Dept. Head	Proc. No. 2.50.0
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.0 DECLARATION AND CATEGORIZATION OF EMERGENCY CONDITION

1.0 DISCUSSION

Emergency conditons may exist or develop which require implementation of the emergency plan.

This procedure is used to determine whether such conditions exist and if so which of the emergency condition classifications (unusual event, alert, site area, general) to assign. It also governs reclassification should conditions necessitate such a step, and declaration of termination of the emergency condition.

Declaration, classification, and reclassification of emergency conditions is the responsibility of the Emergency Coordinator. The Plant Shift Superintendent is the Emergency Coordinator until relieved by a qualified individual.

When an emergency condition has been brought under control and plant conditions have stabilized to the satisfaction of the Plant Shift Superintendent, Shift Technical Advisor, and Emergency Coordinator, the Emergency Coordinator may declare the emergency condition terminated.

2.0 OBJECTIVE

To specify the condition under which an emergency condition is declared and the process by which the emergency is classified.

3.0 REFERENCES

3.1 10 CFR 50.47, 10 CFR 50.54, and 10 CFR 50, Appendix E.

3.2 Maine Yankee Atomic Power Station Facility Emergency Plan.

4.0 PRECAUTIONS

Declaration and classification of an emergency condition is a crucial step in bringing about emergency responses of company and government personnel. Reclassification of emergency conditions, particularly from a lower to a higher category is also of crucial importance. Completion of this activity must be achieved rapidly.

5.0 PREREQUISITES

5.1 The Emergency Coordinator has recognized or been advised that a condition exists which may constitute an emergency condition, or

5.2 The Plant Manager or his designated alternate has ordered an emergency condition declared.

6.0 EQUIPMENT

Not applicable.

7.0 PROCEDURE

7.1 Table 2.50.0-1 lists the emergency action levels (EAL's) for each of the emergency condition classifications (unusual event, alert, site area, and general) together with measurable or observable indications which, where available, may be compared with the EAL's.

Proceed sequentially through the EAL's in Table 2.50.0-1, starting with those for the general emergency condition, determining whether each EAL has been reached. If an EAL has been reached, declare an emergency and classify the emergency condition as that under which the EAL reached is listed. Note the EAL which has been reached.

7.2 Proceed sequentially through the remaining EAL's, noting whether any others have been reached.

7.3 Periodically repeat step 7.1 for EAL's listed under emergency conditions more severe than that standard condition assigned in step 7.1. If any of these higher level EAL's have been reached reclassify the emergency condition.

7.4 Periodically repeat step 7.1 for EAL's listed under the emergency condition declared and those under less severe emergency conditions. When EAL's associated with the declared emergency conditions have cleared, reclassify the emergency condition or declare the emergency terminated.

7.5 When an emergency condition is declared, reclassified, or declared terminated, notify plant, company, affilated company, and government personnel in accordance with Procedure 2.50.17 Emergency Notification.

8.0 ADDITIONAL REQUIREMENTS

The Emergency Coordinator may classify an emergency condition based on the definition of the condition indicated in Table 2.50.0-1 when time is of the essence, when there is uncertanty as to whether EAL's have been reached, or when the list of EAL's or measurables/observables appears not to deal directly with existing conditions.

9.0 FINAL CONDITIONS

Plant conditions indicative of the possible existence of a plant emergency condition have been recognized and evaluated. An emergency condition has been declared, classified, reclassified as necessary, and declared terminated.

TABLE 2.50.0-1
Emergency Condition Emergency Action Levels

GENERAL EMERGENCY CONDITION

Definition: Actual or imminent substantial core degradation or melting with potential for loss of containment integrity constitutes a general emergency.

EMERGENCY ACTON LEVEL	MEASURABLE OR OBSERVABLE INDICATIONS
Offsite and emergency power (less than minimum safeguards operable).	LOCA and zero voltage on buses 1, 2, 3, 4, 5, 6.
Containment Spray injection (failure to control containment pressure).	LOCA and containment spray system A and B trains inoperable in injection phase.
LPSI during ECCS injection (failure to reflood).	LOCA and LPSI A and B trains inoperable during injection phase.
HPSI following loss of coolant (failure to provide adequate overpressure for core to secondary side heat transport).	LOCA and HPSI A and B trains inoperable in injection phase.
HPSI during recirculation phase following major loss of coolant (failure to keep core covered or to prevent boron precipitation).	LOCA and HPSI A and B trains inoperable during recirculation phase.
Containment spray recirculation (failure to control containment pressure and sump temperature, failure of HPSI suction supply).	LOCA and containment spray A and B trains inoperable during recirculation phase.
Heat transfer to ultimate heat sink.	LOCA and failure of PCC and SCC or service water system.
Transient or accident other than LOCA and either failure to shut plant down or failure to adequately cool core after shutdown.	Non LCA transient or accident and failure to achieve filan conditions of EP 2-1 emergency shutdown from power or existence of inadequate core cooling following shutdown.
Armed attack on security vital area(s) of plant or hostages taken on site.	Notification by security force.

TABLE 2.50.0-1
Emergency Condition Emergency Action Levels

SITE AREA CONDITION

Definition: Actual or likely major failures of plant functions needed for protection of the public constitute a site emergency. (This classification would be assigned even though the affected plant function may not be required at the time.)

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Loss of all onsite, offsite power and DC power for more than 20 minutes.	Zero voltage on buses 1, 2, 3, 4, 5, 6 and instrument buses lasting more than 20 minutes.
Loss of all feedwater capability and Steam Generator levels below 150 inches wide range.	Main and emergency feedwater systems inoperable and all steam generator levels below 150 inches wide range.
Loss of all reactor makeup capability and pressurizer level below 10%.	Inability to add water to the RCS and pressurizer level below 10% narrow range.
Reactor Coolant System rupture into containment (in excess of HPSI capability to restore pressurizer level within ten minutes or containment pressure above 20 psi.	LOCA in containment and inability to refill pressurizer or CSAS actuation.
Reactor Coolant System rupture into Steam Generator and inability to secure steam release to atmosphere within 30 minutes.	Steam generator tube rupture and inability to isolate secondary side of affected steam generator and depressurized to below 985 psig.
Unexplained and confirmed stack monitor reading off scale high (scale reads to 10^6 cpm).	(Later).
Rupture of spent fuel pool and inability to maintain water level 6 ft. above top of racks.	Low level alarm and/or report of fuel pool low level or spent fuel pool area monitor ___X most recent RMS check value.
Fire, explosion or other major accident that has resulted in loss of operational control of any key plant functions for more than 10 minutes.	Notification by security force, fire brigade, or others and inability to achieve final conditions of EP 2-1 emergency shutdown from power within 10 minutes.
Any operational incident that renders the Control Room uninhabitable for more than 10 minutes.	N/A

SITE AREA CONDITION

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Any operational incident resulting in an increase in radiation level of 10 mr/hr at plant fence or 3 mr/hr at exclusion boundary (nearest house).	10 mr/hr at site boundary or 3 mr/hr at exclusion area boundary measured and reported by field monitoring teams or projected from nomographs.
Armed security intruder confirmed to have entered plant perimeter and threatening vital areas.	Notificaton by security force.
Earthquake, tornado, floow or other natural phenomena that has disabled plant safety systems and resulted in loss of operational control of a key plant function for more than 10 minutes.	Natural phenomenon followed by or causing loss of operational control of plant systems required to achieve final conditions of EP 2-1 Emergency shutdown from power for more than 10 minutes.

TABLE 2.50.0-1
Emergency Condition Emergency Action Levels

ALERT CONDITION

Definition: An actual or potential substantial degradation of the level of safety of the plant constitutes an alert event.

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Loss of onsite and offsite power.	Zero voltage on buses 1, 2, 3, 4, 5, 6.
Complete loss of ECCS capability.	HPSI, LPSI, CSAS functions inoperable.
Complete loss of steam generator feed capability.	Main and emergency feedwater systems inoperable.
Auto initiation of ECCS and failure to restore pressurizer level within 20 minutes.	SIAS and inability to satisfy HPSI termination criteria within 20 minutes.
Steam line rupture increasing containment pressure to more than 20 psi.	Steam line rupture inside containmenr and CSAS.
Major steam line rupture to atmosphere and blowdown or air ejector monitor activity level increase by a factor of 100.	Steam line rupture resulting in SIAS and steam generator blowdown or air ejector radiation monitor indications 100x most recent RMS check value.
Primary vent stack monitor radiation level unexplained increase by a factor of 10,000 and above 500,000 cpm or measurable offsiet at greater than 2.0 mr/hr.	Primary vent stack monitor reading 10,000x most recent RMS check value and 7,500,000 cpm or offsite dose mesurements or projection 72 mr/hr.
To containment in excess of 100 gpm (Containment activity increase by a factor of 1000, humidity increase appreciable, and charging/bleed flow mismatch increase of over 100 gpm).	Containment low range monitor reading 1000x most recent RMS check value, and containment wt of air test result and RCS leak rate 100 gpm.
To uncontrolled or unexplained systems in excess of 100 gpm (Stack monitor increase by factor of 1000 and charging/bleed flow mismatch increase of over 100 gpm).	Stack monitor reading 1000x most recent RMS check value and RCS leak rate 100 gpm.

ALERT CONDITION

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
To steam generator in excess of 100 gpm (Air ejector or blowdown monitors increase by factor of 100 and charging/ bleed flow mismatch increase of over 100 gpm).	Air ejector or steam generator blowdown radiation monitor reading 100x most recent RMS check value and RCS leak rate 100 gpm.
Primary sample indicates coolant iodine level increase by a factor of 100 and above 500 uc/cc for more than 30 minutes.	Reactor coolant iodine sample results 100x most recent sample and above 500 mc/cc persisting for more than 30 minutes.
Security attack by armed intruders.	Notification by security force.
Major onsite explosion affecting safety systems.	Notification by security force, fire brigade, or others, or observed.
Earthquake, tornado, flood or other natural phenomenon that has impacted upon plant operations and threatens to disable plant safety systems.	Natural phenomenon followed by erratic or abnormal performance of plant systems required to achieve final conditions of EP 2-1 Emergency Shutdown from Power.

TABLE 2.50.0-1
Emergency Condition Emergency Action Levels

UNUSUAL EVENT CONDITION

Definition: A potential degradation of the level of safety of the plant constitutes an unusual event. Incidents which hav no public safety significance but which would attract public attention (e.g., noise nuisance) may be treated as unusual events for notification of offsite authorities.

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Loss of both 115 KV lines.	Zero voltage on 115 KV sections 69 and 207 KV meters.
Loss of both diesels.	DG 1A and DG 1B inoperable, "Disabling condition alarm" MCB.
Complete loss of power availability to A or B safety trains.	Zero voltage on buses 5 or 6 voltmeters.
Loss of all HPSI capability.	HPSI trains A and B inoperable.
Loss of all LPSI capability.	LPSI trains A and B inoperable.
Loss of all Containment Spray.	Containment Spray trains A and B inoperble.
Loss of all Component Cooling.	Primary and Secondary component cooling systems inoperable.
Loss of all Service Water.	Service water system inoperable.
Loss of Containment Integrity.	Containment weight of air alarm verified, leak safe 5 x tech spec limit.
Loss of auto SIAS, CIS or plant trip capability.	Loss of SIAS, CIS control power alarm, failure of RPS, reactor trip system, or turbine trip system, or failure of reactor or turbine shutdown systems.
Loss of all emergency feedwater capability.	Emergency feedwater system inoperable.
Loss of all but one feedwater pump.	Only one of P25A, P25B, P25C, P2A, P2B, or steam driven main feed pumps operable.
Loss of all fire protection pumps.	P4 and P5 inoperable.

UNUSUAL EVENT CONDITION

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Loss of fire main (unable to sustain pressure).	P4 and P5 auto start alarm for unexplained reason.
Auto ECCS initiation.	SIAS automatic actuation.
Reactor coolant temperature greater than 625°F.	MCB reactor coolant temperature indications.
Incore thermocouple temperatures greater than 800°F.	Computer thermocouple maps or point ID indications.
Reactor coolant pressure greater than 2500 psi or les than 1600 psi.	MCB reactor coolant system pressure indications.
Steam generators low low level or below.	MCB wide range steam generator level indications.
Loss of pressurizer level below minimum indication.	MCB wide range pressurizer level indication.
Primary vent stack monitor radiation level unexplained increase by a factor of 100.	100 x most recent RMS check recorded value.
Reactor Coolant System Leakage	
To containment in excess of 10 gpm (radiation monitors increase by factor of 100 and increase in containment humidity).	RCS leak rate determination indicates over 10 gpm and containment low range monitor indication 100x most recent RMS check value and containment dew point temperature indication increase of 10°F over most recently logged value from containment weight of air test, also containment sump high level alarm and sump pump down at intervals of minor less.
To steam generator in excess of 200 gpm (air ejector or blowdown monitor increase by factor of 100).	SIAS or inability to hold pressurizer level with CVCS and air ejector or steam generator blowdown radiation monitor indication 100x most recent RMS check values.
To uncontained systems or unexplained in excess of 10 gpm (stack monitor increase by factor of 100 followed by system leak test).	Stack monitors indicate 100x most recent RMS check value followed by RCS leak rate determination indicating 10 gpm uncontained or unexplained.

UNUSUAL EVENT CONDITION

EMERGENCY ACTION LEVEL	MEASURABLE OR OBSERVABLE INDICATION
Letdown monitor radiation level unexplained increase by factor of 100 for more than 10 minutes.	Letdown monitor 100x most recent RMS check value for 10 minutes.
Primary coolant sample indicates coolant iodine level increase by a factor of ten.	Primary coolant sample analysis indicates 10x last known value.
Security alert (see Maine Yankee Security Plan).	Notificaton by security force.
Aircraft crash or other major accident adjacent to or onto plant property.	Notification by security force or others.
Transport of a contaminated individual to an offsite medical facility.	Ordered by PSS.
Near or onsite explosion or major fire.	Notification by security force, plant staff, or other sources.
Major accident involving transportation or unloading of toxic chemicals or flammable volatile gases or liquids.	Notification by security force, plant staff, or other sources.
Earthquakes, tornado, flood or other natural phenomenon that could impact upon plant operations.	Notificaton by security force, plant staff, or others.
Transportation accident in Maine involving plant generated nuclear wastes.	Notification by any source.
Transient causing steam genertor safety valves or turbine relief valves to blow (noise problem).	Steam generator secondary side pressure greater than 985 psig or crossunder piping pressure greater than ____ or notification by security force, plant staff, or others.
Fire lasting more than ten minutes or in appreciable visible smoke from an offsite location.	Notification by fire brigade.
Steam line break requiring plant area evacuation for non-radiological reasons or appreciable visible steam or noise from an offsite location.	Notification by security force, plant staff, or others.

