section A: EOF Activation/Initial Actions

- ☐ 1. Sign in on the EOF Staffing Board and log date and arrival time on the SERO Log Sheet.
- ☐ 2. Obtain a briefing from the DSEO.
- ☐ 3. IF the DSEO has not yet responded to the facility, perform the following:
 - Direct the MOR to immediately contact a qualified DSEO.
 - Assign an individual to the ADEOF position.
 - Assume the responsibilities assigned to the DSEO position and Go To EPI-FAP04-001.
- ☐ 4. IF a General Emergency was declared before EOF activation, determine the PAR issued by the CR-DSEO.
- ☐ 5. Conduct an initial briefing with the MRDA and AMRDAs concerning the following:
 - Initial dose assessment results.
 - On-site and off-site radiological conditions.
 - EOF High Radiation Ventilation Filtration System activation.
 - Off-site protective actions.
 - HPN data passed to NRC.
- ☐ 6. Conduct an initial briefing with the Public Information Technical Advisor (PITA) concerning the following: | ①
 - Press releases.
 - Rumors to date.
- ☐ 7. Conduct an initial briefing with the MOC concerning the following:
 - ERDS
 - ENS
- ☐ 8. Contact the MRCA and obtain information on on-site protective actions if taken.

Section A: EOF Activation/Initial Actions

- ☐ 9. WHEN EOF is activated and the Emergency Communicator arrives, direct the Emergency Communicator to relieve the control room of future ENRS notification responsibilities.

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Section B: Classification/Termination

- ☐ 1. Refer To EPI-FAP06, "Classification and PARs," as applicable, to determine if any initiating conditions have been met.
- IF plant conditions change, specifically the status of the fission product barriers, discuss the conditions with the TIC.
 - IF radiological or meteorological conditions change, discuss the conditions with the MRDA.
 - Discuss EAL classification input with the DSEO.
- ☐ 2. Assist the DSEO with event termination and transition to Recovery.

Section C: Notifications

NOTE

IF the Governor declares a State of Emergency and directs all future classification changes and updates be processed through the State EOC, Incident Report Forms shall not be transmitted to the offsite agencies using the ENRS.

- ☐ 1. IF a change in classification level occurs or an update is warranted, perform the following:
- a. Ensure the Emergency Communicator completes an IRF for the new classification level or update message.
 - b. IF a State of Emergency **HAS NOT** been declared by the Governor, ensure the IRF is transmitted after the DSEO approves it.
 - c. IF a State of Emergency **HAS** been declared by the Governor and all future notifications are to be processed through the State EOC, ensure the following:
 - The IRF is **NOT** transmitted to the offsite agencies.
 - The DSEO reads the IRF to the Chief Technical Spokesperson (CTS).
 - The IRF is faxed to the CTS or NNM.
 - The CTS notifies OEM and DEP of the message.

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Section D: Protective Action Recommendations



The State must be notified within 15 minutes of the decision to issue or update PARs.

PARs are *not* to be based on "What If" dose projections unless the basis of the "What If" projection is expected to occur shortly, is well understood, and has been validated by the DSEO and ADTS.

- ☐ 1. IF a GENERAL EMERGENCY is declared or conditions change while in a GENERAL EMERGENCY, develop Protective Action Recommendations as follows:
 - a) Obtain wind direction from the MRDA.
 - b) Refer To and complete EPI-FAP06-006, "EOF PARs."
 - c) IF necessary, Refer To and review EPI-FAP06 Attachment 4, "PAR Zone Descriptions."
 - d) Ensure the DSEO verbally transmits the PAR to the DEP within 15 minutes, and then to the CTS.
- ☐ 2. Ensure the PAR form is faxed to the State EOC.
- ☐ 3. Update the Chronology of Events status board with current PAR information.
- ☐ 4. Determine the Protective Actions implemented by the State and notify NRC via the MOC.
- ☐ 5. Continuously evaluate the need for a PAR update, based on the following:
 - Change in fission product barrier status.
 - Change in containment radiation levels.
 - Change in radiological dose assessment.
 - Change in wind direction.
- ☐ 6. IF EPA PAGs (≥ 1 Rem TEDE or ≥ 5 Rem CDE thyroid) are or are suspected to be exceeded beyond 10 miles, perform the following:
 - Ensure that the DSEO has informed the DEP of the situation.
 - Develop PARs for areas beyond the EPZ that are affected.

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Section E: Radiological Controls

NOTE

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). The Manager of Security (MOS) will notify the ADTS of any protective actions put in place.

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- ☐ 1. IF notified by the MRDA that implementation of EPI-FAP09, "Radiation Exposure Controls," is needed for emergency exposure increases or issuing KI to off-site SERO emergency workers, perform the following:
 - Evaluate the emergency condition.
 - IF KI is warranted, inform the DSEO that KI will be issued to off-site SERO emergency workers.
 - IF exposure upgrades up to 25 Rem are required, inform DSEO of increase.
 - IF exposure upgrades greater than 25 Rem are required, obtain DSEO approval.
 - Refer To EPI-FAP09-003 and sign and date appropriate form, indicating approval.
 - Direct the MRDA to implement emergency control.
- ☐ 2. Coordinate the release of contaminated person from site to a designated decontamination location.

Section F: Routine Activities

- ☐ 1. IF a release is imminent or in progress, ensure the EOF high radiation ventilation filtration system is activated.
- ☐ 2. Conduct periodic briefings with the MRDA, PITA, and MOC, as applicable.
- ☐ 3. Verify all press release information and obtain DSEO approval to release.
- ☐ 4. Authorize release of Nuclear Network messages from the PITA.
- ☐ 5. Direct the Regulatory Liaison to prepare for NRC Site Team arrival.
- ☐ 6. Prepare and conduct briefings of event conditions with the NRC Site Team.

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Section F: Routine Activities

☐ 7. Provide the NRC Site Team with familiarization of the following lead functional areas:

- Overall command and control (DSEO)
- Radiological activities onsite/offsite (MRDA)
- Plant technical response (ADTS, AMTL)
- Resource Management (MOR)
- Communications (MOC)

Prepared by: _____

Signature

Print

Date

5/21/03

Approval Date

5/30/03

Effective Date

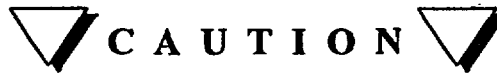
Manager of Radiological Dose Assessment (MRDA)

This form provides guidance to the MRDA for emergency response actions during events that activate the SERO.

Section A: Initial Activation

- ☐ 1. Sign in on the EOF Staffing Board and log date and arrival time on the SERO Log Sheet.
- ☐ 2. Notify the ADEOF of arrival and obtain event conditions and status update.
- ☐ 3. Maintain a log of significant events and communications on the SERO Log Sheet.
- ☐ 4. Assume coordination and supervision of the Radiological Dose Assessment Team (RDAT).
- ☐ 5. Review RDAT assignments and reassign actions, as necessary.
- ☐ 6. Upon DSEO turnover, perform the following:
 - Ensure the AMRDA has relieved the on-shift Chem Tech of dose assessment responsibilities.
 - Notify the ADEOF of dose assessment turnover from the on-shift Chem Tech.
- ☐ 7. Ensure the off-site RMTs are assembled, briefed and prepared for dispatch.
 - Coordinate RMT access to locked site areas with the MOS in the TSC, as necessary.
 - IF over water surveys are required, request the MOR provide transportation to the Environmental Laboratory and the boat location.
- ☐ 8. IF not constrained, direct the FTDC to dispatch off-site RMTs (specifically to the vicinity of site boundary in the downwind direction) and establish field communications as soon as possible.
- ☐ 9. IF a release impacts the EOF, ensure the EOF high radiation ventilation filtration system is activated by the EOF HP Technician.
- ☐ 10. Assign a RDAT member to test phones, hotlines, and fax machines.

Section B: Radiological Controls



1. EPA-400 allows for an unrestricted emergency worker exposure of 5 Rem during a declared event, regardless of 10 CFR 20 occupational exposure previously received.
2. For ALARA purposes at Millstone, an ALERT or higher declaration automatically increases exposures to 4.5 Rem TEDE less annual exposure to date. If dosimetry records are unavailable for prompt deployment, a 1.5 Rem TEDE limit may be assumed. (4.5 Rem emergency worker limit minus 3 Rem station administration limit on dose from all licensees combined).

- ☐ 1. Consult with the MRCA on radiological conditions and on-site personnel protective action decisions.

NOTE

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures). Emergency workers exposures are determined in accordance with EPA-400 tables.

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- ☐ 2. Refer To and implement EPI-FAP09, "Radiation Exposure Controls," to:
- Establish/upgrade off-site RMT exposure limits.
 - Evaluate/issue KI to offsite RMTs.
 - Determine DDE limit reductions.
- ☐ 3. Inform the State DEP of assumed DDE limit reductions.

Section C: Meteorological Data

CAUTION

1. Plant and dose based PARs use 15 minute average meteorological data. The EDAN and MP3 OFIS provide 15 minute average data..
2. The MP2 OFIS provides instantaneous readings which may *not* accurately identify the average of the plume direction. The MP2 OFIS data should only be used if it is trended.

NOTE

1. Wind direction data are critical to making PARs and accurate dose projections. Data is provided as a 3 digit number between 000°-360° representing the bearing from which the wind is blowing at the applicable release height (000° and 360° are from north; 180° is from south).
2. If no release is ongoing, the default height is the 142' elevation at MP.

- ☐ 1. IF necessary, Refer To EPI-FAP04-010, "Meteorological Assistant," and perform essential steps.
- ☐ 2. Maintain meteorological data applicable to the release elevations.

Section D: Dose Projections

NOTE

Time permitting, "What If" and "Worse Case" calculations are encouraged. Results shall be described as "hypothetical" or "bounding" in discussions with the ADEOF and DEP.

- ☐ 1. Immediately notify the ADEOF, DSEO, and MRCA any time off-site radiological or meteorological conditions change significantly or are expected to change.
- ☐ 2. Verify the release pathway and characteristics with the MTSC or the AMTL.
- ☐ 3. Brief the RAE on critical dose assessment inputs (e.g., release direction, core damage status, release filtering, containment spray, etc.)

Section D: Dose Projections

- ☐ 4. Ensure the following are performed by the assigned staff:
 - a) IF a release is in progress, obtain effluent radiation monitor readings, radiation survey results, and TEDE and CDE thyroid dose calculations at site boundary, 5 mile, and 10 mile using EPI-FAP10, "Dose Assessment."
 - b) "What If" dose projections are developed for known source terms released to the RCS or containment.
 - c) "Worst Case" dose projections are developed for severe accident sequences in cooperation with AMTL or MTSC, as appropriate.
- ☐ 5. Identify maximum off-site airborne doses (both TEDE and CDE thyroid) at the site boundary, 5 miles, and 10 miles downwind.
- ☐ 6. Communicate dose assessment results and basis to the ADEOF, State DEP, and the NRC.
- ☐ 7. Immediately notify the ADEOF when EPA PAG limits exceed or are projected to exceed off-site TEDE ≥ 1 Rem or CDE-thyroid ≥ 5 Rem.
- ☐ 8. IF dose projections indicate EPA PAGs may be exceeded beyond the 10 mile EPZ, perform the following:
 - a) Dispatch RMTs to define boundary beyond 10 mile EPZ.
 - b) Verify projected doses with RMT readings.
 - c) Inform the ADEOF of boundaries and doses to areas beyond 10 mile EPZ that may exceed EPA PAGs.
- ☐ 9. IF a radioactive liquid release via the quarry has occurred, calculate dose to the maximum individual using the REMODCM methods.
- ☐ 10. IF a radioactive liquid release via the storm drain system has occurred, calculate dose to the maximum individual using the REMODCM methods with the following input values:
 - Flow - 0.22 CFS
 - Dilution factor for fish, invertebrate, and boat pathways - 100
 - Dilution factor for shore and swim pathways - 240
- ☐ 11. Update the radiological status boards.

Section E: Routine Activities

- ☐ 1. Provide input on radiological emergency classification or PAR changes to the ADEOF.
- ☐ 2. Discuss status of actual or potential release scenarios with the ADEOF.
- ☐ 3. Direct the EOF HP Technician to monitor habitability and provide radiological coverage for building access, as necessary.
- ☐ 4. After an initial PAR has been issued, notify the ADEOF of actual meteorological or radiological conditions that require an updated PAR to be issued.
- ☐ 5. Determine personnel resources and establish individual work priorities. (e.g., off-site dose assessment strategy).
- ☐ 6. IF an effluent sample is required, Refer To EPI-FAP11, "Core Damage Assessment."
- ☐ 7. IF an environmental sample is required, Refer To the appropriate RPM procedure as follows:
 - RPM 2.9.5, "Milk Sampling"
 - RPM 2.9.6, "BIOTA Sampling"
 - RPM 2.9.8, "Soil Sampling"
 - RPM 2.9.9, "Terrestrial Water Sampling"
- ☐ 8. Assign, brief, and dispatch RMTs to obtain environmental sample.
- ☐ 9. Monitor changes in the radiological release pathways via OFIS, TIC, or AMT.
- ☐ 10. Provide input to NRC questions on radiological information via the HPN, as necessary.
- ☐ 11. Consult with the State DEP representative on the following:
 - Dose assessments and field team coordination
 - RMT data
 - Meteorological data
- ☐ 12. Immediately notify the ADEOF, and MRCA when off-site radiological conditions have changed significantly or are expected to change.

Section E: Routine Activities

- ☐ 13. Consult with the MTSC or AMTL regarding radiological data that may affect the following:
 - Plant recovery plans that may effect radiological conditions
 - Accident sequence
 - Radiation release paths
 - Core uncover time
 - Performance information regarding radioactivity mitigating systems
 - Compared results of radiologically based core damage estimates with results obtained using thermal hydraulic methods.
- ☐ 14. Provide a routine briefing to the RDAT on radiological status.
- ☐ 15. Maintain radiological status boards in EOC, as necessary.
- ☐ 16. Request additional personnel from the MOR, as necessary.
- ☐ 17. Process requests for samples (refer to EPI-FAP11, "Core Damage Assessment" for Sample Points/Analysis Options) when warranted or requested by the ADTS.
- ☐ 18. Direct the RAE to calculate core damage estimates when data becomes available, as needed.

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Section F: Environmental Sampling

Sample Location and Schedule

- ☐ 1. Refer To Table 1 "Sample Location References" and the following to determine which areas to begin searching for contamination:
 - For Stack Releases..... Obtain data from the 374' met data
 - For Rooftop Releases..... Obtain data from the 142' met data
 - For Ground Releases..... Obtain data from the 33' met data
 - **DAYTIME - Wind Speed Less than 4 mph (2m/sec)**
Survey in downwind sector and 3 sectors to each side
 - **DAYTIME - Wind Speed Greater than 4 mph (2m/sec)**
Survey in downwind sector and 1 sector on each side
 - **NIGHTTIME - Wind Speed Less than 2 mph (1m/sec)**
Survey in downwind sector and 2 sectors on each side
 - **NIGHTTIME - Wind Speed Greater than 2 mph (1m/sec)**
Survey in downwind sector and 1 sector on each side
- ☐ 2. Coordinate sampling locations, schedule and strategies through State DEP.
- ☐ 3. Periodically, provide environmental sampling teams with the following:
 - Wind Direction
 - Plant Status
 - Sample Collection directions (including TLD)

Analytic Requirements

- ☐ 1. Determine the needed analytic requirements for the requested samples types:
 - HPGe or NaI
 - Iodine chemistry
 - Strontium chemistry
 - Tritium
- ☐ 2. Determine the required Minimum Detectable Levels (MDLs).