Dept. Supv. _____	Proc. No. 2.50.1
Plt. Mgr. _____	Class. _____
PORC _____	Rev. No. 0
Mgr. of Ops. _____	Issue Date _____
	Review Date _____

2.50.1 NOTIFICATION OF UNUSUAL EVENT

1.0 DISCUSSION:

An Unusual Event is defined as any plant-related event which indicates a potential degradation of plant safety margins which is not likely to affect personnel on-site or the public off-site or result in radioactive releases requiring off-site monitoring. Unusual Event conditions have not caused serious damage to the plant and may not require a change in operational status.

The basic shift complement is able to deal with Unusual Event conditions. Additional plant personnel will be notified and will respond at the discretion of the Plant Shift Superintendent or Plant Manager.

The decision to make an immediate initial declaration rests with the Emergency Coordinator who, in turn, instructs Control Room personnel to activate the notification system. On-duty personnel are assigned to functions as required. Notification is made to off-site authorities as delineated. Additional members of the plant organization, including top management, are notified and augment on-duty personnel as necessary. Public information will be supplied via appropriate mechanisms. Notification of closeout or escalation to a more severe classification will be provided to appropriate off-site authorities.

The following appendixes are attached and are to be used as check-off sheets by individuals responsible for implementation of this procedure:

Appendix I Plant Shift Superintendent
Appendix II On-Call Supervisor/Emergency Coordinator
Appendix III Plant Manager

2.0 OBJECTIVE:

To outline the actions required of plant personnel, visitors, and contractors when an Unusual Event is declared.

3.0 PROCEDURE:

1. Having recognized the emergency condition and classified as an Unusual Event according to Procedure 2.50.0 "Declaration and Categorization of Emergency Condition", the Plant Shift Superintendent will assume the duties specified in Appendix 1 of this procedure.

2. After being notified of the Unusual Event, On-Call Supervisor/Emergency Coordinator will perform the actions specified in Appendix III.

3. The Plant Manager or his designated alternate, after being notified will perform the actions specified in Appendix II.

FINAL CONDITIONS:

1. When the Unusual Event has been brought under control and plant conditions have stabilized to the satisfaction of the Plant Shift Superintendent, Shift Technical Advisor and the Emergency Coordinator, the Emergency Coordinator may in accordance with Procedure 2.50.4, "Declaration and Categorization of Emergency Condition", Step 7.4, declare the emergency condition terminated.

2. The Emergency Coordinator will close out the event with a verbal summary to appropriate offsite authorities and agencies,

   OR

   Conditions causing the event may become more severe and escalation to a more severe class of emergency may be deemed necessary by the Emergency Coordinator

APPENDIX I

UNUSUAL EVENT - PLANT SHIFT SUPERINTENDENT

IMMEDIATE ACTIONS:	Time/Initial
1. Instruct control room personnel to initiate applicable emergency operating procedures.	/
2. Act as the Emergency Coordinator until relieved.	
3. Instruct Control Room personnel to activate the page system and make the following announcement: "Unusual Event, Unusual Event, Unusual Event (Describe conditions and affected area) Plant staff with emergency duties respond as required. All other plant personnel will report to their department areas and be accounted for and advised by their supervisors. Visitors and contractors report to Information Center and await further instruction.	/
NOTE: Repeat the above announcement	
4. Request the Shift Technical Advisor to report to the Control Room and instruct him to:	
a) Notify the NRC on the Emergency Notification System (Red Phone). Maintain an open communications channel on this line. This channel will be closed only when allowed to do so by the NRC.	/
b) Notify Maine Yankee Nuclear Support Division	/
c) Review the classification and determine required assistance	/
5. Contact the On-Call Supervisor, inform him of current plant conditions and request assistance as required	/
6. Notify the Maine State Police by using the State Police Radio in the control room. If the radio is inoperable, notify using the telephone. If neither State Police radio nor phone contact can be made, notify the CMP dispatcher via the microwave link and ask the dispatcher to notify the State Police. Using one of the above communications systems provide the following announcement:	/

"This is (name of caller) from Maine Yankee Atomic Power Station. We have an Unusual Event [NO releases of radioactivity are occuring. NO protective actions are recommended.] I repeat (the entire message indicated above). Please acknowledge receipt of message".

NOTE: If the Unusual Event involves either a gaseous or liquid radioactivity release, replace the bracket statement with the following:
"A minor release of radioactivity is in progress. The wind is blowing from _____. No protective actions are recommended."

SUBSEQUENT ACTIONS:

1. Be prepared to provide plant status information to offsite authorities if requested. _____/_____

2. Inform the Plant Manager of current plant status and required actions to terminate the event. Direct the activities of the emergency response organization unless otherwise directed by the Plant Manager.

   NOTE: For backshift or weekends, this notification will be made to the On-Call Supervisor/Emergency Coordinator, who in turn notifies plant management.

3. Request assistance of outside agencies (fire, law enforcement, or medical rescue personnel and related equipment) as needed to deal with the event.

   a. Fire _____/_____
   b. Medical _____/_____
   c. Law enforcement (in conjunction with shift Security Supervisor) _____/_____

4. Notify the CMP Dispatcher, who in turn will notify Corporate Management and Public Affairs and Information Services. _____/_____

5. Re-evaluate the emergency classification and confer with the Emergency Coordinator (if on site). Use Proc. 2.50.0 for for reclassification criteria.

FINAL CONDITIONS:

1. When the Unusual Event no longer exists, notify the Plant Manager and announce on the plant page system that the Unusual Event is ended.

2. Summarize all actions an resultant conditions in the Shift Supervisor's Log.

APPENDIX II

UNUSUAL EVENT - PLANT MANAGER

IMMEDIATE ACTIONS:	Time/Initial
1. Assess the situation based on information supplied by the Plant Shift Superintendent or the On-Call Supervisor and assure all necessary plant resources are applied to the event.	/
2. Act as liaison between plant and corporate headquarters for the generation of public information releases.	

APPENDIX III

UNUSUAL EVENT - ON-CALL SUPERVISOR/EMERGENCY COORDINATOR

IMMEDIATE AND SUBSEQUENT ACTIONS:

1. After discussion of the plant conditions with the P.S.S. and/or Shift Technical Advisor, notify Plant Manager. _____/_____

2. Augment plant manpower as requested by Plant Manager and/or the Plant Shift Superintendent. _____/_____

3. Report to the plant if conditions warrant such action. _____/_____

   NOTE: This election is made after consultation with the Plant Shift Superintendent and/or the Shift Technical Advisor.

4. Standby and continue to assist the Plant Manager and Plant Shift Superintendent until the event is terminated. _____/_____

5. Use Proc. 2.50.0 "Declaration and Categorization of Emergency Condition", for reclassification criteria.

Dept. Supv.	Proc. No. 2.50.2
PORC	Class.
Plant Mgr.	Rev. No. 0
Mgr of Ops	Issue Date
	Review Date

2.50.2 ALERT

1.0 DISCUSSION:

An Alert is defined as an indication of a substantial degradation of plant safety margins which chould affect on-site personnel safety, could require off-site impact assessment, but is not likely to require off-site public protective action.

An Alert requires action beyond the normal capability of the basic shift complement. Plant response and off-site notification associated with this event classification will assure that sufficient emergency response personnel are readily available to activate the Technical Support Center (TSC) and the Operational Support Center (OSC). The Emergency Operations Facility (EOF) will be activated with the Emergency Coordinator and sufficient emergency assistance personnel to assess off-site radiological impact.

The decision to make an immediate initial declaration rests with the Emergency Coordinator. Prompt notification is made to off-site authorities cognizant of plant conditions. Public information concerning the event will be provided via appropriate mechanisms.

The following appendices are attached and are to be used as check-off sheets by individuals responsible for implementation of this procedure at the various identified center locations:

Appendix I	Plant Shift Superintendent
Appendix II	Plant Management
Appendix III	Technical Support Center Coordinator
Appendix IV	Emergency Coordinator
Appendix IV-1	Radiological Evaluation Assistant
Appendix IV-2	Communications Assistant
Appendix IV-3	Manpower and Planning Assistant
Appendix IV-4	Coordinators Assistant
Appendix V	Radiological Habitability Assessment

2.0 OBJECTIVES:

To outline the actions required of plant personnel, visitors, contractors, and other affected personnel when an Alert is declared.

3.0 PROCEDURE:

1. Having recognized the emergency condition and classified it as and Alert according to Procedure 2.50.0, "Declaration and Categorization of Emergency Condition", the Plant Shift Superintendent will assume the duties specified in Appendix I.

2. After being notified of the Alert, Plant Manager or his designated alternate will carry out the actions specified in Appendix II.

3. The Technical Support Center Coordinator will respond and perform the actions specified in Appendix III.

4. The Emergency Coordinator/On-Call Supervisor will respond and perform those actions specified in Appendix IV.

5. The Emergency Operation Facility (EOF) will be activated and those personnel with EOF duties will respond and perform the actions speficied in Appendices IV-1 thru IV-4.

FINAL CONDITIONS:

1. When Alert Event Conditions no longer exist, the Plant Shift Superintendent will announce on the plant page system that the Alert Event is ended.

2. Public information statements will be prepared and released by Maine Yankee Corporate office personnel at the Central Maine Power Company, Augusta or, if conditions warrant such action, at the EOF.

3. The Emergency Coordinator will close out the event by verbal summary to off-site authorities.

OR

It may be necessary to escalate or de-escalate the emergency classification as determined by the Emergency Coordinator.

APPENDIX I

ALERT - PLANT SHIFT SUPERINTENDENT

IMMEDIATE ACTIONS: Initial/Time

1. Instruct control room personnel to initiate applicable emergency operating procedures. ____/____

2. Act as the Emergency Coordinator until relieved. ____/____

3. Instruct control room personnel to sound a ten second blast of the emergency alarm and make the following announcement:

   a. :Alert, Alert, Alert"
   b. "(Describe condition and affected area)"
   c. "Plant staff with emergency duties report to your assigned emergency center and be accounted for by the center supervisor. All other plant staff, visitors and contractors assemble at the Information Center and await further instruction". ____/____

   NOTE: Repeat the announcement ____

4. Request the Shift Technical Advisor to report to the control room and instruct him to:

   a. Notify the NRC on the Emergency Notification System (red phone). Maintain an open communications' channel on this line. This channel will be closed only when allowed to do so by the NRC. ____/____

   b. Notify Maine Yankee Nuclear Support Division. ____/____

   c. Review the classification and determine required assistance. ____/____

   d. Advise the Plant Shift Superintendent on response measures. ____/____

5. Contact the On-Call Supervisor, inform him of current plant status and request assistance as required. ____/____

6. Notify the Maine State Police by using the State Police Radio in the control room. If the radio is inoperable, notify using the telephone. If neither State Police radio nor phone contact can be made, notify the CMP dispatcher via the microwave link and ask the dispatcher to notify the State Police. Using one of the above communications systems provide the following announcement: ____/____

   "This is (name of caller) from Maine Yankee Atomic Power Station. We have an Alert [NO releases of radioactivity are occurring. NO protective actions are recommended]. I repeat (the entire message indicated above) Please acknowledge receipt of message".

NOTE: If the Alert involves either a gaseous or liquid radioactivity release, replace the bracket statement with the following:
"A minor release of radioactivity is in progress. The wind is blowing from _____. No protective actions are recommended."

SUBSEQUENT ACTIONS: Initial/Time

1. Be prepared to provide plant status information to off-site authorities if requested. ____/____

2. Notify the CMP Dispatcher, who in turn will notify Maine Yankee Corporate Management and the Public Affairs and Information Service. ____/____

3. When the TSC has established contact with the control room request any required assistance in handling communications. ____/____

4. If the event produces abnormal in-plant radiological conditions, direct the shift Chemistry and Health Physics Technician to evaluate the condition and augment this capability with the manpower provided by the Emergency Coordinator when applicable. ____/____

5. Account for all shift personnel. ____/____

6. Request assistance of outside agencies (fire, law enforcement, or medical rescue personnel) as needed to deal with the event: (if applicable)

   a. Fire ____/____
   b. Medical ____/____
   c. Law enforcement (in conjunction with the Shift Security Supervisor) ____/____

7. Together with the Nuclear Safety Advisor and the Emergency Coordinator, re-evaluate the emergency classification to determine if it is necessary to escalate or de-escalate the classification. ____/____

8. When the Alert no longer exists, announce on the plant page system that the Alert is ended. ____/____

FINAL CONDITIONS:

1. The emergency condition no longer exists and plant personnel have resumed their normal assignments. ____/____

2. Summarize all actions and resultant conditions in the Plant Shift Superintendent's log. ____/____

APPENDIX II

ALERT - PLANT MANAGER

IMMEDIATE ACTIONS:

1. Assess the situation based on information supplied by the Plant Shift Superintendent or the On-Call Supervisor.

   NOTE: If conditions qarrant such action report to the plant.

   NOTE: In the absence of the Plant Manager, the following individuals, in the order listed, are designated as his alternate.

   Assistant Plant Manager (one of four Dept. Heads is permanently designated)
   Operations Dept. Head
   Technical Support Dept. Head
   On Duty Plant Shift Superintendent

SUBSEQUENT ACTIONS:

1. Assure continuity of resources (technical, administrative, and material) on a 24 hour basis as required.

2. Act as liaison between plant and corporate headquarters for the generation of public information releases.

3. Notify corporate office when additional resources are required to augment plant resources.

4. Respond to all NRC inquiries regarding plant emergency actions.

5. Periodically review emergency classification with the Emergency Coordinator, Plant Shift Superintendent and the Shift Technical Advisor.

6. Direct the emergency organization until such time that the emergency condition has been rectified.

   NOTE: Notify plant staff, corporate office and other emergency resources if the emergency condition requires a transition to a recovery phase.