Laboratory Selection

- ☐ 1. Send samples to primary contractor for analysis.
- ☐ 2. Obtain assistance from additional contractor, as necessary.

Section F: Environmental Sampling

Preparation and Transmittal of Sample Requests

- ☐ 1. Refer To Table 2, "Record of Requested Environmental Samples," and document sample determinations.
- ☐ 2. Forward a copy of Table 2 to Environmental Services or Health Physics and record the time.

Sample Delivery Confirmation, Analytic and TLD Results

- ☐ 1. Obtain Environmental Services or Health Physics confirmation that samples have been delivered to laboratory.
- ☐ 2. Refer To Table 2, "Record of Requested Environmental Samples," and record laboratory results of field sample analysis.
- ☐ 3. Refer To Table 3, "Field TLD Data," and record the TLD results.

Prepared by: _____

Signature

Print

Date

Table 1: Sample Location References

SAMPLE TYPE	LOCATIONS	MAPS
TLDs	Emergency TLD locations and their backgrounds as identified in the Environmental Operating Report	Millstone REMODCM
Air Particulates & Iodine	Environmental Operating Report	Millstone REMODCM
Aquatic, Ground Cover (Broad Leaf Vegetation, Grass, Snow, etc.)	As taken by the Environmental Sampling Team in the Environmental Operating Report	Millstone Power Station Field Monitoring Map Books
Milk (or Pasture Grass)	Dairy cow and goat census in Annual Environmental Operating Report.	Millstone REMODCM
Vegetables, Fruits and Water	Environmental Operating Report	Millstone REMODCM

Table 2: Record of Requested Environmental Samples

[illegible]

Performed By: _____ Reviewed By: _____

Table 3: Field TLD Data

[illegible]

*See appropriate individuals in the RDAT for a listing of emergency TLD locations and their background radiation dose levels.

Docket Nos. 50-245

50-336

50-423

B18926

Attachment 4

Millstone Power Station, Unit Nos. 1, 2 and 3

Emergency Procedures Implementing (EPI) Functional Administrative Procedure (FAP)

MP-26-EPI-FAP08

"Evacuation and Assembly"

**Functional
Administrative
Procedure**



Millstone Station

Evacuation and Assembly

MP-26-EPI-FAP08

Rev. 001-03

Approval Date: 5/21/03

Effective Date: 5/30/03

STOP

THINK

ACT

REVIEW

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1. PURPOSE

1.1 Objective

This procedure provides guidance for actions to protect and account for on-site personnel during an emergency.

1.2 Applicability

Any Unit 2 or 3 Shift Manager or the ADTS may initiate this procedure when warranted by actual or projected environmental, security, radiological, or operational conditions.

Activation of the Station Emergency Response Organization (SERO) is not required to use this procedure.

The affected unit will be the lead unit for implementation. Unit 3 is normally the lead unit for non-unit specific events.

1.3 Supporting Documents

C OP 200.6, "Storms and Other Hazardous Phenomena (Preparation and Recovery)"

MP-26-EPA-REF08B, "Millstone Emergency Plan Resource Book "

MP-26-EPI-FAP01-001, "Control Room-Director of Station Emergency Operations (CR-DSEO) Checklist"

MP-26-EPI-FAP02-001, "Assistant Director Technical Support (ADTS) Checklist"

MP-26-EPI-FAP04-001, "Director of Station Emergency Operations (DSEO) Checklist"

MP-26-EPI-FAP15, "Common Forms"

NRC Regulatory Issue Summary 2002-21, "National Guard and Other Emergency Responders Located in the Licensee's Controlled Area"

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1.4 Discussion

This procedure provides guidance for on-site protective actions for a wide range of events which may include one or more of the following:

- Radiological release
- Fire, steam, or explosion hazards
- Chemical release, including truck or rail accident
- Storm or flood related hazards
- Security-related event

Protective responses to a hazard may include one or more of the following:

- Development of a coordinated plan of action
- Pre-deployment of Security or Health Physics personnel or both
- Early dismissal of selected (non-essential) personnel
- Local area evacuations
- Sheltering personnel
- Accounting for personnel
- Evacuating the protected area or the site

1.4.1 General

Selecting protective actions and coordinating the resources needed to implement those actions is best coordinated through the input and assistance from several groups. Security provides the logistics to facilitate any protective actions involving the movement of personnel; the unaffected unit needs to be informed of protective actions being implemented for operational considerations, HP, and/or Chemistry support the identification of hazardous areas in radiological events.

The time required to complete actions is an important component of on-site protective actions. On-site protection action decisions should consider the following, as appropriate:

- Radiological exposure
- Transportation accidents
- Injury
- Safety and control of plant operations
- Evaluation of constraining conditions (e.g., radiological, security, or chemical threats)
- Consequences of premature or delayed actions

Any of the following protective actions are predicated on the assumption that the conditions support the actions. Since all possible scenario combinations cannot be predicted or proceduralized, timing and implementation of any protective action will be controlled by the SM or ADTS, as appropriate, for the specific situation at the time of the event.

1.4.2 Precautionary Dismissal of Non-Essential Personnel

A precautionary dismissal of non-SERO personnel occurs at the Alert level declaration unless constraints exist, and can be initiated from the Control Room or TSC. The ADTS or CR-DSEO can elect NOT to conduct the precautionary dismissal if the nature of the event warrants such judgement.

A precautionary dismissal directs all non-SERO Millstone employees, contractors, and visitors to leave the site. This includes any offsite responders (i.e., National Guard, State Police) in the controlled area considered "non-essential" to the event.

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1.4.3 Evacuation

A site evacuation is automatically initiated at the Site Area Emergency or General Emergency classification levels unless constraints exist. Site evacuation may be called for at the Alert level classification; however, conditions which require a site evacuation are inherently defined as Site Area Emergency events and should be classified as such. Evacuation can be accomplished in about 30 minutes.

Evacuation can involve the movement of large numbers of personnel outside of the Protected Area by keying out of the turnstiles at the NAP or SAP. Evacuation may warrant station egress control by Security. Following discussion with the Connecticut State Police and the Waterford Police Departments, Security will provide specific instructions to personnel in the parking areas as requested by these off-site authorities. Following dismissal, station personnel may be directed to a specific location for monitoring and decontamination. Other situations which involve the evacuation of personnel from occupied localized areas onsite must be controlled on a case by case basis.

If the main access road is restricted to traffic, alternate egress routes are available for evacuation.

Evacuation may be deferred if the nature of the threat (weather-related, security-related, radiological release) poses a threat to the safety of the evacuating population.

Any offsite responders located in the controlled area will be evacuated if deemed non-essential to the event.

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1.4.4 Local Area Evacuation

Local area evacuation is an evacuation of a building, area, unit, or multi-units for the immediate protection of station personnel from a hazard within a limited exposure potential or a Security threat. A local area evacuation needs to be initiated anytime personnel in an occupied area may be at risk from an identified hazard. It is a standard response for control room personnel to take actions immediately upon acknowledging the hazard or threat.

1.4.5 Sheltering

Sheltering is a short-term action taken in specific situations where there is insufficient time available to conduct an evacuation, where the hazard is short lived, or where evacuation would pose a threat to the safety of the evacuating population. If a release or hazard is projected to occur within 30–60 minutes, sheltering in place with subsequent staggered movement of personnel may be considered.

Sheltering could prevent full SERO activation and Emergency Response Facility activation within 60 minutes of an event (i.e., security-related) because of constraints inside the Protected Area.

1.4.6 Protective Actions for Offsite Emergency Responders Located at the Station

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider these offsite responders as “non-essential” to the event and evacuate them from the site. However, they are still under the State’s authority and the State may require they stay on site.

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1.4.7 Relocation of EOF and TSC

Designated backup locations have been established for the EOF and TSC if either of these locations cannot be inhabited. These locations provide facilities for SERO members so that responsibilities can be performed.

EOF relocation will be to the upper level of the TSC (the mechanical room). EOF staff assemble in this location, receive a briefing of the event, and then relocate to the following areas:

Unit 3 Control Room

- DSEO
- MOC (affected unit)
- PITA
- MRDA

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- AMRDA (1)
- RAE (1)
- FTDC, after briefing RMTs #3, #4, #5

OSC AA

- ADEOF
- TICs
- MOR
- Emergency Communicator
- HP Tech
- MOC (unaffected unit)
- AMRDA (1)
- RAE (1)
- Rad Com
- Met Assistant
- SEPR
- RL

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The ADEOF may choose to relocate team members to another location in Building 475 (such as the video conferencing area on the 5th floor) where additional equipment, work space, and other capabilities already exist. Communication can then be established with Control Room SERO members.

RMT #3, #4, #5 will be deployed from upper level TSC.

TSC relocation is the EOF. A designated workspace is provided with procedures, drawings, phone lines, and computers to support current SERO TSC members.

All TSC staff assemble in this location *except* for OSC Assistants. They will report to the OSCAA, establish communications to the relocated TSC, and perform duties from this location.

1.4.8 Assembly

Assembly occurs at the Alert emergency classification level or higher. Non-essential personnel are not involved in assembly activities. The Assembly Areas are used to retain SERO personnel who may be needed in the near term to support the event.

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There are two Assembly Areas, one located in the Bldg 475 Cafeteria and one located in the Simulator Foyer. These areas would be used by SERO as "Holding Locations" for individuals with special expertise or experience for the particular event. | ①

Backup to the Simulator Foyer is the OSC AA.

1.4.9 Accountability

Accountability is automatically conducted at a Site Area Emergency or General Emergency. Accountability may be conducted at the Alert level following SERO activation and the completion of the precautionary dismissal, at the discretion of the SM or ADTS.

Accountability is the process of verifying the location of personnel who are inside the Protected Area. That is, any unaccounted for person that has keyed into the Protected Area (NAP/SAP) and is not keyed into a vital area, the TSC/OSC, or the OSC Assembly Area (cafeteria) will be identified as missing. Accountability is required to be completed within 45 minutes of its initiation (the names of any missing persons identified to the ADTS and announced over the PA).

Accountability targets from the time of the announcement are as follows:

- Personnel have keyed in or notified CAS within 15 minutes.
- Unaccounted personnel have been identified within 30 minutes.
- Names of unaccounted personnel have been announced within 45 minutes.
- Personnel accountability inside the protected area is continuously maintained for the duration of the event.

1.4.10 Definitions and abbreviation are contained in Attachment 1, "Definitions and Abbreviations." Responsibilities are contained in Attachment 2, "Responsibilities."

2. INSTRUCTIONS

2.1 Precautionary Dismissal

2.1.1 Assess the nature, probable cause, and duration of the hazard and perform the following:

- a. IF event is security related and a Security assessment has *not* been completed, delay the dismissal until the assessment is completed by Security.
- b. IF event requires sheltering instead of dismissal, Refer To Section 2.2, "Sheltering."
- c. IF event is *not* security related OR a Security assessment has been completed, provide the SSS/MOS with all available information.
- d. Consider the status of SERO activation prior to the dismissal of personnel.

2.1.2 Contact SSS/MOS and MRCA to discuss the following:

NOTE

For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders (i.e., National Guard, Police) as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- Decision to shelter site personnel
- Decision to dismiss State/local responders onsite (i.e., National Guard, Police, etc.)
- Additional personnel assigned to the NAP and SAP to assist in the egress of large numbers of personnel as necessary
- Use of alternate egress routes, if needed
- Estimated time to pre-position personnel to support the dismissal
- Existence of any local area or site access restrictions
- Need to sweep areas outside the protected area including :
 - Environmental lab
 - Red barn and beach area
 - Bay Point Beach and A-Frame
 - Roadways and walkways
 - Switchyard

- Fitness center
 - Credit union
 - Recreation areas
 - Fire Training Center
 - Warehouses
 - Simulator building
 - Training building
 - Parking areas
 - Outside job sites or grounds maintenance
- Need for additional off-site support

2.1.3 Notify the following of planned actions and announcements:

- a. IF the SERO is in the process of activation, the DSEO and the ADTS.
- b. The unaffected unit control room.

2.1.4 Perform the following:

- a. Activate the outside speakers.
- b. Select station public address system (priority page or 810).
- c. IF alternate routes are being used for the dismissal, include instructions in announcement.
- d. Announce the following:

Attention all personnel. Attention all personnel. All non-SERO employees, contractors and visitors leave the site at this time.

(IF alternate routes are being used, provide directions)
- e. Repeat the announcement.
- f. Log the time the announcement was completed.

2.1.5 IF the public address system is inoperable, consider using the following as alternatives for personnel notification:

- Security sweeps using bull horns
- HP personnel
- O&M radios

2.1.6 WHEN the precautionary dismissal has been completed, DIRECT SSS/MOS to perform accountability.

- End of Section 2.1 -

2.2 Sheltering

2.2.1 IF the event involves a situation where site personnel should be sheltered (e.g., Security-related, weather-related, fire, toxic gas, an evacuation is not possible), perform the following:

- a. Determine the nature of the constraint:
 - Not enough time to conduct an evacuation (weather-related, rad release)
 - Short-lived hazard (chemical, toxic gas)
 - Radiological release
 - Evacuation would threaten the safety of the evacuees
 - Intrusion by a hostile force
- b. IF SERO is staffed, contact the following to discuss course of action :
 - For radiological-related, MRCA
 - For security-related, MOS
 - EOF DSEO
- c. Inform unaffected unit of the event and sheltering actions planned.

2.2.2 Refer To Attachment 3, "Examples of On-Site Protective Actions and Announcements," and prepare announcement.

2.2.3 Ensure outside speakers are activated.

2.2.4 Review the wording for the station notification message and announce the sheltering instructions.

2.2.5 Repeat the PA message.

2.2.6 Log the time of announcement on EPI-FAP15-012, "SERO Log Sheet."

2.2.7 Refer To appropriate section of EPI-FAP01-001, "Control Room - Director of Station Emergency Operations (CR-DSEO)," and perform actions.

- End of Section 2.2 -

2.3 Evacuation

NOTE

Evacuation is automatically conducted at a Site Area Emergency or General Emergency unless constraints exist. Other situations which involve the evacuation of personnel from occupied localized areas onsite must be controlled on a case by case basis.

2.3.1 Assess the nature, probable cause, and duration of the hazard.

CAUTION

Movement of personnel should consider potential on-site and off-site constraints.

- a. IF the station evacuation is constrained (e.g., security related, weather related, fire or toxic gases), consider delaying evacuation until an assessment has been completed.

- 1) Notify SSS/MOS of decision *not* to evacuate.

2.3.2 Direct the SSS/MOS to perform the following:

NOTE

For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

- a. IF evacuation via the main access road is restricted, discuss the use of alternate egress routes.
- b. Inform Waterford Dispatch of time and purpose of any planned on-site siren activation.
- c. Establish and maintain traffic control with the Waterford and Connecticut State Police departments including alternative egress routes, as applicable.
- d. IF the event is Security-related and State/local responders are onsite (i.e., National Guard, Law Enforcement, Coast Guard, DEP), notify SSS/MOS to contact Waterford Dispatch to perform protective actions associated with these workers.
- e. IF the event is non-Security-related and National Guard are onsite and considered non-essential, notify SSS/MOS to inform National Guard Command and Control to evacuate or reposition these forces.

2.3.3 Perform the announcement over the public address system as follows:

- a. Activate the outside speakers.

- b. Sound the Evacuation Alarm for 30 seconds.
- c. Select station public address system (priority page or 810).
- d. IF alternative evacuation routes are being used, include instructions in announcement.
- e. Announce the following:
Attention all personnel, Attention all personnel. All non-SERO employees, contractors, and visitors evacuate the site at this time. (IF alternative routes are being used, provide directions) Security initiate accountability.
- f. Repeat the announcement.
- g. Log the time of the announcement.