7. Direct plant action during the recovery phase, when applicable.

8. Closeout the event by summarizing details and actions with appropriate off-site authorities.

   a. Nuclear Regulatory Commission
   b. State of Maine

APPENDIX III

TECHNICAL SUPPORT CENTER COORDINATOR

IMMEDIATE AND SUBSEQUENT ACTIONS	Initial/Time
1. Establish voice communications with the control room, using channel 4 (the preferred channel) of the plant paging system and document the reported event history and current plant status.	_____/_____
2. Assure that representatives of the following departments have assembled at the TSC: a. Operations Department b. Reactor and Computer c. Instrumentation and Control d. Chemistry e. Technical Support	_____/_____
3. Coordinate in-plant activities with the Plant Shift Superintendent and/or the Shift Technical Assistant, relative to bringing the plant to a safe condition.	_____/_____
4. Determine center habitability in accordance with Appendix V. Request assistance from the EOF if needed.	_____/_____
5. Conduct personnel accountability in the TSC and Control Room. Report the names of all personnel accounted for to the Security Shift Supervisor at the Gatehouse.	_____/_____
6. If Security reports that there are unaccounted personnel, call the personnel over the page system.	_____/_____
7. If missing personnel can not be reached, notify the Emergency Coordinator that a search and rescue team is needed.	_____/_____
8. Periodically access plant status.	_____/_____
9. Utilizing the information acquired in step 7 prepare summaries of plant status and inform plant and corporate management of the details, of any significant changes in the plant status.	_____/_____
10. Notify the Emergency Coordinator, using channel four of the plant page system, when in-plant operational changes could change in-plant and/or off-site radiological conditions.	_____/_____

Initial/Time

11. Assume the responsibility for maintaining open communications with the NRC (red phone) if the Plant Shift Superintendent requires such action. _____/_____

12. Remain active and manned until terminated by Plant Manager.

APPENDIX IV

ALERT - ON-CALL SUPERVISOR/EMERGENCY COORDINATOR

IMMEDIATE AND SUBSEQUENT ACTIONS: Initial/Time

1. After discussion of the plant conditions with the Plant Shift Superintendent and/or the Shift Technical Advisor, notify the Plant Manager. _____/_____

2. Augment plant staff to the extent that the following functions will be implemented if conditions warrant.

   a. Off-site monitoring
   b. Emergency Communications
   c. Radiological Exposure Control
   d. Sample Analysis
   e. Coordination with OFF-site Authorities.

   NOTE: If the event occurs during the back-shift or on a week-end, the On-Call Supervisor/Emergency Coordinator will, initiate the contacting of sufficient staff to activate the EOF and TSC. _____/_____

3. Report to the EOF, contact the Plant Shift Superintendent on channel 2 and obtain a plant status report and the current meteorological conditions. _____/_____

4. Get updated conditions from the Plant Shift Superintendent and Shift Technical Advisor and re-evaluate the emergency classificationusing Proc. 2.50.0, "Declaration and Categorization of Emergency Condition" criteria. _____/_____

5. Brief incoming personnel as to current plant status. _____/_____

6. Assign the following emergency duties to appropriate qualified emergency personnel as they arrive at the EOF. _____/_____

	Name of Individual
Coordinators Assistant -	_____
Communications Assistant -	_____
Radiological Evaluation Assistant -	_____
Manpower and Planning Assistant - (if required)	_____

7. Coordinate personnel accountability with plant security. If missing personnel are identified dispatch rescue personnel. _____/_____

Initial/Time

8. If there are injured personnel, provide first aid treatment and prepare the patient(s) for transfer to the Bath Hospital by the local ambulance service, 882,7878 or, if unavailable, use the Company or private station wagon. (See Emergency Procedure 2.50.8.) _____/_____

   NOTE: Provide the Bath Hospital (443-5524) with the following information before a patient arrives at the hospital.

   1. Number of accident victims (and whether they are radioactively contaminated).
   2. Nature of medical problem of each.
   3. Magnitude of radiation aspect, if applicable.
   4. Anticipated time of arrival at the hospital.
   5. Who will accompany patients.

   Transfer the patient(s) to the ambulance or station wagon. If the patient is contaminated, assign a Health Physics representative to accompany them to the hospital to maintain radiological controls.

9. If requested dispatch qualified emergency personnel to emergency centers to verify center habitability in accordance with Appendix V. _____/_____

10. Coordinate site access and control measures with plant security. _____/_____

11. Coordinate accident information with appropriate off-site authorities. Use the data hot-line to inform them of projected dose rates, actual plant conditions, field sample results and recommendations concerning emergency actions, if conditions warrant such action. _____/_____

12. Check with the Manpower and Planning Assistant for an evaluation of manpower requirements. _____/_____

13. Assure that the EOF remains active and manned for the duration of the event. _____/_____

14. Periodically reasess the habitability of the EOF. _____/_____

15. Notify American Nuclear Insurers. _____/_____

APPENDIX IV - 1

ALERT - RADIOLOGICAL EVALUATION ASSISTANT (LOCATED AT EOF)

IMMEDIATE AND SUBSEQUENT ACTIONS:	Initial/Time
1. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.12, "OFF-Site Monitoring".	/
2. If conditions warrant such action, determine the affected area downwind, inform off-site monitoring personnel as to the appropriate sampling locations and notify the Emergency Coordinator when team members are ready to be dispatched.	/
3. Assign qualified personnel to monitor personnel for contamination and possible high radiation exposure. If the possibility of OFF-site contamination exists, ensure that all vehicles leaving the area have been monitored.	
NOTE: If personnel and/or equipment have been contaminated above emergency limits, hold for decontamination.	/
4. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.10, "Evaluation of Radiological Data".	/
5. If requested by the Emergency Coordinator assign and direct qualified emergency personnel in the determination of center habitability (see Appendix V). Report finding to the Emergency Coordinator.	/
6. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.14, "Emergency Radiation Exposure Control" and recommend appropriate response to the Emergency Coordinator.	/
7. Review the results of Proc. 2.50.10, "Evaluation of Radiological Data" and recommend appropriate emergency response to the Emergency Coordinator.	/
8. Dispatch on-site monitoring teams to affected areas to establish radiological access and control measures, if required. Inform the Emergency Coordinator when such actions are required.	/
9. Periodically evaluate exposure records, review projected manpower requirements and coordinate requirements with the Manpower and Planning Assistant.	/
10. Maintain response efforts to determine radiological status and be prepared to adjust radiological assessment efforts if conditions change.	/

FINAL CONDITIONS

	Initial/Time
1. Summarize emergency actions and provide this documentation to the Emergency Coordinator.	/
2. Update exposure records of plant personnel.	/
3. Dispose of all sample media in accordance with the plant rad-waste procedures.	/

APPENDIX IV - 2

ALERT - COMMUNICATIONS ASSISTANT

IMMEDIATE AND SUBSEQUENT ACTIONS: Initial/Time

1. Check that phone and page system communication channels are available to:

   a. Technical Support Center ____/____
   b. Control Room ____/____
   c. Security ____/____

2. Assist the Emergency Coordinator in answering and placing phone emergency personnel in the establishment of continuous communication channels between the TSC, off-site monitoring teams, security and the EOF and page system messages). ____/____

3. If off-site monitoring teams are to be used, request the Security Force to install the Portable Base Station Security radio at the EOF. ____/____

4. Use Message Forms to record communications. ____/____

5. Record the parties involved, date and time of each incoming or outgoing message by telephone, plant page or radio on a Message Form. ____/____

   NOTE: On incoming calls, forward copies 1 and 3 to the Emergency Coordinator of his appropriate assistant.

   Retain copy 2 (yellow) as a "tickler" for those messages requiring a reply.

   When copy 1 is returned for dispatching a reply, discard copy 2 and note date and time the reply message was dispatched.

   Retain completed copy 1 as a log record of all communications. ____/____

6. Establish radio communications witrh all onsite and offsite teams prior to their departure from the EOF, if practicable. ____/____

7. If plant communications systems are inadequate to handle the flow of incoming calls, notify the Emergency Coordinator and recommend alternative measures. ____/____

FINAL CONDITIONS:

1. Collect all message forms, tabulate them in sequential order and provide this documentation to the Emergency Coordinator.

APPENDIX IV - 3

ALERT - MANPOWER AND PLANNING ASSISTANT

	Initial/Time
1. Review manpower requests and establish shift relief schedules after reviewing the Emergency Assignment list and coordinate such activity with the Emergency Coordinator.	/
2. Assure that sufficient personnel to fulfill all emergency functions have been mobilized to maintain continuous emergency preparedness.	/
3. Maintain an updated roster of emergency personnel onsite.	/

NOTE: This function may be unnecessary or may be filled by the Coordinator's Assistant in an Alert Category Emergency.

The Emergency Coordinator will make this determination.

APPENDIX IV - 4

ALERT - COORDINATORS' ASSISTANT

	Initial/Time
1. Function as an aide to the Emergency Coordinator.	/
2. Assist the Emergency Coordinator in directing the activities of the incoming support personnel.	/
3. Provide periodic briefings to emergency personnel at the EOF.	/
4. Direct personnel accountability at the EOF.	/
5. Document recommendations made to off-site authorities.	/

APPENDIX V

RADIOLOGICAL HABITABILITY ASSESSMENT

	Initial/Time
1. Obtain a copy of Proc. 2.50.14, Emergency Radiation Exposure Control.	/
2. Obtain a RM-14, a PIC-6A, and a low volume charcoal air sampler. Perform the necessary function checks on the instrumentation.	/
3. Monitor conditions in the area(s) assigned:	
Technical Support Center Operational Support Center Emergency Operations Facility Other areas as requested by the Plant Emergency Director or the Chemistry and Health Physics Supervisor or his alternate.	
4. Place a high range pocket dosimeter in a representative location or locations at each center.	/
5. Using Table II in Procedure 2.50.14, assess personnel actions with respect to radiological conditions encountered.	/
6. Report findings and recommendations on area habitability form and submit to the appropriate center coordinator.	/

NOTE: Additional information, such as area surveys, should be recorded on the reverse side of the habitability survey form MY-HP-119-81.

EMERGENCY CONDITIONS RADIOLOGICAL ASSESSMENT FORM

Date _____

Time _____

Location of Sampling _____

DATA

Maximum Dose Rate (W.B.) _____

Average Dose Rate (W.B.) _____

Air Sample Results _____

Thyroid Dose Rate _____ (from air sample data and Appendix B Proc. 2.50.10 Evaluation of Radiological Data

Recommended Action (From sampling information and specifications in Table 1, Proc. 2.50.14, Emergency Radiation Exposure Control)

_____

_____

_____

_____

_____

Comments _____

_____

NOTE: Additional information, such as area surveys, should be recorded on

_____ / _____

Surveyor Date

Dept. Head	Proc. No. 2.50.3
Plt. Mgr.	Class.
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.3 SITE AREA EMERGENCY

1.0 DISCUSSION

A Site Area Emergency indicates an event which involves likely or actual major failures of plant functions needed for the protection of the public. The events included in the Site Area Emergency Category represent a potential for off-site releases which could impact to the extent that off-site protective actions may be necessary. Assessment of radiological parameters will determine the type of protective measures necessary.

Plant resources are anticipated to be sufficient to cope with a Site Area Emergency. Outside resources, however, are mobilized; and selected members are dispatched to the site. All emergency centers are activated following the declaration of a Site Area Emergency. All personnel without emergency assignments are evacuated from the plant.

The decision to make an immediate initial declaration rests with the Emergency Coordinator. Prompt notification is made to the off-site authorities and follow-up information is made available to keep these authorities cognizant of plant conditions. Public information concerning the event will be provided via appropriate mechanisms. The public will be alerted by the Public Emergency Alert System under this emergency.

The following appendices are attached and are to be used as check-off sheets by individuals responsible for implementation of this procedure at the various identified center locations:

Appendix I	Plant Shift Superintendent
Appendix II	Plant Management
Appendix III	Technical Support Center Coordinator
Appendix IV	Operations Support Center Coordinator
Appendix V	Emergency Coordinator
Appendix V-1	Radiological Evaluation Assistant
Appendix V-2	Communications Assistant
Appendix V-3	Manpower and Planning Assistant
Appendix V-4	Coordinator's Assistant
Appendix VI	Radiological Habitability Assessment

2.0 OBJECTIVE

To outline the actions required of plant personnel, visitors, contractors, and other affected personnel in the event of a Site Area Emergency.

3.0 PROCEDURE

1. Having recognized the emergency condition and its classification as a Site Area Emergency according to Procedure 2.50.0, "Declaration and Categorization of Emergency Condition", Plant Shift Superintendent will follow the actions specified in Appendix I.

2. After being notified of the Site Area Emergency, the Plant Manager or his designated alternate will carry out the actions specified in Appendix II.

3. The Technical Support Center Coordinator will respond and perform the actions specified in Appendix III.

4. The Operations Support Center Coordinator will respond and perform theose actions specified in Appendix IV.

5. The Emergency Coordinator/On Call Supervisor will respond and perform those actions specified in Appendix V.

6. The Emergency Operations Facility (EOF) will be activated and those personnel with EOF duties will respond and perform those actions specified in Appendices V-1 thru V-4.

FINAL CONDITIONS

1. When the Site Area Emergency condition no longer exists, the Plant Shift Superintendent will announce on the plant page system that the emergency is ended.

2. Public information statements will be prepared and released by Maine Yankee Corporate office personnel at the Central Maine Power Company, Augusta or if conditions warrant at the Bath Armory (Media Center).

3. The Emergency Coordinator will close out the event by verbal summary to off-site authorities.

   OR

   It may be necessary to escalate or de-escalate the emergency classification as deemed necessary by the Emergency Coordinator.

4. If conditions warrant, the plant has started into a recovery phase under the direction of a Recovery Manager.

APPENDIX I

SITE AREA EMERGENCY - PLANT SHIFT SUPERINTENDENT

IMMEDIATE ACTIONS: INITIAL/TIME

1. Instruct control room personnel to initiate applicable emergency operating procedures. _____/_____

2. Act as the Emergency Coordinator until relieved. _____/_____

3. Instruct control room personnel to sound a ten second blast of the emergency alarm and make the following announcement on the page system:

   a. "Site Area Emergency, Site Area Emergency, Site Area Emergency:

   b. "(Describe condition and affected area)"

   c. "Plant staff with emergency duties report to your assigned emergency center and be accounted for by the center supervisor. All other plant staff, visitors and contractors assemble at the Information Center and await further instruction" _____/_____

   NOTE: Repeat the announcement. _____/_____

4. Request the Shift Technical Advisor to report to the control room and instruct him to:

   a. Notify the NRC on the Emergency Notification Sytem (red phone). Maintain an open communications' channel on this line. This channel will be closed only when allowed to do so by the NRC. _____/_____

   b. Notify Maine Yankee Nuclear Support Division. _____/_____

   c. Review the classification and determine required assistance. _____/_____

   d. Advise the Plant Shift Superintendent on response measures. _____/_____

5. Contact the On-Call Supervisor, inform him of current plant status and request assistance as required. _____/_____

INITIAL/TIME

6. Notify the Maine State Police by using the State Police Radio in the control room. If the radio is inoperable, notify using the telephone. If neither State Police radio nor phone contact can be made, notify the CMP dispatcher via the microwave link and ask the dispatcher to notify the State Police. Using one of the above communications systems provide the following announcement: _____/_____

   "This is (name of caller) from Maine Yankee Atomic Power Station. We have a Site Area Emergency [No releases of radioactivity are involved. As a precautionary measure, we recommend that the general public tune in to their local radio or TV station for further information] I repeat (the entire message indicated above). Please acknowledge receipt of message".