2.3.4 IF public address system is inoperable, consider using the following as alternatives for personnel notification:

- Security sweeps using bull horns
- HP personnel
- O&M radios

2.3.5 Direct the SSS/MOS to perform the following:

- a. Coordinate security patrols to sweep the open areas, outdoors, and buildings outside the Protected Area including:
 - Environmental lab
 - Red barn and beach area
 - Bay Point Beach and A-Frame
 - Roadways and walkways
 - Switchyard
 - Fitness center
 - Credit union
 - Recreation areas
 - Fire Training Center
 - Warehouses
 - Simulator building
 - Training building
 - Parking areas
 - Outside job sites or grounds maintenance

①

- b. Verify personnel are moving as instructed and report back on the status.
- c. Provide key search accountability results within 30 minutes if not previously conducted.

- End of Section 2.3 -

2.4 Accountability

2.4.1 IF a site evacuation has been conducted, perform the following:

- a. Upon declaration of a Site Area Emergency or General Emergency, direct CAS to implement accountability procedures.
- b. Within 15 to 25 minutes after station announcement, ensure CAS has run an area summary report or similar printout to account for personnel in the protected area.
- c. Within 40 minutes of the announcement to conduct accountability, perform the following:
 - 1) Obtain the missing persons report.
 - 2) Determine the approximate number of personnel who are unaccounted for by badge or telephone call.
 - 3) Notify the ADTS of the results.
- d. IF personnel are unaccounted for in the Protected Area, provide the ADTS with the following:
 - Name of missing individual
 - Last known location of missing individual
 - Special access requirements for intended search and rescue route

NOTE

Announcement by name in 45 minutes fulfills the initial accountability commitment.

- e. Announce the names of unaccounted personnel over station PA system.
- f. Coordinate with the MOSC to initiate the dispatch of Search and Rescue Teams to locate any unaccounted for personnel.
- g. Maintain continuous accountability of personnel within the protected area until directed otherwise by the ADTS.

- End of Section 2.4 -

2.5 Assembly

- 2.5.1 Identify and retain additional SERO personnel with special expertise or experience for the particular event. ①
- 2.5.2 Direct the MOR and the MOSC (in the OSC Assembly Area) to obtain the following information: ②
 - a. Name
 - b. SERO position
 - c. Home or point of contact number
- 2.5.3 Direct SERO EOF experts to the Simulator Foyer Assembly Area to wait for further instructions. ①
- 2.5.4 Notify the MOSC to retain SERO OSC Assembly Area experts and to wait for further instructions.
- 2.5.5 Discuss establishing a staging area for personnel and resources outside the 10 mile EPZ with DSEO as conditions warrant.

- End of Section 2.5-

3. SUMMARY OF CHANGES

3.1 Revision 001-03

- 3.1.1 Added supporting document NRC Regulatory Issue Summary 2002-21.
- 3.1.2 Added Section 1.4.6 on protective actions for offsite emergency responders located at the station. (CR-03-0929/03000501-03/03000680-02)
- 3.1.3 Added a NOTE and a step under 2.1.2 to contact the SSS/MOS and MRCA to discuss whether to dismiss State/local responders onsite (i.e., National Guard, Police, etc.).
- 3.1.4 Added a NOTE and steps under 2.3.2 to direct the SSS/MOS to consider State/local non-responders non-essential, and to evacuate them.

3.2 Revision 001-02

- 3.2.1 Added Note and associated steps 2.1.2 and 2.3.2 on actions to take for offsite responders for precautionary dismissal and evacuation.
- 3.2.2 Clarified definitions and messages by changing "subject-to-call" to "all call," minimum staffing and full staffing.
- 3.2.3 Changed references from Shift Technician (ST) to Emergency Communicator.
- 3.2.4 Changed reference from ERC to MOR.

3.3 Revision 001-01

- 3.3.1 Changed MPI to PITA to reflect new title.
- 3.3.2 Clarified Assembly Areas are used to retain SERO experts who may be used in the near term to support the event.
- 3.3.3 Modified instructions for assembly.
- 3.3.4 Updated the MOR's responsibilities for releasing personnel.
- 3.3.5 Added list of sweep areas for Security to sections 2.1.2 and 2.3.5.

3.4 Revision 001

- 3.4.1 Editorial changes only.

3.5 Revision 000-05

- 3.5.1 Added security-related events to Section 1.4.
- 3.5.2 Minor editorial change in step 1.4.1.
- 3.5.3 Clarified in step 1.4.2 that a precautionary dismissal occurs at the Alert level unless constraints exist.
- 3.5.4 Clarified in step 1.4.3 that a site evacuation is initiated at the Site Area Emergency (SAE) or General Emergency (GE) unless constraints exist.

- 3.5.5 Minor editorial change in step 1.4.3. Added information on alternate egress routes.
- 3.5.6 Clarified in step 1.4.4 that a local area evacuation may be the result of a Security threat.
- 3.5.7 Clarified in step 1.4.5 that sheltering may be chosen instead of evacuation.
- 3.5.8 Added steps 1.4.6 and 1.4.7 for information on relocated EOF, Backup TSC, and relocated assembly area for simulator foyer.
- 3.5.9 Added step 2.1.1.b, 2.1.2, and 2.1.4 to precautionary dismissal to provide reference to sheltering and use of alternate egress routes.
- 3.5.10 Modified step 2.2.4 and added steps 2.2.5 and 2.2.7 to clarify the sheltering procedure.
- 3.5.11 Added step 2.3.1.a.1) on sheltering.
- 3.5.12 Added steps 2.3.2.a and 2.3.3.d to provide information on alternate egress routes.
- 3.5.13 Clarified in step 2.3.5.c that key search accountability results are available within 30 minutes.
- 3.5.14 Modified step 2.4.1.c to identify missing persons in about 40 minutes in accordance with security procedures.
- 3.5.15 Clarified in Attachment 3, Security Event, that a follow-up action to sheltering is to conduct precautionary dismissal, evacuation, and accountability as deemed appropriate when the threat has been resolved. Added information on the classification level.
- 3.5.16 Various editorial comments.

3.6 Revision 000-04

- 3.6.1 Minor editorial changes.
- 3.6.2 Added Section 2.2, Sheltering.
- 3.6.3 Added definitions to Attachment 1, "Definitions and Abbreviations."
- 3.6.4 Added example to Attachment 3, "Examples of Onsite Protective Actions and Announcements," for situations which may require sheltering.

3.7 Revision 000-03

- 3.7.1 Deleted sentences directing SERO personnel to the Simulator Foyer in first paragraph under steps 1.4.3 and 1.4.6.

3.8 Revision 000-02

- 3.8.1 Changed the word "director" to "direct" in step 2.1.6.

3.9 Revision 000-01

3.9.1 Added the words "unless constraints exist" to clarify the evacuation.

3.10 Revision 000

3.10.1 Original issue

Attachment 1

Definitions and Abbreviations

(Sheet 1 of 2)

Accountability - Accountability is used to determine if personnel are missing. A census of personnel in the protected area completed within 45 minutes.

ADTS - Assistant Director Technical Support

Affected Area - Location requiring protective response to include level, building, unit, open area, or site.

CAS - Central Alarm Station

DSEO - Director of Station Emergency Operations

EPZ - Emergency Planning Zone

Essential Personnel - Personnel directly engaged in actions required to safely operate, monitor plant functions, or mitigate accident events. Security, HP, and other personnel directed by managers. This includes emergency plan on-call, minimum staffing, full staffing, on-shift security, HP and other personnel as directed.

| ②

MOS - Manager of Security

MRCA - Manager Radiological Consequence Assessment

NAP - North Access Point

Owner Controlled Area - All station property excluding the protected area.

PA - Public Address (System)

Protected Area - The area inside the security fence where access is controlled by security.

Protected Area Evacuation - Leaving the protected area to a designated assembly area.

SAP - South Access Point

Attachment 1

Definitions and Abbreviations

(Sheet 2 of 2)

Sheltering - Staying inside a structure with doors, windows, and exterior ventilation closed.

Site Evacuation - Leaving the protected area and exiting the owner controlled property.

SM - Shift Manager

SSS - Security Shift Supervisor

TSC - Technical Support Center

Attachment 2 Responsibilities

(Sheet 1 of 1)

1. The Security Shift Supervisor/Manager of Security is responsible for coordinating accountability, site access control, traffic control, and assembly areas.
2. The HP Manager or MRCA is responsible for providing radiological assessment and guidance concerning protective recommendations.
3. The Manager of Resources is responsible for coordinating the control and release of personnel from the emergency response facilities or assembly areas. | ①
4. The following managers and staff may be designated by the Shift Manager or DSEO to support implementation of this procedure:
 - MRCA (chemical release)
 - Emergency Communicator or alternate designee (announcements) | ②
 - HP Technicians (decontamination at access and assembly points)
 - Security (accountability, crowd control)

Attachment 3

Examples of On-Site Protective Actions and Announcements

(Sheet 1 of 3)

Example 1: Approaching Hurricane (station-wide, late onset, long duration)

- Objectives:
- a) Early release of all but essential personnel
 - b) Prepare essential personnel for long-term staffing during storm

Sample Announcement

ATTENTION ALL PERSONNEL! ATTENTION ALL PERSONNEL! Hurricane conditions are projected to reach the site within 24 hours. Personnel not on call or involved in plant safety, security, or operations may leave work at 2 PM today and are excused from regular work tomorrow. All on-call and all-call SERO and operations personnel: plan to report to your assigned locations by 10 AM tomorrow for the duration of the storm. Additional information will be provided.

②

- Follow-up:
- a) As storm approaches, warn all personnel to remain indoors.
 - b) Announce restoration of normal conditions when appropriate.

Example 2: Radiological or Chemical Release (onset <30 minutes, duration <30 minutes)

- Objectives:
- a) Avoid affected areas
 - b) Prompt sheltering (no time to complete assembly)

Sample Announcement

ATTENTION ALL PERSONNEL! ATTENTION ALL PERSONNEL! A brief radiological (or chemical) release from the main stack is projected to start in 15 minutes. **ALL PERSONNEL!** Avoid the stack and the unit ____ turbine building. Take shelter indoors; secure windows, doors and unnecessary ventilation. **STAND BY FOR ADDITIONAL INSTRUCTIONS.**

- Follow-up:
- a) Ensure Environmental Laboratory, SGRP, other buildings outside fence are notified (security walk through or phone call)
 - b) Announce restoration of normal conditions when appropriate.

Attachment 3

Examples of On-Site Protective Actions and Announcements

(Sheet 2 of 3)

Example 3: Radiological Release (onset >30 minutes, duration >30 minutes)

- Objectives: a) Accountability within 45 minutes
b) Retention of essential personnel

Precondition: SERO activation already announced (Alert Charlie-One or higher declared)

Sample Announcement

ATTENTION ALL PERSONNEL! ATTENTION ALL PERSONNEL! A radiological release may occur in (x) hours. HP personnel assemble in the (cafeteria, NAP, SAP). Inside the protected area, evacuate now. All personnel remaining in the protected area - key in now.

- Follow-up: a) Ensure Security uses bullhorn to retain HP, SERO, other crafts or trades at assembly areas as directed by MOR.
b) Ensure off-site notifications are performed.
c) Coordinate release of personnel from assembly points (NAP, SAP).

Example 4. Security Event (Intrusion by a hostile force)
(Sheltering Actions)

- Objectives: a) Avoid injury to station personnel
b) Prompt sheltering

ATTENTION ALL PERSONNEL! ATTENTION ALL PERSONNEL! An _____ has been declared at (Unit # ____).
(Unusual Event)(Alert)(Site Area Emergency)(General Emergency)

There is a [insert nature of constraint (e.g., Security event)] _____ occurring at the station.

Avoid the _____ until further notice. Take shelter indoors. Close windows and doors and stay clear of windows. Do not leave the building. Stand by for additional instructions. (SERO members report to your designated emergency response facility.)
OR (SERO members take shelter.)

- Follow-up: a) Warn personnel to avoid specific areas onsite and remain indoors.
b) When appropriate, announce termination of hostile situation.
c) WHEN the threat has been resolved, conduct SERO activation, precautionary dismissal, or evacuation and accountability as deemed appropriate.

Attachment 3
Examples of On-Site Protective Actions and Announcements

(Sheet 3 of 3)

Example 5. Evacuation of Site (radiological release in progress, conditions degrading)

- Objectives:
- a) Emergency event declared
 - c) Off-site notifications are performed
 - d) Security notified to allow evacuation

Sample Announcement

ATTENTION ALL PERSONNEL! ATTENTION ALL PERSONNEL! Plant conditions are degrading. A site evacuation has been ordered. Personnel at NAP will be released, in groups, by security. Personnel at SAP, stand by. Avoid all areas east and south of the main stack. All personnel remaining in the protected area - key in now.

- Follow-up:
- a) Provide follow-up message and transportation for personnel at SAP who can not reach cars without passing release point (in this case, stack).

Docket Nos. 50-245
50-336
50-423
B18926

Attachment 5

Millstone Power Station, Unit Nos. 1, 2 and 3

Emergency Procedures Implementing (EPI) Functional Administrative Procedure (FAP)

MP-26-EPI-FAP09

"Radiation Exposure Controls"

**Functional
Administrative
Procedure**



Millstone Station

Radiation Exposure Controls

MP-26-EPI-FAP09

Rev. 001-01

Approval Date: 5/21/03^{PO2}

Effective Date: 5/30/03



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MP-26-EPI-FAP09-001, "Increased Radiation Exposure Authorization"

MP-26-EPI-FAP09-002, "DDE Limit Reduction"

MP-26-EPI-FAP09-003, "KI Tablet Issue Authorization and Tracking Sheet"

MP-26-EPI-FAP09-004, "Emergency Worker Access and Exposure Control Log"

MP-26-EPI-FAP09-005, "Calculation of I-131 Activity Worksheet Based on HP-210 Count"

MP-26-EPI-FAP09-006, "Thyroid CDE Based on Field Air Samples"

1. PURPOSE

1.1 Objective

This procedure provides guidance for personnel radiation exposure control, emergency dosimetry, and Potassium Iodide (KI) issuance during events which activate the Station Emergency Response Organization (SERO).

1.2 Applicability

An event has been classified as an emergency in accordance with MP-26-EPI-FAP06, "Classification and PARs."

1.3 Supporting Documents

RPM 1.5.4, "Response to a Contaminated Injured Person"

RPM 2.1.1, "Issuance and Control of RWPs"

RPM 2.1.2, "ALARA Interface With the RWP Process"

MP-26-EPI-FAP02, "Technical Support Center Activation and Operation"

MP-26-EPI-FAP04, "Emergency Operations Facility Activation and Operation"

C-OP 200.3, "Response to Medical Emergencies"

KI Qualification Index

NRC Regulatory Issue Summary 2002-21, "National Guard and Other Emergency Responders Located in the Licensee's Controlled Area"

①

1.4 Discussion

1.4.1 Exposure Control

When an Alert or higher classification has been declared, exposures up to a Total Effective Dose Equivalent (TEDE) of 4.5 Rem per year (inclusive of year-to-date exposures) are automatically authorized within the 10 CFR 20 limit of 5 Rem. Emergency exposures are exposures which may be authorized above 10 CFR 20 limits to enable SERO personnel to operate the plant and take actions to mitigate the effect of the emergency to plant systems and the public (see Attachment 3 for required authorizations). Emergency exposure guidelines are established per EPA 400.

If exposure > 25 Rem is expected, the mission is voluntary and the potential health effects of the increased exposure have to be explained to the volunteer (Refer to Attachment 4, "Health Risks of High Doses of Radiation").