   NOTE: If the Site Area Emergency involves a gaseous or liquid release of radioactivity, replace the bracketed statement with the following:

   "A release of radioactivity is in progress, the wind is blowing from the _____. As a precautionary action we recommend that the general public seek shelter and tune in to their local radio or TV station".

7. Activate the Public Emergency Alert System. _____/_____

SUBSEQUENT ACTIONS

1. Be prepared to provide plant status information to off-site authorities if requested. _____/_____

2. Notify the CMP Dispatcher, who in turn will notify Maine Yankee Corporate Management and the Public Affairs and Information Service. _____/_____

3. When the TSC establishes contact with the control room request any required assistance in handling communications. _____/_____

4. If the event produces abnormal in-plant radiological conditions, direct the Shift Chemistry and Health Physics technician to evaluate the condition and augment this capability with the manpower provided by the Emergency Coordinator when applicable. _____/_____

5. Account for duty shift personnel. Give names of personnel accounted for to the Technical Support Center. _____/_____

INITIAL/TIME

6. Request assistance of outside agencies (fire, law enforcement, or medical rescue personnel) as needed to deal with the event:

   a. Fire _____/_____

   b. Medical _____/_____

   c. Law enforcement (in conjunction with the Shift Security Supervisor). _____/_____

7. Together with the Emergency Coordingor, and the Shift Technical Advisor, re-evaluate the emergency classification to see if conditions warrant, escalation or de-escalation of the classification. _____/_____

FINAL CONDITIONS

1. When the Site Area Emergency no longer exists, announce on the plant page system that the Emergency is ended. _____/_____

2. Summarize all actions and resultant conditions in the Plant Shift Superintendent's Log. _____/_____

APPENDIX II

SITE AREA EMERGENCY - PLANT MANAGER

IMMEDIATE ACTIONS

1. Assess the situation based on information supplied by the Plant Shift Superintendent or the On-Call Supervisor and report to the plant.

   NOTE: The Plant Manager is not assigned to any particular center as he is responsible for overall direccion of emergency response.

   NOTE: In the absence of the Plant Manager, the following individuals, in the order listed, are designated as his alternates:

   Assistant Plant Manager (one of four Dept. Heads is permanently designated).
   Operations Dept. Head
   Technical Support Dept. Head
   On-Duty Plant Shift Superintendent

SUBSEQUENT ACTIONS

1. Assure continuity of resources (technical, administrative, and material) on a 24 hour basis as required.

2. Act as liaison between plant and corporate hedquarters for the generation of public information releases.

3. Inform M.Y. Corporate Management when additional resources are required to augment plant resources. (Combustion Engineering, Stone & Webster & other contracted services)

4. Inform M.Y. Nuclear Support Division when Yankee Nuclear Service Division support other than the initial response group is required.

5. Periodically review emergency classificaion with the Emergency Coordinator and Shift Technical Advisor adjust if conditions warrant such action.

6. Direct the emergency organization until such time that the emergency condition has been terminated.

   NOTE: Notify plant staff, corporate office and other emergency resources if the emergency condition requires a transition to a recovery phase.

7. Direct plant action during the recovery phase, when applicable.

APPENDIX III

SITE AREA EMERGENCY - TECHNICAL SUPPORT CENTER COORDINATOR

IMMEDIATE AND SUBSEQUENT ACTIONS	INITIAL/TIME
1. Establish voice communications with the control room, using channel 4 of the plant paging system, and document the reported event history and current plant status.	_____/_____
2. Assure that representatives from the following Technical disciplines have assembled at the TSC:	_____/_____
a. Operations b. Reactor and Computer c. Instrumentation and Control d. Chemistry e. Technical Support f. Radiological Control	
NOTE: After a period of travel time to the plant, the above staff will be augmented with Yankee Nuclear Services Division staff if this support is requested by the Plant Management.	
3. Review and aid in coordinating in-plant activities with the Plant Shift Superintendent, Shift Technical Advisor and/or the Operations Department Head (if onsite) relative to bringing the plant to a safe condition.	_____/_____
4. Determine center habitability in accordance with Appendix VI. Request assistance from the EOC if needed.	_____/_____
5. Conduct personnel accountability in the TSC and Control Room. Report the names of all personnel accounted for to the Security Shift Supervisor at the Gatehouse.	_____/_____
6. If Security reports that there are unaccounted personnel, call the personnel over the page system.	_____/_____
7. If missing personnel cannot be reached, notify the Emergency Coordinator that a search and rescue team is needed.	_____/_____
8. Periodically access plant status.	_____/_____
9. Utilizing the information acquired in Step 8 inform Plant and Corporate Management of the details of any significant changes in the plant status.	_____/_____
10. Instruct security to prepare for the arrival of Nuclear Services Divisionpersonnel (YAEC), NRC representatives, and State Civil Defense and/or Public Health Department representatives at the EOF.	_____/_____

INITIAL/TIME

11. Notify the emergency Coordinator, using channel two of the plant page system, when in-plant operational changes could change in-plant and/or off-site radiological conditions. _____/_____

12. Assume the responsibility for maintaining open communications with the NRC (red phone) if the Plant Shift Superintendent requires such action. _____/_____

13. Remain active and manned until terminated by Plant Management. _____/_____

APPENDIX IV

SITE AREA EMERGENCY - OPERATIONS SUPPORT CENTER COORDINATOR

	INITIAL/TIME
1. The first OSC member to arrive will establish communications with the TSC using either the in-plant phone extension or the page/intercom set.	_____/_____
2. Assure that all Operations Department personnel not assigned to the operating shift report to the OSC.	_____/_____
3. Assure that all Chemistry personnel and Health Physics personnel report to the OSC.	_____/_____
4. Determine the habitability of the OSC in accordance with Appendix VI.	_____/_____
5. Conduct personnel accountability in the OSC and report the names of all personnel accounted for to the Security Shift Supervisor at the Gatehouse.	_____/_____
6. Provide assistance in the investigation or repair of plant systems, as directed by appropriate supervisor.	_____/_____
7. Provide the necessary technical manpower required to provide in-plant radiological monitoring and habitability assessment.	_____/_____
8. Procide assistance in the decontamination of affected plant areas as necessary.	_____/_____
9. Work in conjunction with the Manpower and Planning Assistant in preparing for operating shift turnover and relief.	_____/_____
10. Assure that the OSC remains active and manned for the duration of the emergency.	_____/_____

APPENDIX V

SITE AREA EMERGENCY - ON-CALL SUPERVISOR/EMERGENCY COORDINATOR

REQUIRED FUNCTIONS AND ACTIONS	INITIAL/TIME
1. Assume the functions of Emergency Coordinator.	_____/_____
NOTE: The On-Call Supervisor, when notified, will assume the position of Emergency Coordinator and continue in this position until relieved.	
2. Notify Plant Management.	_____/_____
NOTE: On back shifts and weekends the Plant Shift Superintendent will notify the On-Call Supervisor and brief him on plant conditions.	
3. Augment the duty staff, during back shifts and weekends, by notifying one person from each of the following call lists:	
Operations Call List	_____/_____
Technical Support List	_____/_____
Emergency Coordination List	_____/_____
NOTE: Assure that the person contacted has a call list available so that he may continue notifications.	
4. During normal working hours contact the Operations Support Center for Health Physics and Chemistry personnel.	_____/_____
5. Report to the Emergency Operations Facility (EOF).	_____/_____
NOTE: This will be the Information Center unless otherwise notified.	
6. Get updated conditions from the Plant Shift Superintendent and the Shift Technical Advisor and re-evaluate the emergency clasification using Procedure 2.50.0, "Declaration and Categorization of Emergency Condition" criteria.	_____/_____
7. Contact the Plant Shift Superintendent and obtain a plant status report and the current meteorological conditions.	_____/_____
8. Direct qualified emergency personnel to conduct a center habitability determination using Appendix VI.	_____/_____

INITIAL/TIME

9. If it is determined that the center may become uninhabitable initiate planning for evacuation of center and moving to the alternate center. _____/_____

10. If it is detemined that the center is uninhabitable initiate the movement of personnel and equipment to the alternate center. Direct the Security Force to initiate their plan for the move. _____/_____

11. Assign the following emergency duties to appropriate qualified personnel as they arrive at the EOF: Name of Individual

    Coordinator's Assistant _____

    Communications Assistant _____

    Radiological Evaluation Assistant _____

    Manpower and Planning Assistant _____

12. Check with plant security and determine the status of personnel accountability. _____/_____

13. Contact the Technical Support Center and inform them of the plant personnel accountability status. _____/_____

14. Check with the Technical Support Center to see if search and rescue personnel are needed. _____/_____

15. Check with the Technical Support Center, the Operations Support Center and the Control Room to assure that habitability has been established. If habitability has not been established direct Health Physics personnel to make an assessment using Appendix VI.

Technical Support Center	Habitability Established	_____/_____
	Survey Team Assigned	_____/_____
Operational Support Center	Habitability Established	_____/_____
	Survey Team Assigned	_____/_____
Control Room	Habitability Established	_____/_____
	Survey Team Assigned	_____/_____

16. Check with plant security to assure that site access and control measures have been taken. _____/_____

INITIAL/TIME

17. Establish contact with and brief the following outside agencies that will report to the EOF.

	NAME	
N.R.C.	_____	_____/_____
Maine Div. of Health & Welfare	_____	_____/_____
Maine State Police	_____	_____/_____
Maine Civil Emerg. Prep.	_____	_____/_____

NOTE: Inform members of the above agencies of current dose rate projections, plant conditions, field sample results and recommendations concerning emergency actions.

18. If representatives of the above agencies are not present at the EOF communications is maintained with these agencies via the Hot Lines to:

	CONTACT ESTABLISHED
Lincoln County EOF	_____/_____
N.R.C. (Red Phone)	_____/_____

19. The following Yankee Nuclear Service Division personnel will report to the EOF for assignments to augment plant personnel: (These personnel will report only if requested by Maine Yankee Nuclear Support Division).

	ASSIGNED TO	NAME	
Systems Engineer	TSC	_____	_____/_____
Safety Analysis Engineer	TSC	_____	_____/_____
Radiological Engineer	TSC	_____	_____/_____
Radiation Protection Engineer	EOF	_____	_____/_____
Emergency Plan Engineer	EOF	_____	_____/_____
Yankee Environmental Lab Staff	EOF	_____	_____/_____

INITIAL/TIME

20. Notify security of the arrival of any aid and assistance personnel so that they may prepare the necessary badging. _____/_____

21. If there are injured personnel, provide first aid treatment and prepare the patient(s) for transfer to the Bath Hospital by the local ambulance service, 882-7878 or, if unavailable, use the Company or private station wagon. (See Emergency Procedure 2.50.8)

    NOTE: Provide the Bath Hospital (443-5524) with the following information before a patient arrives at the hospital.

    1. Number of accident victims (and whether they are radioactively contaminated).
    2. Nature of medical problem of each.
    3. Magnitude of radiation aspect, if applicable.
    4. Anticipated time of arrival at the hospital.
    5. Who will accompany patients.

    Transfer the patient(s) to the ambulance or station wagon. If the patient is contaminated, assign a Health Physics representative to accompany them to the hospital to maintain radiological controls.

22. Check that the Manpower and Planning Assistant has prepared to supplement plant manpower as may be dictated by emergency management. _____/_____

23. Check that the Manpower and Planning Assistant has scheduled personnel for shift turnover and relief. _____/_____

24. Assure that the EOF remains active and adequately manned and supplied for the duration of the event. _____/_____

25. Notify American Nuclear Insurers _____/_____

APPENDIX IV-1

SITE AREA EMERGENCY - RADIOLOGICAL EVALUATION ASSISTANT

IMMEDIATE AND SUBSEQUENT ACTIONS	INITIAL/TIME
1. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.12, "Emergency Off-Site Monitoring".	_____/_____
2. If conditions warrant such action, determine the affected area downwind, inform off-site monitoring personnel as to the appropriate sampling locations and notify the Emergency Coordinator when team members are ready to be dispatched.	_____/_____
3. Assign qualified personnel to monitor all personnel for contamination and possible high radiation exposure. If the possibility of off-site contamination exists, ensure that all vehicles leaving the area have been monitored.	_____/_____
NOTE: If personnel and/or equipment have been contaminated above emergency limits, hold for decontamination.	_____/_____
4. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.10, "Evaluation of Radiological Data".	_____/_____
5. Assign and direct qualified emergency personnel in the determination of center habitability (See Appendix V). Report findings to the Emergency Coordinator.	_____/_____
6. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.14, "Emergency Radiation Exposure Control".	_____/_____
7. Interpret the results of Proc. 2.50.10, "Evaluation of Radiological Data" and recommend appropriate emergency response to the Emergency Coordinator.	_____/_____
8. Dispatch on-site monitoring teams to affected areas, direct the establishment of radiological access and control measures, and inform the Emergency Coordinator when such actions are required.	_____/_____
9. Periodically evaluate exposure records, review projected manpower requirements and coordinate requirements with the Manpower and Planning Assistant.	_____/_____
10. Maintain response efforts to deterine radiological status and be prepared to adjust radiological assessment efforts if conditions change.	_____/_____

APPENDIX IV-2

SITE AREA EMERGENCY - COMMUNICATIONS ASSISTANT

IMMEDIATE AND SUBSEQUENT ACTIONS	INITIAL/TIME
1. Check that phone and page system communication channels are available to:	
a. Technical Support Center	_____/_____
b. Control Room	_____/_____
c. Operations Support Center	_____/_____
d. Security	_____/_____
2. Establish radio communications with the Control Room	_____/_____
3. Use Message Forms to record communications.	_____/_____
4. Record the parties involved, date and time of each incoming or outgoing message by telephone, plant page or radio on a Message Form.	_____/_____
NOTE: On incoming calls, forward copies 1 and 3 to the Emergency Coordinator or his appropriate assistant.	
Retain copy 2 (yellow) as a "tickler" for those messages requiring a reply.	
When copy 1 is returned for dispatching a reply, discard copy 2 and note date and time the reply message was dispatched.	
Retain completed copy 1 as a log record of all communications.	
5. Establish radio communications with all on-site and off-site teams prior to their departure from the EOF, if practicable.	_____/_____
6. If plant communications systems are inadequate to handle the flow of incoming calls, notify the Emergency Coordinator and recommend alternative measures.	_____/_____

FINAL CONDITIONS

1. Collect all message forms, tabulate them in sequential order and provide this documentation to the Emergency Coordinator.	_____/_____

APPENDIX IV-3

SITE AREA EMERGENCY - MANPOWER AND PLANNING ASSISTANT

		INITIAL/TIME
1.	Review manpower requests and establish shift relief schedules after reviewing the Emergency Assignment list and coordinate such activity with the Emergency Coordinator.	_____/_____
2.	Assure that sufficient personnel to fulfill all emergency functions have been mobilized to maintain continuous emergency preparedness.	_____/_____
3.	Maintain an updated roster of emergency personnel on-site.	_____/_____
4.	Assure that incoming assistance personnel are property accounted for, provided with dosimetry and assigned.	_____/_____

APPENDDIX IV-4

SITE AREA EMERGENCY - COORDINATOR'S ASSISTANT

1. Function as an aide to the Emergency Coordinator.
2. Assist the Emergency Coordinator in directing the activities of the incoming support personnel.
3. Provide periodic briefings to emergency personnel at the EOF.
4. Direct personnel accountability at the EOF.
5. Document recommendations made to off-site authorities.