1.4.2 Issuance of KI

The issuance of KI is based on the determination of a release in which radioiodine exposure may result in an Emergency Worker's accumulated dose of 50 Rem or greater to the thyroid. The MRCA will make the recommendation for issuance of KI to the ADTS for on-site personnel. The MRDA will make the recommendation for issuance of KI to the ADEOF for off-site SERO personnel. The appropriate Assistant Director is then responsible for authorizing the use of KI.

1.4.3 Protective Actions for Offsite Emergency Responders Located at the Station

State/local authorities may deploy offsite responders such as the National Guard or State/local police to the Millstone Station in response to a security-related threat. The State of CT and Waterford Police will be responsible for protective measures for these forces, as necessary (i.e., providing and issuing potassium iodide (KI) in a timely manner, maintaining doses ALARA, and upgrading exposures, issuing and tracking dosimetry). Emergency worker exposures are determined in accordance with EPA-400 tables. For an emergency event, radiological or non-radiological, that does *not* involve a security threat, the station would consider offsite responders as "non-essential" to the event and evacuate them from the site. However, they are still under the State's authority and the State may require they stay on site.

①

1.4.4 Definitions and abbreviations are contained in Attachment 1. Responsibilities are contained in Attachment 2.

2. INSTRUCTIONS

2.1 Emergency Worker Exposure Controls and Increased Exposure Authorization

CAUTION

EPA-400 allows for an unrestricted emergency worker exposure of 5 Rem during a declared event, regardless of 10 CFR 20 occupational exposure previously received.

For ALARA purposes at Millstone, an ALERT or higher declaration automatically increases exposures to 4.5 Rem TEDE less annual exposure to date. If dosimetry records are unavailable for prompt deployment, a 1.5 Rem TEDE limit may be assumed. (4.5 Rem emergency worker limit minus 3 Rem station administration limit on dose from all licensees combined).

NOTE

Mission-specific exposure limits and controls for offsite responders located on site (i.e., National Guard) will be developed and issued by the State of CT or local agencies in accordance with EPA-400.

①

- 2.1.1 Refer to Attachment 3, "Emergency Exposure Control Guidance," and develop Mission Specific Exposure Limits and assign those limits to emergency workers based on their task considering the work environment, event conditions and ALARA practices.
- 2.1.2 IF the dose received for the mission is expected to exceed 4.5 Rem, Refer To and complete MP-26-EPI-FAP09-001, "Increased Radiation Exposure Authorization," and submit for approval.
- 2.1.3 IF the dose received for the mission is expected to exceed 25 Rem, perform the following:
 - a. Obtain DSEO approval.
 - b. Explain the consequences of large exposures to the volunteer. Refer To Attachment 4, "Health Risks of High Doses of Radiation."
- 2.1.4 IF the source of exposure is expected to include a significant amount of non-noble gases (such as when fuel failure is imminent or has occurred):
 - a. Determine the TEDE to DDE ratio using MP-26-EPI-FAP09-002, "DDE Limit Reduction," and base the Mission Specific Exposure Limits on corrected DDE values.
 - b. Calculate a TEDE/DDE ratio for each mission whenever environmental conditions are expected to differ.

2.1.5 Refer To MP-26-EPI-FAP09-004, "Emergency Worker Access and Exposure Control Log," and log exposure information for personnel dispatched from TSC, OSC, OSCAA, and Control Rooms, as applicable.

- a. Obtain exposure information for offsite responders located onsite (i.e., National Guard, State Police) from the MOS and log.

①

2.1.6 In addition to the DDE limit reduction developed in MP-26-EPI-FAP09-002, "DDE Limit Reduction," consideration should be given to the following items when determining DDE dose limit restrictions:

- Measured air sample results
- Use of respiratory protection
- β sensitive radiation instrument response

2.1.7 Refer To RPM 2.1.2, "ALARA Interface with the RWP Process," and develop respiratory protection/PPE recommendations.

2.1.8 IF emergency workers receive emergency exposures in excess of Emergency Exposure Limits, perform the following:

- Determine exposure conditions and status and notify the DSEO (via the ADTS or ADEOF as appropriate).
- Maintain dosimetry records of personnel who have received excess emergency exposures for the dosimetry laboratory.
- Perform whole body counts and bioassays, as necessary.
- Transport potentially contaminated or highly exposed personnel to off-site medical facilities, as necessary.

2.1.9 IF emergency workers receive exposures in excess of 10 CFR 20.1201, initiate NRC notification per 10 CFR 20.2202 through the MOC, as soon as possible, without interfering with the emergency actions or prompt actions to protect health and safety.

- End of Section 2.1 -

2.2 Potassium Iodide (KI) Use and Distribution

NOTE

1. Consider the administration of KI to emergency workers during radiological releases in which radioiodine exposure is projected to result in an dose of 50 Rem or greater to the thyroid. The total accumulated dose is based on the inhaled iodine dose rate from airborne concentrations of radioiodine plus the gamma dose rate.
2. The State of CT is responsible for issuing KI to offsite responders located onsite supporting the event. ①

- 2.2.1 Calculate thyroid CDE using MP-EPI-FAP09-006, "Thyroid CDE Based on Field Air Samples," when air sample results are available.

The inhaled iodine dose rate from airborne concentrations of radioiodine is based on the following rule of thumb:

Breathing 6×10^{-7} $\mu\text{Ci/cc}$ of I-131 for 1 hour = 1 Rem to Thyroid (Adult)

- 2.2.2 WHEN the control and issue of KI has been determined as the appropriate response to emergency conditions, notify the appropriate Assistant Director (ADTS or ADEOF).
- 2.2.3 WHEN approval has been granted to initiate the KI tablet issue process by the Assistant Director, perform the following:
- a. Log the date, time and justification for when approval was granted.
 - b. IF needed, request that the MOR call in clerical or medical staff to assist in KI tablet issue and documentation.

NOTE

1. The "KI Qualifications Index" is located in the EOF and OSC.
2. KI should not be administered to individuals with known allergies to shellfish.
3. Optimum protection of the thyroid gland against radioiodine exposure is achieved when KI is administered within 4 hours preceding or 4 hours following an acute radioiodine dose.
4. KI Tablets are located in each unit control room, the EOF, the TSC/OSC lockers in the ventilation room, and in each RMT Kit.

- 2.2.4 Review "KI Qualifications Index" and determine emergency workers qualified to receive KI tablets.

2.2.5 Direct HP personnel to complete the following:

- Issue a copy of MP-26-EPI-FAP09-003, "KI Tablet Issue, Authorization, and Tracking Sheet," for each emergency worker scheduled to receive KI and track use of KI.
- Direct authorized emergency workers to read the "KI Information Sheet" section of MP-26-EPI-FAP09-003 and advise personnel that the use of KI is voluntary.
- Issue first KI tablet to emergency workers.

2.2.6 Refer To MP-26-EPI-FAP09-003, "KI Tablet Issue, Authorization, and Tracking Sheet," and track the control and issue of KI tablets for each authorized emergency worker.

- a. Ensure authorized emergency workers are only taking one (1) 130 mg KI tablet for each 24 hour period.
- b. Ensure a 10 consecutive day limit for KI tablet use is tracked for each authorized emergency worker.
- c. Log Senior Company Physician approval for each extension of the 10 consecutive day limit for KI tablet use.

- End of Section 2.2 -

3. SUMMARY OF CHANGES

3.1 Rev. 001-01

3.1.1 CR-03-00929/03000501-03/03000680-02

- Added supporting document Regulatory Issue Summary 2002-21.
- Added Section 1.4.3 on protective actions for offsite emergency responders located at the station.
- Added note to step 2.1.1 to provide information that the State of CT or local agencies are responsible for mission-specific exposure limits and controls for off-site resources located at the site.
- Added step 2.1.5.a to obtain exposure information for offsite resources located onsite from the ADTS or DSEO and log.
- Added to note 2.2.1 that the State of CT is responsible for issuing KI to offsite resources located onsite supporting the event.