APPENDIX VI

RADIOLOGICAL HABITABILITY ASSESSMENT

	Initial/Time
1. Obtain a copy of Proc. 2.50.14, Emergency Radiation Exposure Control.	_____/_____
2. Obtain a RM-14, a PIC-6A, and a low volume charcoal air sample. Perform the necessary function checks on the instrumentation.	_____/_____

3. Monitor conditions in the area(s) assigned:

   Technical Support Center
   Operational Support Center
   Emergency Operations Facility
   Other areas as requested by the Plan Emergency Director or the Chemistry and Health Physics Supervisor or his alternate.

4. Place a high range pocket dosimeter in a representative location at each center.

5. Using Table II in Procedure 2.50.14, assess personnel actions with respect to radiological conditions encountered.

6. Report findings and recommendations and submit to the appropriate center coordinator.

NOTE: Additional information, such as area surveys, should be recorded on the reverse side of form MY-HP-119-81.

NOTE: Start the Continuous Air Monitor located in the Technical Support Center (Computer Room). Use Procedure 9.209 for operating instructions.

EMERGENCY CONDITIONS RADIOLOGICAL ASSESSMENT FORM

Date _____

Time _____

Location of Sampling _____

DATA

Maximum Dose Rate (W.B.) _____

Average Dose Rate (W.B.) _____

Air Sample Results _____

Thyroid Dose Rate _____ (form air sample data and App. B Proc. 2.50.10 Evalution of Radiological Data

Recommended Action (From sampling information and specifications in Table 1, Proc. 2.50.14, Energency Radiation Exposure Control)

_____

_____

_____

_____

_____

Comments _____

_____

NOTE: Additional information, such as area surveys, should be recorded on

_____/_____
Surveyor Date

Dept. Head	Proc. No. 2.50.4
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.4 GENERAL EMERGENCY

DISCUSSION

A General Emergency is declared when substantial core degradation or melting has occurred, with a potential for loss of containmnet integrity. The events included in a General Emergency category represent actual or potential substantial off-site radioactivity releases requiring immediate implementation of off-site protective actions. Assessment of radiological parameters will determine the type of protective measures necessary.

The decision to make an immediate initial declaration rests with the Emergency Coordinator. Prompt notification is made to the appropriate off-site authorities to assure that sufficient emergency personnel are mobilized and respond to the event in accordance with their respective emergency plan arrangements. Public information concerning the event will be provided via appropriate mechanisms. The public will be alerted by the Public Emergency Alert System under this emergency.

Other nuclear industry organizations will be alerted and requested to render assistance as appropriate. Federal agency response will be implemented in accordance with the Federal Master Emergency Plan.

All emergency centers are activated following the declaration of a General Emergency. All personnel without emergency assignments are evacuated from the plant Protected Area. The Emergency Operations Facility (EOF) once activated, will provide a centralized meeting location for representatives from all responding emergency organizations.

The following appendices are attached and are to be used as check-off sheets by individuals responsible for implementation of this procedure at the various identified center locations:

Appendix I	Plant Shift Superintendent
Appendix II	Plant Management
Appendix III	Technical Support Center Coordinator
Appendix IV	Operations Support Center Coordinator
Appendix V	Emergency Coordinator
Appendix V-1	Radiological Evaluation Assistant
Appendix V-2	Communications Assistant
Appendix V-3	Manpower and Planning Assistant
Appendix V-4	Coordinators Assistant
Appendix VI	Radiological Habitability Assessment

2.0 OBJECTIVE

To outline the actions required of plant personnel, visitors, contractors, and other affected personnel in the event of a General Emergency.

3.0 PROCEDURE

1. Having recognized the emergency condition and its classificaion as a General Emergency according to Procedure 2.50.0, "Declaration and Categorization of Emergency Condition", the Plant Shift Superintendent will follow the actions specified in Appendix I.

2. After being notified of the Site Area Emergency, the Plant Manager or his designated alternate will carry out the actions specified in Appendix II.

3. The Technical Support Center Coordinator will respond and perform the actions specified in Appendix III.

4. The Operations Support Center Coordinator will respond and perform those actions specified in Appendix IV.

5. The Emergency Coordinator/On-Call Supervisor will respond and perform those actions specified in Appendix V.

6. The Emergency Operations Facility (EOF) will be activated and those personnel with EOF duties will respond and perform those actions specified in Appendices V-1 thru V-4.

FINAL CONDITIONS

1. When the General Emergency condition no longer exists, the Plant Shift Superintendent will announce on the plant page system that the emergency is ended.

2. Public information statements will be prepared and released by Maine Yankee Corporate office personnel at the Central Maine Power Company, Augusta, or, if conditions warrant action, at the Bath Armory (Media Center).

3. The Emergency Coordinator will close out the event by verbal summary to off-site authorities.

   OR

   It may be advisable to de-escalate the emergency classification as determied by the Emergency Coordinator.

4. If conditions warrant, the plant has started into a recovery phase under the direction of a Recovery Manager.

APPENDIX I

GENERAL EMERGENCY - PLANT SHIFT SUPERINTENDENT

Initial/Time

IMMEDIATE ACTIONS

1. Instruct control room personnel to initiate applicable emergency operating procedures. ____/____
2. Act as the Emergency Coordinator until relieved. ____/____
3. Instruct control room personnel to sound a ten second blast of the emergency alarm and make the following announcement:
   A. "General Emergency, General Emergency, General Emergency".
   B. "(Describe condition and affected area)".
   C. "Plant staff with emergency duties report to your assigned emergency center and be accounted for by the center supervisor. All other plant staff, visitors and contractors assemble at the Information Center and await further instruction." ____/____

   NOTE: Repeat the announcement.
4. Request the Shift Technical Advisor to report to the Control Room and instruct him to:
   A. Notify the NRC on the Emergency Notification System (red phone). Maintain an open communications channel on this line. This channel will be closed only when allowed to do so by the NRC. ____/____
   B. Notify Maine Yankee Nuclear Support Division. ____/____
   C. Review the classification and determine required assistance. ____/____
   D. Advise the Plant Shift Superintendent on response measures. ____/____
5. Contact the On-Call Supervisor, inform him of current plant status and request assistance as required. ____/____

Initial/Time

6. Notify the Maine State Police by using the State Police Radio in the Control Room. If the radio is inoperable, notify using the telephone. If neither State Police radio nor phone contact can be made, notify the CMP dispatcher via the microwave link and ask the dispatcher to notify the State Police. Using one of the above communications system provide the following announcement:

   "This is (Name of Caller) from Maine Yankee Atomic Power Station. We have a General Emergency. Present Plant conditions could represent a public health hazard in the immediate area around Maine Yankee. The wind is blowing from the _____. Our recommendation for the public is to seek shelter and remain indoors until further advised. I repeat, this is Maine Yankee Atomic Power Station. We have a General Emergency. Please acknowledge receipt of message." ____/____

7. Activate the Public Emergency Alert System. ____/____

SUBSEQUENT ACTIONS

1. Be prepared to provide plant status information to off-site authorities if requested. ____/____

2. Notify the CMP Dispatcher, who in turn will notify the Maine Yankee Corporate Management and the Public Affairs and Information Service. ____/____

3. When the TSC establishes contact with the Control Room request any required assistance in handling communications. ____/____

4. If the event produces abnormal in-plant radiological conditions, direct the Shift Chemistry and Health Physics Technicial to evaluate the condition and augment this capability with the manpower provided by the Emergency Coordinator when applicable. ____/____

5. Account for duty shift personnel. Give the names of personnel accounted for to the Technical Support Center. ____/____

6. Request assistance of outside agencies (fire, law enforcement, or medical rescue personnel) as needed to deal with the event: (If Applicable)

   A. Fire ____/____

   B. Medical ____/____

   C. Law enforcement (in conjunction with the Security Shift Supervisor) ____/____

7. Together with the Emergency Coordinator and the Shift Technical Advisor, re-evaluate the emergency classification to see if conditions warrant, de-escalation of the classification. ____/____

Initial/Time

FINAL CONDITIONS

1. When the General Emergency no longer exists, announce on the plant page system that the General Emergency is ended. _____/_____

2. Summarize all actions and resultant conditions in the Plant Shift Superintendent Log. _____/_____

APPENDIX II

GENERAL - PLANT MANAGER

IMMEDIATE ACTIONS

1. Assess the situation based on information supplied by the Plant Shift Superintendent or the on-call supervisor and report to the Plant.

   NOTE: The Plant Manager is not assigned to any particular center, as he is responsible for overall direction of emergency response.

   NOTE: In the absence of the Plant Manager the following individuals, in the order listed, are designated as his alternate:

   Assistant Plant Manager
   Operations Department Head
   Technical Support Department Head
   On Duty Plant Shift Superintendent

SUBSEQUENT ACTIONS

1. Assure continuity of resources (technical, administrative, and material) on a 24 hour basis as required.

2. Act as liaison between Plant and corporate headquarters for the generation of public information releases.

3. Inform M.Y. Corporate Management when additional resources are required to augment Plant resources. (Combustion Engineering, Stone & Webster and other contracted services)

4. Inform M.Y. Nuclear Support Division when Yankee Nuclear Service Division support other than the initial response group is required.

5. Periodically review emergency classification with Emergency Coordinator and Shift Technical Advisor and adjust if conditions warrant such action.

6. Direct the emergency organization until such time that the emergency condition has been terminated.

   NOTE: Notify Plant staff, corporate office and other emergency resources if the emergency condition requires a transition to a recovery phase.

7. Direct Plant action during the recovery phase, when applicable.

8. Close out the event by summarizing details and actions with appropriate off-site authorities:

   A. Nuclear Regulatory Commission.

   B. State of Maine.

APPENDIX III

GENERAL - TECHNICAL SUPPORT CENTER COORDINATOR

Initial/Time

IMMEDIATE AND SUBSEQUENT ACTIONS

1. Establish voice communications with the Control Room, using channel 4 of the Plant paging system and document the reported event history and current Plant status. ____/____

2. Assure that representatives from the following technical disciplines have assembled at the TSC:

   A. Operations ____/____
   B. Reactor and Computer ____/____
   C. Instrumentation and Control ____/____
   D. Chemistry ____/____
   E. Technical Support ____/____
   F. Radiological Control ____/____

   NOTE: After a period of travel time to the Plant, the above staff will be augmented with Yankee Nuclear Services Division staff if this support is requested by the Plant Management:

3. Review and aid in coordinating in-plant activities with the Plant Shift Superintendent, Shift Technical Advisor and/or the Operations Dept. Head (if on site) relative to bringing the plant to a safe condition. ____/____

4. Determine center habitability in accordance with Appendix VI. Request assistance from the EOC if needed. ____/____

5. Conduct personnel accountability in the TSC and Control Room. Report the names of all personnel accounted for the the Security Shift Supervisor at the Gatehouse. ____/____

6. If Security reports that there are unaccounted personnel, call the personnel over the page system. ____/____

7. If missing personnel cannot be reached, notify the Emergency Coordinator that a search and rescue team is needed. ____/____

8. Periodically access plant status. ____/____

9. Utilizing the information acquired in Step 8, inform Plant and Corporate Management of the details. ____/____

	Initial/Time
10. Instruct security to prepare for the arrival of Nuclear Service Division personnel (YAEC), NRC representatives, and state Civil Defense and/or Public Health Department representatives at the EOF.	/
11. Notify the Emergency Coordinator, using Channel two of the Plant page system, when in-plant operational changes could change in-plant and/or off-site radiological conditions.	/
12. Assume the responsibility for maintaining open communications with the NRC (red phone) if the Plant shift Superintendent requires such action.	/
13. Remain active and manned until terminated by Plant Management.	

APPENDIX IV

GENERAL EMERGENCY - OPERATIONS SUPPORT CENTER COORDINATOR

		Initial/Time
1.	The first OSC member to arrive will establish communications with the TSC, using either the in-plant phone extension or the page/intercom set.	____/____
2.	Establish communications with the EOF.	____/____
3.	Assure that all Operations Department personnel not assigned to the operating shift report to the OSC.	____/____
4.	Assure that all Chemistry personnel and Health Physics personnel report to the OSC.	____/____
5.	Determine the habitability of the OSC in accordance with Appendix VI.	____/____
6.	Conduct personnel accountability and report the names of all personnel accounted for to the Security Supervisor at the EOF.	____/____
7.	Provide assistance in the investigation or repair of plant systems.	____/____
8.	Provide the necessary technical manpower required to provide in-plant radiological monitoring and habitability assessment.	____/____
9.	Provide assistance in the decontamination of affected Plant areas as necessary.	____/____
10.	Work in conjunction with the Manpower and Planning Assistant at the EOF in preparing for operating shift turnover and relief.	____/____
11.	Assure that the OSC remains active and manned for the duration of the emergency.	____/____

APPENDIX V

GENERAL EMERGENCY - ON CALL SUPERVISOR/EMERGENCY COORDINATOR

REQUIRED FUNCTIONS AND ACTIONS	Initial/Time
1. Assume the functions of Emergency Coordinator at the Emergency Operations Facility.	/
NOTE: The On-Call Supervisor, when notified, will assume the position of Emergency Coordinator and continue in this position until relieved.	
2. Notify Plant Management.	/
NOTE: On back shifts and weekends the Plant Shift Superintendent will notify the On Call Supervisor and brief him on Plant conditions.	
3. Augment the duty staff, during back shifts and weekends, by notifying one person from each of the following call lists:	
Operations Call List	/
Technical Support List	/
Emergency Coordination List	/
NOTE: Assure that the person contacted has a call list available so that he may continue notifications.	
4. During normal working hours contact the Operations Support Center for Health Physics and Chemistry personnel.	/
5. Report to the Emergency Operations Facility (EOF).	/
NOTE: This will be the Information Center unless otherwise notified.	
6. Get updated conditions from the Plant Shift Superintendent and the Shift Technical Advisor and re-evaluate the emergency classification using Procedure 2.50.0, "Declaration and Categorization of Emergency Condition" criteria.	/
7. Contact the Plant Shift Superintendent and obtain a Plant status report and the current meteorological conditions.	/
8. Direct qualified emergency personnel to conduct a center habitability determination using Appendix VI.	/

Initial/Time

9. If it is determined that the center may become uninhabitable, initiate planning for evacuation of center and moving to the alternate center. ____/____

10. If it is determined that the center is uninhabitable, initiate the movement of personnel and equipment to the alternate center. Direct the Security Force to initiate their plan for the move. ____/____

11. Assign the following emergency duties to appropriate qualified personnel as they arrive at the EOF:

	Name of Individual
Coordinators Assistant	
Communications Assistant	
Radiological Evaluation Assistant	
Manpower and Planning Assistnat	

12. Check with Plant security and determine the status of personnel accountability. ____/____

13. Contact the Technical Support Center and inform them of the Plant personnel accountability status. ____/____

14. Check with the Technical Support Center to see if search and rescue personnel are needed. ____/____

15. Check with the Technical Support Center, the Operations Support Center and the Control Room to assure that habitability has been established. If habitability has not been established, direct Health Physics personnel to make an assessment using Appendix VI.

Technical Support Center	Habitability Established	____/____
	Survey Team Assigned	____/____
Operations Support Center	Habitability Established	____/____
	Survey Team Assigned	____/____
Control Room	Habitability Established	____/____
	Survey Team Assigned	____/____

16. Check with Plant security to assure that site access and control measures have been taken. ____/____

17. Establish contact with and brief the following outside agencies that will report to the EOF:

	Name	Initial/Time
NRC		/
Maine Div. of Health Eng.		/
Maine State Police		/
Maine Civil Emerg. Prep.		/

NOTE: Inform members of the above agencies of current dose rate projections, Plant conditions, field sample results and recommendations concerning emergency actions.

18. If representatives of the above agencies are not preser : at the EOF communications is maintained with these agencies v a the hot lines to:

	Contact Established
Lincoln County EOF	/
NRC	/

19. The following Yankee Nuclear Service Division personnel will report to the EOF for assignments to augment Plant personnel: (These personnel will report only if requested by Maine Yankee Nuclear Support Division.)

	Assigned To	Name	
Systems Engineer	TSC		/
Safety Analysis Engineer	TSC		/
Radiological Engineer	TSC		/
Radiation Protection Engineer	EOF		/
Emergency Plan Engineer	EOF		/
Yankee Environmental Lab Staff	EOF		/

20. Notify security of the arrival of any aid and assistance personnel so that they may prepare the necessary badging. /

Initial/Time

21. If there are injured personnel, provide first aid treatment and prepare the patient(s) for transfer to the Bath Hospital by the local ambulance service, 882-7878 or, if unavailable, use the Company or private station wagon. (See Emergency Procedure 2.50.8.)

    Note: Provide the Bath Hospital (443-5524) with the following information before a patient arrives at the hospital.

    1. Number of accident victims (and whether they are radioactively contaminated).
    2. Nature of medical problem of each.
    3. Magnitude of radiation aspect, if applicable.
    4. Anticipated time of arrival at the hospital.
    5. Who will accompany patients.

    Transfer the patient(s) to the ambulance or station wagon. If the patient is contaminated, assign a Health Physics representative to accompany them to the hospital to maintain radiological controls.

22. Check that the Manpower and Planning assistant has prepared to supplement Plant manpower as may be dictated by emergency management. _____/_____

23. Check that the Manpower and Planning Assistant has scheduled personnel for shift turnover and relief. _____/_____

24. Assure that the EOF remains active and adequately manned and supplied for the duration of the event. _____/_____

25. Notify American Nuclear Insurers. _____/_____

APPENDIX IV-1

GENERAL EMERGENCY - RADIOLOGICAL EVALUATION ASSISTANT

REQUIRED ACTIONS — Initial/Time

1. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.12, "Off-Site Monitoring. ____/____

2. If conditions warrant such action, determine the affected area downwind, inform off-site monitoring personnel as to the appropriate sampling locations and notify the Emergency Coordinator when team members are ready to be dispatched. ____/____

3. Assign qualified personnel to monitor all personnel for contamination and possible high radiation exposure. If the possibility of contamination exists, ensure that all vehicles leaving the area have been monitored. ____/____

   NOTE: If personnel and/or equipment have been contaminated above emergency limits, hold for decontamination. ____/____

4. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.10, "Evaluation of Radiological Data. ____/____

5. Assign and direct qualified emergency personnel in the determination of center habitability (See Appendix V). Report findings to the Emergency Coordinator. ____/____

6. Assign and direct qualified emergency personnel in the implementation of Proc. 2.50.14, "Emergency Radiation Exposure Control". ____/____

7. Interpret the results of Proc. 2.50.10, "Evaluation of Radiological Data" and recommend appropriate emergency response to the Emergency Coordinator. ____/____

8. Dispatch on-site monitoring teams to affected areas, direct the establishment of radiological access and control measures, and inform the Emergency Coordinator when such actions are required. ____/____

9. Periodically evaluate exposure records, review projected manpower requirements and notify the Emergency Coordinator and Manpower and Planning Assistant of required shift turnover and relief actions. ____/____

10. Maintain response efforts to determine radiological status and be prepared to adjust radiological assessment efforts if conditions change.

	Initial/Time
11. Note the arrival of the NSD Mobile Environmental Laboratory. Coordinate the set-up and radiological monitoring activities of the lab.	/

APPENDIX IV-2

GENERAL EMERGENCY - COMMUNICATIONS ASSISTANT

Initial/Time

IMMEDIATE AND SUBSEQUENT ACTIONS

1. Check that phone and page system communication channels are available to:

   A. Technical Support Center ____/____
   B. Control Room ____/____
   C. Operations Support Center ____/____
   D. Security ____/____

2. Establish radio communications with the Control Room. ____/____

3. Use Message Forms to record communications personnel.

4. Record the parties involved, date and time of each incoming or outgoing message by telephone, Plant page or radio on a Message Form.

   NOTE: On incoming calls, forward copies 1 and 3 to the Emergency Coordinator or his appropriate assistant.

   Retain copy 2 (yellow) as a "tickler" for those messages requiring a reply.

   When copy 1 is returned for dispatching a reply, discard copy 2 and note date and time the reply message was dispatched.

   Retain completed copy 1 as a log record of all communications.

5. Establish radio communications with all on-site and off-site teams prior to their departure from the EOF, if practicable. ____/____

6. If plant communications systems are inadequate to handle the flow of incoming calls, notify the Emergency Coordinator and recommend ad hoc measures. ____/____

FINAL CONDITIONS

1. All message forms have been tabulated in sequential order and this documentation has been given to the Emergency Coordinator.

APPENDIX IV-3

GENERAL EMERGENCY - MANPOWER AND PLANNING ASSISTANT

		Initial/Time
1.	Review manpower requests and establish shift relief schedules after reviewing the Emergency Assignment List and coordinate such activity with the Emergency Coordinator.	/
2.	Assure that sufficient personnel to fulfill all emergency functions have been mobilized to maintain continuous emergency preparedness.	/
3.	Maintain an updated roster of emergency personnel on site.	/
4.	Assure that incoming assistance personnel are properly accounted for, provided with dosimetry and assigned.	/

APPENDIX IV-4

GENERAL EMERGENCY - COORDINATOR'S ASSISTANT

1. Function as an aide to the Emergency Coordinator.
2. Assist the Emergency Coordinator in directing the activities of the incoming support personnel.
3. Provide periodic briefings to emergency personnel at the EOF.
4. Direct personnel accountability at the EOF.
5. Document recommendations made to off-site authorities.

APPENDIX V

RADIOLOGICAL HABITABILITY ASSESSMENT

	Initial/Time
1. Obtain a copy of Procedure 2.50.14, "Emergency Radiation Exposure Control.	/
2. Obtain a RM-14, a PIC-6A, and a low volume charcoal air sample. Perform the necessary function checks on the instrumentation.	/

3. Monitor conditions in the area(s) assigned:

   Technical Support Center
   Operational Support Center
   Emergency Operations Facility
   Other areas as requested by the Plant Shift Superintendent of the Radiological Controls Supervisor or his alternate.

4. Place a high range pocket dosimeter in a representative location at each center.

5. Using Table II in Procedure 2.50.14, assess personnel actions with respect to radiological conditions encountered.

6. Report findings and recommendations and submit to the appropriate center coordinator.

   NOTE: Additional information, such as area surveys, should be recorded on the reverse side of MY-HP-

   NOTE: Start the Continuous Air Monitor located in the Technical Support Center (computor room). Use Procedure No. 9.209 for operating instructions.

EMERGENCY CONDITIONS RADIOLOGICAL ASSESSMENT FORM

Date _____

Time _____

Location of Sampling _____

DATA

Maximum Dose Rate (W.B.) _____

Average Dose Rate (W.B.) _____

Air Sample Results _____

Thyroid Dose Rate _____ (from air sample data and App. B, Proc. No. 2.50.10 "Evaluation of Radiological Data)

Recommended Action (From sampling information and specifications in Table 1 of Proc. No. 2.50.14, "Emergency Radiation Exposure Control")

_____

_____

_____

_____

_____

_____

Comments _____

_____

_____

NOTE: Additional information, such as area surveys, should be recorded on

_____ /
Surveyor Date

Dept. Head	Proc. No. 2.50.5
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.5 EMERGENCY PLAN TRAINING AND EXERCISE

1.0 DISCUSSION

All members of the staff must be familiar with their duties and responsibilities in relation to the Maine Yankee Emergency Plan. This procedure provides a means for training to and exericse of the Emergency Plan from a plant-wide as well as an individual standpoint.

Each emergency implementing procedure will be reviewed to identify all procedural steps not part of the routine duties of the individuals assigned to perform them. These individuals will be trained to perform these procedural steps, and will where feasible, demonstrate their ability to perform the required procedures or procedure steps in a drill.

Specialized training will be conducted upon initial assignment of individuals to specified emergency duties and will be followed by an annual refresher course and requalification.

Qualification and requalification drills will not be conducted for activities which are part of an individual's routine assignment.

Emergency training exercises simulating an emergency that results in offsite radiological release will be conducted annually to test the implementing procedures and methods, to test emergency equipment, and to ensure that emergency organization personnel are familiar with their duties. Active participation will be limited to plant personnel and local support services.

Offsite agency/plant combined emergency response will be exercised once every five years in a joint Federal, State, Local and Plant exercise.

Annually, the Emergency Planning Corodinator in conjunction with senior plant management will develop an exercise scenario simulating a site or general emergency. Other scenarios will be developed periodically to test portions of the plan (eg., communicaions, medical emergency, etc.).

During the conduct of exercises, auditors will be stationed at strategic locations and with key individuals, and will observe the emergency response actions. At the conclusion of the exercise, the Emergency Planning Coordinator will meet with the auditor and develop a critique, which will be presented to the plant staff. Actions will then be initiated by the Emergency Planning Coordinator to correct deficiencies revealed by the exercise.

The public emergency alert system will be tested periodically in accordance with FEMA requirements.

2.0 OBJECTIVE

To provide a means of training emergency response personnel and testing, evaluating and documenting the response of plant staff and offsite agencies during the conduct of drills and exercises.

3.0 REFERENCES

Maine Yankee Atomic Power Company Emergency Plan.

4.0 PRECAUTIONS

4.1 Before initiating the annual emergency exercise, applicable offsite agencies shall be made cognizant of the intended drill and a determination made of their desire to participate, and to what degree and if letters of agreement are in force. If it is desired that the drill be unrehearsed and unannounced applicable offsite agencies will be notified in advance but will not receive specific information concerning the time of the drill.

4.2 Any initiating announcement associated with an emergency exercise must be preceded and followed by the words "This is a Drill".

4.3 During a simulated accident any action to materially alter the plant operating conditions will be simulated unless previously authorized in writing by the Plant Manager.

4.4 An emergency exercise may be terminated by the Plant Shift Superintendent at any time operational conditions warrant such action.

4.5 Proper Health Physics controls must be maintained if actual source material is used to make the exercise realistic.

5.0 PREREQUISITES

5.1 Prior to conduct of the drill, persons with emergency plan duties will receive training.

5.2 Obtain written approval from the Plant Manager and notify the CMP Public Information Group prior to the conduct of any emergency exercise.

5.3 Prior to conduct of training, assure that training aids and lesson plans reflect the current revisions of the plans and procedures to be covered.

6.0 EQUIPMENT

6.1 Emergency radiological and other plant equipment essential to emergency operations will be utilized during emergency plan training and exercises, unless otherwise specified by plant management.

7.0 PROCEDURE

7.1 Emergency Plan Training

Training to be conducted for the following emergency response functions and is to cover the scope of responsiblities outlined unless the duties are within the scope of the individual's normal job function.

1. Function: Implement Emergency Plan.

   Duties: Verify that emergency Centers are manned and functioning properly.

   Personnel: High level plant management as specified by the Emergency Contact List.

2. Funcion: Emergency Coordinator

   Duties: Coordination of emergency planning activities to include familiarity with all aspects of the plan.

   Personnel: Duty Call Officers and Plant Shift Superintendents as specified by the Emergency Contact List.

3. Function: Radiological Accident Assessment

   Duties: Determine downwind affected areas.
   Determine onsite and offsite sample locations.
   Determine public dose based on instrument or sample analysis.
   Advise Emergency Coordinator of public dose with regard to PAGs.

   Personnel: Chemistry, Health Physics and Reactor Engineering Supervisors as specified by the Emergency Contact List.

4. Function: Offsite/Onsite Surveys and Onsite Assistance

   Duties: Proceed to designated sample point.
   Obtain gamma & beta dose rate mesurements.
   Obtain particulate & iodine air samples.
   Count air samples.
   Report data to EOF.
   Locate plume with low range GM meters.

   Personnel: Chemistry & Health Physics Technicians & Testers, I&C Technicians, Chemistry Lab Assistants, Plant Engineers as specified by the Emergency Contact List.

5. Function: Security & Accountability

   Duties: Assure Site Access Control.
   Assure all site personnel are accounted for.
   Assure vehicles are evacuated to alternate ECC if used.
   Asure transport of E-kits, badge rack and radios to ECC.

   Personnel: Security personnel.

6. Function: Radiological Protection & Control

   Duties: Maintain radiological controls for Plant personnel.
   Establish check points at site access.
   Establish clothing, respiratory protection, dosimetry and stay times for emergency response team members.
   Establish dosimetry program.
   Establish internal & external dose assessment for plant personnel.

   Personnel: Radiological Controls Department personnel as specified by the Emergency Contact List.

7. Function: Communication

   Duties: Establish & maintain radio communication with the Control Room.
   Establish & maintain radio communication with all site re-entry and offsite survey teams.
   Establish telephone communication with NRC and other State & Federal agencies as required.
   Establish telephone communication with Corporate Headquarter Depts. as necessary.
   Establish telephone communication with emergency response organizations (Fire, Medical, Ambulance) as necessary.
   Log all communications data and inform he Emergency Coordinator.