3.2 Rev. 001

3.2.1 The following changes were made as a result of a biennial review (CR-02-10545):

- a. Added reference to MP-26-EPI-FAP04-004, "Emergency Worker Access and Exposure Control Log."
- b. Various editorial changes including:
 - Change word "List" to "Index" in Section 1.3 and 2.2.
 - Deleted reference to RPM 2.1.2 in Section 1.3.
 - Added "MP-26-" to references to EPD procedures.
 - Deleted word "incident" from first paragraph of Section 1.4.
 - Added word "dose" to Section 1.4.2.
 - Deleted reference to "Nurses Office" in EOF in note with step 2.2.3.
 - Revised wording in Definitions Section of Attachment 1.
 - Revised reference to C OP 204 to C OP 200.3 in Attachment 3.
 - Deleted "MRCA or Designee" from step 6 of FAP09-005.
- c. Added Caution to Section 2.1 prior to step 2.1.1.

3.3 Rev. 000

3.3.1 Original Issue

Attachment 1

Definitions and Abbreviations

(Sheet 1 of 1)

Definitions

Computer Based Exposure Tracking System (CBETS) - A station approved database, such as PREM or Fastrak, used to track personnel radiation exposure.

Emergency Worker - Any utility, contractor, or other personnel performing duties in support of the Station Emergency Response Organization during a declared emergency at Millstone Station.

Life Saving Exposures - There are no upper limits for emergency life-saving and protection of large populations. The DSEO shall authorize any dose extension greater than 25 Rem. Acceptance by emergency workers is voluntary.

Mission Specific Exposure Limits - Exposure limits required to conduct a specific task or mission.

Protection of Valuable Property (Exposure) - EPA 400 recommends 10 Rem limit.

Abbreviations

ADEOF - Assistant Director Emergency Operations Facility

ADTS - Assistant Director Technical Support

ALARA - As Low As Reasonably Achievable

DSEO - Director of Station Emergency Operations

MOR - Manager of Resources

MRCA - Manager of Radiological Consequence Assessment

MRDA - Manager of Radiological Dose Assessment

RMT - Radiation Monitoring Team

TEDE/DDE - Total Effective Dose Equivalent/Deep Dose Equivalent

Attachment 2 Responsibilities

(Sheet 1 of 1)

1. The Director of Station Emergency Operations (DSEO) is responsible for authorizing emergency exposures greater than 25 Rem.
2. The Assistant Director, Technical Support (ADTS) is responsible for approving the Manager of Radiological Consequences Assessment's (MRCA) recommendations for emergency exposure upgrades up to 25 Rem and for authorizing KI issuance for SERO emergency workers within the protected area fence.
3. The Assistant Director, Emergency Operations Facility (ADEOF) is responsible for approving the Manager of Radiological Dose Assessment's (MRDA) recommendations for emergency exposure upgrades up to 25 Rem and for authorizing KI issuance for SERO emergency workers outside the protected area fence.
4. The MRCA is responsible for recommending emergency dosimetry issuance, personnel radiation exposure limits including Mission Specific Exposure Limits, and KI issuance to the ADTS and implementing the approved actions.
5. The on-shift Health Physics (HP) Technician is responsible for providing dosimetry and guidance on radiation exposure control to Control Room personnel.
6. The Computer Based Exposure Tracking System (CBETS) Operators are responsible for utilizing the current exposure tracking system and providing radiation exposure reports to SERO personnel as requested by the MRCA.
7. The Manager of Radiological Dose Assessment (MRDA) is responsible for recommending and implementing exposure limits upgrades, and the issuance of KI for off-site Radiological Monitoring Team (RMT) personnel.

Attachment 3 Emergency Exposure Control Guidance

(Sheet 1 of 1)

NOTE

For many accident scenarios, only noble gases are released and hence, the contribution of non-noble gasses to TEDE is negligible. This allows emergency worker exposure limits to be based on the measurement of DDE. If it is determined that the iodine/particulate dose is a substantial contributor to the TEDE, additional dose contribution for non-noble gasses must be evaluated (per EPI-FAP09-002). Special on-site conditions may require independent review/special evaluation.

Emergency exposure control at Millstone is conducted in a step process. For events classified at the Unusual Event level, normal operational exposure control limits and levels are maintained in accordance with 10 CFR 20 per station procedures. At Alert and higher classification levels, dose limits are automatically extended to 4.5 Rem and continue to follow 10 CFR 20 criteria (any emergency dose is added to any accumulated annual dose to establish control limits). For situations where exposure may exceed 4.5 Rem, dose accumulated during the emergency follows EPA-400 criteria and is independent of any prior occupational exposure. The table below assumes an Alert or higher classification has been declared:

If the following condition is expected	The following may be applicable
Dose (including annual exposure to date) <u>is not</u> expected to reach 4.5 Rem TEDE	Emergency workers may be dispatched without exposure extension.
Dose (accumulated during the emergency) <u>may</u> reach 10 Rem TEDE for actions needed to protect valuable property.	Assistant Director approval required for exposure > 4.5 Rem and ≤ 10 Rem.
Dose (accumulated during the emergency) <u>may</u> reach 25 Rem TEDE for actions needed for lifesaving or protection of large populations.	Assistant Director approval required for exposure > 4.5 Rem and ≤ 25 Rem.
Dose (accumulated during the emergency) <u>may</u> exceed 25 Rem TEDE for actions needed for lifesaving or protection of large populations.	a. DSEO approval required for exposures > 25 Rem. b. Exposure is voluntary. c. Risks of exposure explained to volunteers
Contaminated or highly exposed individual requires evaluation for medical attention.	Addressed by C OP 200.3 or RPM 1.5.4.

Attachment 4 Health Risks of High Doses of Radiation

(Sheet 1 of 2)

Health Effects Associated with Doses Received Within a Few Hours^(a)

Whole Body Absorbed Dose (rad)	Early Fatalities ^(b) (%)	Whole Body Absorbed Dose (rad)	Prodromal Effects ^(c) (% affected)
140	5	50	2
200	15	100	15
300	50	150	50
400	85	200	85
460	95	250	98

- (a) Risks will be lower for protracted periods.
- (b) Supportive medical treatment may increase the dose at which these frequencies occur by approximately 50 percent.
- (c) Forewarning symptoms of more serious health effects associated with large doses of ionizing radiation (such as changes in blood characteristics, headaches, nausea, diarrhea).

Approximate Cancer Risk to Average Individuals from 25 Rem Effective Dose Equivalent Delivered Promptly

Age at Exposure (years)	Approximate Risk of Premature Death (deaths/1000 people exposed)	Average Years of Life Lost if Premature Death Occurs (years)
20 to 30	9.1	24
30 to 40	7.2	19
40 to 50	5.3	15
50 to 60	3.5	11

Attachment 4

Health Risks of High Doses of Radiation

(Sheet 2 of 2)

NOTE: All doses shown are total effective dose equivalent in Rem.

Organ	Volume or Area of Exposure ¹	Risk of injury in five years		Type of Injury
		5 percent	50 percent	
Bone marrow	whole	230	340	aplasia and pancytopenia
	segment	1135	1360	
Liver	whole	1000	1360	acute and chronic hepatitis
Stomach	100 cm ²	1464	1665	ulcer, perforation, hemorrhage
Intestine	400 cm ²	1465	1665	ulcer, perforation, hemorrhage
	100 cm ²	1570	1855	
Lung	whole	720	1000	acute and chronic pneumonitis
	100 cm ²	1135	1245	
	75 percent	770	-----	
Kidney	whole	875	1000	acute and chronic nephrosclerosis
Brain	whole	1770	1950	infarction, necrosis
Spinal cord	10 cm	1465	1665	infarction, necrosis
Heart	60 percent	1465	1665	pericarditis and pancarditis
Skin	---	1665	1950	ulcers, fibrosis
Fetus	whole	200	314	death
Lens of eye	whole	355	620	cataracts
Ovary	whole	200-430	410-875	permanent sterilization
Testes	Whole	340-720	410-875	permanent sterilization

¹ Dose delivered in 200 Rad fractions, 5 fractions per week.