   Personnel: As specified by the Emergency Contact List.

8. Function: Radiochemistry

   Duties; Obtain and analyze liquid and air samples as required.
   Obtain and analyze post accident samples.

   Personnel: Chemistry Department Supervisors as specified by the Emergency Contact List.

9. Function: First Aid

   Duties: Administer first aid.

   Personnel: Personnel completing the Red Cross Multi-Media First Aid Course as specified by the Emergency Contact List.

10. Function: Repair and Corrective Action

    Duties: Organize repair and corrective action teams during emergenccies.

    Personnel: Maintenance and I&C Supervisors as specified by the Emergency Contact List.

11. Function: Offsite Support Agencies

    Duties: Provide fire or police protection as necessary.
    Provide emergency medical care, transportation and hospital care if injured personnel.

    Personnel: As specified by the Offsite Support Agencies.

    NOTE: Training will cover such topics as site access, radiological controls, and use of protective equipment. Training can be accomplished by lectures, facility tours, visual aides or other appropriate methods.

12. Function: Headquarters Support

    NOTE: Nuclear Support Division personnel will attend Emergency Plan training in the above listed modules as it applies to their particular support functon.

Appropriate demonstration of skills acquired by the trainees will be required. On the spot correction of improper actions will be made.

7.2 Emergency Plan Exercises and Drills

1. The Emergency Plan Coordinator selects a plausible simulated accident to exercise the Emergency Plan or portions of the Plan and initiates the Radiation Emergency Exercise Approval Sheet. The Emergency Plan Coordinator prepares and submits to the Plant Manager the detailed plan in written outline form for comment. Once every six years the exercise will be conducted during off-duty hours (1800-2400 hours and 0000-0600 hours).

2. The Emergency Plan Coordinator prepares a simulation list on all events that the plant recognizes would be accomplished in an actual emergency but will not be carried out for the drill. (i.e., Contractors remaining onsite during drill, equipment on order but not available at the time of the drill,etc.).

3. The completed plan is submitted to the Plant Manager for approval.

4. The Emergency Plan Coordinator will contact offsite agencies to make arrangements for date, time, degree of participation and ensure that their Letters of Agreement are still in effect.

5. The final plan is approved for execution by the Plant Manager.

6. Prior to commencement of the exercise, the Emergency Plan Coordinator briefs and stations observers.

7. During the exercise, observers will provide the sensory information necessary for the participants to effect actons appropriate to the simulated accident imposed. Throughout the exercise they will record pertinent observations of individual and group performance on the Radiation Emergency Exercise Critique Sheets.

8. At the completion of the exercise, the Emergency Plan Coordintor will meet with the observers to review the summary comments. All obervers will submit their forms to the Emergency Plan Coordinator after the meeting.

9. The Emergency Plan Coordinator will review and evaluate all comments/recommendations from observers and offsite agencies on the Emergency Drill Observation Documentation Sheet and submit them to the Plant staff for final resolution.

10. The Emergency Plan Coordinator will implement approved recommendations.

11. Originals of all forms, minutes of meeting and final draft plans will be retained in plant files.

12. Drills to test specific functons of emergency plan response will be developed, approved, conducted and evaluated as above. A list of special drills and frequencies to be conducted follows:

    a. Communicatons Drills - Monthly with State and Local governments within the plume exposure pathway.

       - Annually with Federal emergency response organizations and States within the ingestion pathway.

       - Annually with Plant, State and Local emergency operations centers and field assessment teams.

    b. Fire Drills - according to the Fire Protection Program.

    c. Medical Emergency Drills - Annually with ambulance and hospital support groups.

    d. Radiological Monitoring Drills - Annually for plant environs and radiological monitoring.

    e. Health Physics Drills - Semi-annually.

EMERGENCY PLAN DRILL APPROVAL SHEET

DATE _____

DATE & TIME OF DRILL _____

Exercise Title _____

_____

Objectives of Drill _____

_____

Description of Drill (Including time schedule of events) _____

_____

Simulated Events _____

_____

_____

OBSERVERS

_____	_____
_____	_____
_____	_____
_____	_____

EMERGENCY PLAN PARTICIPANTS

_____	_____
_____	_____
_____	_____
_____	_____

OFFSITE AGENCIES

AGENCY	LETTER OF AGREEMENT IN EFFECT	WILL PARTICIPATE	WILL NOT PARTICIPATE	DATE
Mane State Police				
National Guard				
Coast Guard				
Wiscasset Police				
Wiscasset Fire Department				
Bath Memorial Hospital				
Yankee Mutual Assistance				
NRC Region I				
Maine Dept. of Health and Welfare				
Maine Civil Emergency Preparedness Agency				

Submitted by: _____ _____
Emergency Plan Coordinator — Date

Final Approval for Drill _____ _____
Plant Manager — Date

Proc. No. 2.50.5
Rev. No. 0

EMERGENCY PLAN DRILL CRITIQUE SHEET

_____
Date

Observer: _____ _____
Name Date

Exercise Title: _____

Exercise Start: _____ Time Initial Required Action Initiated: _____

Time Initial Required Acton Completed _____ Time Exercise Finish: _____

Location of Observer: _____

Information Provided to Participants: _____

Time Information Provided: _____

Observations: (Proper use of equipment, correct procedures, effectiveness of individual and group action, etc.)

Comments and Recommendations (Specific): _____

Use additional pages as required.

_____ _____
Signature Date

Proc. No. 2.50..5
Rev. No. 0

DOCUMENTATION OF DRIVER'S COMMENTS
FOR EMERGENCY DRILL

_____
Date

Comments/Recommendations (Include All)	Plant Management's Position (If Rejected Indicate Why)	Date Accomplished (If Accepted)

Dept. Head	Proc. No. 2.50.9
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.9 SECURITY FORCE RADIATION EMERGENCY PLAN

1.0 DISCUSSION

The plant may be subject to emergencies caused by fire, explosives or release of radioactive materials which may require evacuation. This procedure provides guidance for the Security Guard Force in the event an emergency condition is declared. The Security Shift Supervisor will be responsible for the initial accountability of all personnel in the protected area. Personnel accountability should start as soon as possible to verify missing or injured personnel. The duties and responsibilities of Security personnel are outlined for each emergency condition.

2.0 OBJECTIVE

To outline specific actions to be followed by Security Officers in the event of an emergency condition.

3.0 REFERENCES

3.1 Maine Yankee Facility Plan.

3.2 15.4 Security Emergency Procedure.

3.3 15.5 Support from Off-Site Security Forces.

4.0 PRECAUTIONS

Not applicable.

5.0 PREREQUISITES

Not applicable.

6.0 EQUIPMENT

6.1 Radio vehicles. (Available on site).

6.2 Keys. (Gatehouse Key Respository)

6.3 Portable Base Station Security Radio. (Security Day Room)

6.4 Walkie-Talkie Radios. (Security Force)

6.5 TLD Badge Board. (Security Access Control Point)

6.6 Emergency Kits (Only if evacuating to Lincoln County Court House in Wiscasset). (Backroom of P.I. Building)

6.7 Weapons Locker (Actual evacuation only). (Weapons vault in Security Area)

7.0 PROCEDURE

7.1 The Plant Shift Superintendent or his designated alternate will announce on the plant communication system the type (Unusual Event, Alert, Site-Area, General Emergency) of emergency that exists. The emergency alarm will be sounded. Regardless of the type emergency that exists,stop all vehicles and visitors from entering the protected area.

7.2 Unusual Event

NOTE: Insure ALL EVACUATING PERSONNEL LEAVE THEIR PHOTO I.D., or escorted visitor badges, at the security access control desk.

a. The Security Access Controllers will determine what personnel remain in the protected area by inventorying the photo I.D. and escorted visitor badges.

b. Plant personnel without assigned emergency duties will also evacuate to the Information Building.

c. All personnel will keep their dosimetry when evacuating.

d. When accountability of personnel is completed, notify the Security Shift Supervisor.

e. The Security Shift Supervisor will report any unaccounted for personnel to the Plant Shift Superintendent.

f. The Security Shift Supervisor will coordinate with Department Supervisors to verify that they have completed their accountability.

7.3 Alert Condition

NOTE: Insure all evacuating personnel leave their photo I.D., or escorted visitor badges, at the security access control desk.

a. The Security Access Controllers will determine what personnel remain in the protected area by inventorying the photo I.D. and escorted visitor badges.

b. Plant personnel without assigned emergency duties will also evacuate to the Information Building.

c. All evacuating personnel will keep their dosimetry with them.

d. When accountability of the above is completed, notify the Security Shift Supervisor.

e. The Security Shift Supervisor will notify the Technical Support Coordinator of any unaccounted for personnel.

f. The Security Shift Supervisor will coordinate with Department Supervisors to verify that they have completed their accountability of personnel.

7.4 Site Area Condition

NOTE: Insure evacuating personnel leave their photo I.D. and escorted visitor badges at the security access control desk.

a. The Security Access Controllers will determine what personnel remain in the protected area by inventorying the photo I.D. and escorted visitor badges.

b. Plant personnel without assigned emergency duties will also evacuate to the Information Building.

c. All evacuating personnel will keep their dosimetry with them.

d. When accountability of the above is completed, notify the Security Shift Supervisor.

e. The Security Shift Supervisor will report any unaccounted for personnel to the Technical Support Coordinator.

f. The Security Shift Supervisor will verify that the Control Room, Technical Support Center, and Operations Support Center personnel accountability has been completed.

g. Two Security Officers will take the following items of equipment with them to the Emergency Operations Facility:

1. Security vehicle(s).

2. Keys to Public Information Building.

3. Key to vehicle radios.

4. Portable base station security radio.

5. Available portable radio(s) (Walkie-talkie).

6. TLD Badge Board/Visitors Register and all Spare TLD's, dosimeters including spare asgmt. sheets.

7. Weapons locker and key (actual evacuation only).

8. Emergency kits (from Public Information Building, if evacuating to the Lincoln County Court House).

9. State Police radio from Information Building, if evacuating to the Lincoln County Court House.

h. On arrival at the Emergency Operations Facility:

1. Set up radio and establish radio communications with the Control Room.

2. Set up TLD board and other equipment as soon as possible.

3. Secure the weapons locker and retain key in his possession (actual evacuation only).

4. Provide traffic control after initial duties are completed.

i. One Security Officer will be responsible for the following:

1. Place keys in all remaining plant vehicles.

2. Open the personnel and main gate and leave open (actual emergency only).

3. Take one portable radio (Walkie-talkie).

4. Deactivate the employee turnstile to allow free access to the plant (actual emergency only).

5. Drive company vehicle to the Emergency Operations Facility. (If applicable.)

6. Unlock plant access doors to allow free entry (actual emergency only).

j. One Security Officer will perform the following:

1. Verify that exiting traffic and/or personnel, have cleared with the Emergency Operations Facility prior to allowing egress from the plant site.

2. Allow fire/emergency equipment to enter the plant site as directed by the Emergency Coordinator.

3. Allow access to the plant site only to those personnel authorized by the Emergency Coordinator.

k. One Security Officer will perform the following:

1. Verify that the Administration Building, warehouse buildings and Foxbird Island and Southpoint areas have been evacuated.

2. Drive company vehicle to the Emergency Operations Facility if applicable.

7.5 General Emergency Condition

NOTE: Insure evacuating personnel leave their photo I.D. or escorted visitor badges at the security access control desk.

a. The Security Access Controllers will determine what personnel remain in the protected area by inventorying the photo I.D. and escorted visitor badges.

b. Plant personnel without assigned emergency duties will also evacuate to the Information Building.

c. All evacuating personnel will keep their dosimetry.

d. When accountability of personnel is completed, notify the Security Shift Supervisor.

e. The Security Shift Supervisor will report any unaccounted for personnel to the Technical Support Center Coordinator.

f. The Security Shift Supervisor will verify that the Control Room, Technical Support Center and Opeations Support Center personnel accountability has been completed.

g. Two Security Officers will take the following items of equipment with them to the Emergency Coordination Center.

1. Security vehicle(s).

2. Keys to Public Information Building and Eaton Farm Building.

3. Key to vehicle radios.

4. Portable base station security radio.

5. Available portable radio(s) (Walkie-talkie).

6. TLD Badge Board/Visitors Register and all Spare TLD's, dosimeters including spare asgmt. sheets.

7. Weapons locker and key (actual evacuation only).

8. Emergency kits (from Public Information Building, if evacuating to the Lincoln County Court House).

9. State Police radio from Information Building, if evacuating to the Lincoln County Court House.

h. On arrival at the Emergency Operations Facility:

1. Set up radio and establish radio communications with the Control Room.

2. Set up TLD board and other equipment as soon as possible.

3. Secure the weapons locker and retain key in his possession (actual evacuation only).

4. Provide traffic control after initial duties are completed.

i. One Security Officer will be responsible for the following:

1. Place keys in all remaining plant vehicles.

2. Open the personnel and main gate and leave open (actual emergency only).

3. Take one portable radio (Walkie-talkie).

4. Deactivate the employee turnstile to allow free access to the plant (actual emergency only).

5. Drive company vehicle to the Emergency Operations Facility. (If applicable.)

6. Unlock plant access doors to allow free entry (actual emergency only).

j. One Security Officer will perform the following:

1. Verify that exiting traffic and/or personnel, have cleared with the Emergency Coordinator center prior to allowing egress from the plant site.

2. Allow fire/emergency equipment to enter the plant site as directed by the Emergency Coordinator.

3. Allow entrance to the plant site only to those personnel authorized by the Emergency Coordinator.

k. One Security Officer will perform the following:

1. Verify that the Administration Building, warehouse buildings, and the Foxbird Island and Southpoint areas been evacuated.

2. Drive company vehicle to the Emergency Operations Facility if applicable.

8.0 ADDITIONAL REQUIREMENTS

8.1 Establish a work schedule and call in off-duty Security personnel if the situation warrants.

8.2 Maintain liaison with the State and Local law enforcement agencies.

8.3 Security Officers will not comment on the emergency in any way to outside agencies. The Emergency Coordinator or Plant Management will release information to the News-Media and visitors.

8.4 Follow guidance of plant management.

8.5 During emergency evacuation exercises, sufficient security officers will be on duty to insure the integrity of the protected area.

8.6 The Security Shift Supervisor shall direct the activities of the Security Personnel in accomplishing the assigned tasks.

9.0 FINAL CONDITIONS

The Security Guard Force has accounted for personnel remaining in the protected areas, evacuated required equipment, set up and established radio communications, and is controlling traffic and personnel as required.

Dept. Head	Proc. No. 2.50.8
Plt. Mgr.	Class. A
PORC	Rev. No. 6
Mgr. of Ops.	Issue Date
	Review Date

2.50.8 MEDICAL EMERGENCY PLAN

1.0 DISCUSSION

Any time injuries to plant personnel occur in a control area, such injuries may be complicated by radiation exposure or contamination. Personnel dose rates must be quickly determined. As soon as practicable, the victim should be removed from the radiation area. The extent of contamination should be determined and a judgement made as to whether injuries take precedence over contamination control or whether decontamination should be attempted before further treatment. This judgement will be made by the senior medical representative available.

Decontamination of injured personnel in the event an emergency will be done in the first aid room if dose rates permit. If dose rates are too high in the first aid room, decontamination will be performed at the Emergency Coordination Center(s).

2.0 OBJECTIVE

To establish a procedure for the care and handling of personnel injured in radiation control areas.

3.0 REFERENCES

3.1 Maine Yankee Medical Policies and Procedures (Section 7.0).

3.2 Health Physics Procedure 9.1.8.

3.3 Health Physics Procedure 9.1.9.

3.4 Bath Memorial Hospital Radiation Accident Plan.

3.5 "Procedures for Radioactively Contaminated Patients", Peter Bent Brigham Hospital.

4.0 PRECAUTIONS

4.1 Except in life threatening situations, remove personnel protective clothing and commence decontamination before transferring the victim to the First Aid Room.

4.2 In all cases consideration for the injured must take precedence and care should be taken not to aggravate any injuries.

4.3 Radiation exposure to First Aid, Rescue or Ambulance Squad personnel will be maintained within the limits specified in 2.50.--, Table 1.

5.0 PREREQUISITES

5.1 The Control Room or the Senior Medical representative will provide the Bath Hospital (Phone #443-5524) with the following information before a patient arrives at the hospital.

NOTE: Under Emergency conditions this information will be transmitted from the EOF.

1. Number of accident victims (and whether they are radioactively contaminated).

2. Nature of medical problem of each (to the extent known).

3. Anticipated time of arrival at the hospital.

4. Who and what Health Physics support will accompany patients.

5.2 Make the notifications specified in Procedure 2.50.1, "Notificaion of Unusual Event".

6.0 EQUIPMENT

6.1 As required in references 9.1.8, 9.1.9.

6.2 Usual equipment stored in the First Aid Room.

7.0 PROCEDURE

7.1 For Minor Injuries

7.1.1 Check for contamination.

7.1.2 If no contamination exists, remove protective clothing and send the victim to the First Aid Room.

7.1.3 If contamination is present, decontaminate in accordance with Health Physics Procedure 9.1.9.

7.1.4 If a wound is contaminated, wash gently with liquid soap and copious quantities of water.

7.1.5 After decontamination is complete, move the patient to the First Aid Room.

7.1.6 After treatment the patient should have a bio-assay or other applicable performed tests to determine if internal contamination has occurred.

7.2 For Major Injuries Requiring Hospitalization

7.2.1 Monitor the areas around the victim for radiation levels.

7.2.2 If the levels are greater than 1 R/hr remove the patient to a low radiation area if transportation of the injured will be delayed. Use caution not to aggravate the victims injuries.

7.2.3 If the level is less than 1 R/Hr, do not move the patient until it can be determined that movement will not jeopardize his condition.

7.2.4 Determine the extent of the injury and administer proper first aid.

7.2.5 If the patient is free of contamination transfer him to the Bath Hospital Emergency Room using the local ambulance service (tel. 207-882-7878) or, if unavailable, use the company station wagon.

7.2.6 If patient is not completely decontaminated, wrap in blankets and/or a polyethylene sheet to limit the spread of contamination.

7.2.7 The representative from Health Physics, accompanying the victim(s) to the hospital, will maintain radiological controls. Health Physics personnel will remain at the Bath Hospital until the patient is decontaminated and all radioactive material is removed from the hospital.

7.2.8 Cases requiring care which is beyond the capabilities of the Bath Hospital may be referred to Peter Bent, Brigham Hospital, according to the referenced procedures.

8.0 FINAL CONDITIONS

8.1 Decontamination of injured personnel and emergency vehicles has been completed.

8.2 All radioactive material has been removed from the local hospital and the supplies used have been re-stocked.

8.3 If necessary, the patient has been referred to Peter Bent, Brigham Hospital, for further treatment.

Dept. Head	Proc. No. 2.50.7
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.7 EMERGENCY ON-SITE RADIATION MONITORING PROCEDURE

1.0 DISCUSSION

Radiological surveys must be performed in order to verify instrumentation readouts provided in the Control Room and also to provide information about radiological conditions in areas not covered by the fixed in-plant monitors. Additional surveys to determine habitability of emergency response centers must be performed as well as surveys of personnel and equipment for exposure to radiation or contamination.

2.0 OBJECTIVE

To establish a procedure for on-site radiation monitoring during an emergency.

3.0 REFERENCES

3.1 HP Procedure 9.1.1.

3.2 EmergencyPlan Procedure 2.50.14.

4.0 PRECAUTIONS

4.1 Maintain radiation exposure within the limits specified by 2.50.--.

4.2 If survey instruments fail, retreat to a safe location immediately.

4.3 Use proper respiratory protecton in areas of known or suspected high airborne radioactivity.

5.0 PREREQUISITES

5.1 Check all survey equipment for battery response and source response prior to use.

5.2 If air samples at the security fence or other outside areas are to be taken, obtain a Company vehicle to provide battery power for the air sampler.

6.0 EQUIPMENT

6.1 High range survey meter.

6.2 Battery operated or A.C. powered air sampler with particulate filter and charcoal or silica gel cartridge.

6.3 Count rate instrument with G.M. detector or standard swipes and counter for contamination measurements.

6.4 High range dosimeter.

7.0 PROCEDURE

7.1 Unusual Event Emergency

1. Perform radiation, contamination and airborne radioactivity surveys in the affected area as requested by the Plant Shift Superintendent or an HP Supervisor.

2. Perform special surveys such as main steam line dose rate at the preselected location (using a PIC-6A meter) as needed to determine radioactivity release rates.

3. Perform surveys of affected personnel for radiation and contamination as dictated by the circumstances of the event. Report any high exposure (in excess of plant administrative limits or 10 CFR 20 limits) to an HP Supervisor. Report any personnel contamination requiring followup (unsuccessful decontamination or positive nasal smear) to an HP Supervisor

4. Following completion of the surveys, appropriately post and establish boundaries and controls per Procedure 9.1.6.

5. Accompany any contaminated injured employee to the Hospital and provide necessary radiological controls.

7.2 Alert Emergency

1. Perform radiation, contamination and airborne radioactivity surveys in the affected area as requested by the Plant Shift Superintendent or an HP Supervisor.

2. Perform special surveys such as main steam line dose rate surveys at the preselected location (using a PIC-6A meter) as needed to determine radioactivity release rates.

3. Perform surveys necessary to determine the habitability of the Control Room, the Technical Support Center (TSC) and the Emergency Operations Facility (EOF). Limits are specified in the Emergency Radiation Exposure Control Procedure 2.50.14, Table 1. Rezero the center pocket dosimeter. Note the time and secure the dosimeter in an appropriate location.

4. Perform surveys of affected personnel for radiation and contamination as dictated by the circumstances of the incident. Report any high exposure (in excess of plant administrative limits or 10 CFR 20 limits) to an HP Supervisor. Report any personnel contamination requiring followup (unsuccessful decontaminatin or positive nasal smear) to an HP Supervisor.

5. When time or additional personnel are available, proceed to the EOF and surveyevacuated personnel for contamination and radiation exposure. Use the guidelines in Step 3 for reporting individuals requiring followup.

6. If time and dose rates permit establish boundaries and post areas in accordance wth Procedure 9.1.6.

7. Accompany any contaminated injured employee to the Hospital and provide necessary radiological controls.

7.3 Site Area Emergency

1. Transport as many survey instruments as possible to the Operations Support Center (OSC).

2. Perform the surveys necessary to deterine the habitability of the OSC, Control Room, TSC and the EOF. Limits are specified in the Emergency Radiation Exposure Control Procedure 2.50.14, Table I . Rezero the center pocket dosimeter. Note the time and secure the dosimeter in an appropriate location.

3. Perform other surveys as requested by the PSS or an HP Supervisor.

4. When time or additional pesonnel are available, proceed to the EOF and survey evacuated personnel for contamination and radiation exposure. Report any high exposure (3 rem) or personal contamination or positive nasal smear to an HP Supervisor so evaluation and/or decontamination and followup can be performed.

5. When personnel are available, establish a Site Access Control Point and survey all vehicles leaving the site. Report any contaminated vehicles to the EOF.

6. When time pumits, update the site survey map with current survey information.

7. Accompany any contaminated injured employee to the Hospital and provide necessary radiological controls.

7.4 General Emergency

1. Transport as many survey instruments as possible to the OSC.

2. Perform the surveys necessary to determine the habitability of the OSC, Control Room, TSC and the EOF. Limits are specified in the Emergency Radiation Exposure Control Procedure, 2.50.14, Table I. Rezero the center pocket dosimeter. Note the time and secure the dosimeter in an appropriate location.

3. Perform other surveys as requested by the PSS or an HP Supervisor.

4. When time or additional personnel are available, proceed to the EOF and survey evacuated personnel for conamination and radiation exposure. Report any high expoosure (3 rem) or personal contamination or positive nasal smear to an HP Supervisor so evaluation and/or decontamination and followup can be performed.

5. When personnel are available, estalbish a Site Access Control Point and survey all vehicles leaving the site. Report any contaminated vehicles to the EOF.

6. When time permits, update the site survey map with current survey information.

7. Accompany any contaminated injured employee to the Hospital and provide necessary radiological controls.

8.0 FINAL CONDITIONS

8.1 Necessary on-site radiation surveys have been performed.

Dept. Head	Proc. No. 2.50.10
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

EVALUATION OF RADIOLOGICAL DATA

1.0 DISCUSSION

This procedure is to be used to assess the offsite radiological hazards due to an abnormal release of radioactive material by evaluating information received from within the plant, offsite monitoring teams, and environmental monitoring stations. Radiological assessment is made to the extent of projecting doses to the public from each source of data. The dose rate projections produced by this procedure represent the best estimate possible for each method. If projections from in-plant parameters are significantly different than those measured in the environment, it may be due to specific variations in the plume behavior which cannot be pre-determined. The results obtained from this procedure should be carefully analyzed since these may form the basis for protective action recommendations to the public.

There are two areas from which information will be available for the analysis of radiological hazards; in-plant (stack effluent monitor, containment personnel hatch monitor, or other) and offsite field monitoring surveys (air samples and dose rates). From each of these areas, the projection of offsite whole body and thyroid doses are possible with the necessity of employing different techniques at each area. In order to categorize the different techniques, the procedure has been divided into several appendices listed as follows:

APPENDIX	TITLE
A	Whole body dose/dose rate projections at 1/2 mile from the use of in-plant parameters.
B	Thyroid Dose Assessment from in-plant and offsite measurements.
C	Dose projections at distances greater than 1/2 mile.
D	Evaluations of Environmental Stations samples, and other environmental sample media.

These appendices should be used in the order that they appear since they are arranged in the order of priority. A description of the appendicies and the interpretation of the results are given below. Each appendix uses the existing meteorology conditions and therefore these parameters should be periodically monitored for significant changes.

Appendix A may be used by Control room or Emergency Center personnel to obtain an estimate of the release rate and/or offsite whole body dose rate at 1/2 mile due to a high level stack release or a containment leakage release during a loss of coolant accident (LOCA). This appendix uses the Emergency Offsite Dose Nomogram which requires the following inputs: time after plant shutdown, containment personnel hatch monitor dose rate, wind speed, delta temperature (for atmospheric stability class), and the high range noble gas monitor response. The information obtained from the Nomograms is Total Noble Gas Release Rate and Offsite Whole Body Dose Rate at 1/2 mile. It must be acknowledged that information obtained from the Containment Leakage Nomogram is very conservative since it assumes a containment leakage of 0.1% per day which is the maximum allowed design basis leakage at peak containment pressure, therefore, a correction for containment pressure is available.

Appendix B should be used by the cognizant EOF individual to assess the potential offsite thyroid dose to the public. This may be done by evaluation of the Primary Vent Stack (PVS) charcoal cartridge for halogen release or by analysis of the field sample iodine cartridge results. The appendix is separated into two sections. The first describes the method by which the charcoal cartridge at the stack should be analyzed and evaluated to obtain iodine concentations at 1/2 mile. From this result, the Field Sample Thyroid Dose Nomogram may be used to obtain Adult and Newborn thyroid dose estimates. The second section describes the methods to be used to evaluate the results reported by the offsite survey teams from the iodine cartridge field counting and to analyze the sample at the EOF for more accurate radiological estimates. These results are also used in conjunction with the Field Sample Thyroid Dose Nomogram to obtain Adult and Newborn Thyroid Doses.

Appendix C describes the method to be used to project the in-plant and field measured estimates of whole body and thyroid doses to distances greater than 1/2 mile. The results of these projections should be compared to the field sample measurement performed by the Offsite Survey Teams. In the event that these measurements are significantly different, it may indicate one of the following:

a) Containment leakage estimates are in error, or,

b) Meteorological conditions have changed rapidly, or

c) Actual plume dispersion is extremely stochastic and variable.

Appendix D calls attention to the use of the environmental station's samples, soil and other enviornmental sample media to be used for dose assessment to the public during the later stages of the accident. The analysis of these samples will be made when the Yankee Environmental Lab van arrives or the samples are sent out for analysis. Therefore, this section describes sample collection and labelling techniques that should be employed.

2.0 OBJECTIVE

2.1 To assess the Offsite Radiological Hazards associated with an abnormal release of radioactive material from the plant so that appropriate protective actions to the public may be recommended.

3.0 REFERENCES

4.0 PRECAUTIONS

4.1 Meteorological conditions are subject to change and must be closely monitored during the potential radiological hazard.

4.2 Results of the different dose projection methods must be carefully compared for a complete evaluation of the radiological offsite conditions.

5.0 PROCEDURE

NOTE: At each stage of the procedure, pass the appropriate information to the Emergency Coordinator so that protective actions may be recommended.

5.1 Upon notification of an Emergency condition, complete the steps in Appendix A to determine the offsite whole body dose rate at 1/2 mile.

5.2 Once the Primary Vent Stack charcoal cartridge has been analyzed or offsite iodine samples have been collected, determine the offsite projected thyroid dose as described in Appendix B. If this sample has not been taken, go to 5.3.

5.3 After the 1/2 mile projected doses/dose rates have been determined, go to Appendix C and calculate projected doses at other locations of interest.

5.4 Under the direction of the Emergency Coordinator, make provisions to collect the air samples at the environmental sample stations and other environmental samples (soil, water vegetations, milk, etc.) as outlined in Appendix D.

5.5 As updated information becomes available, repeat the steps in each Appendix as appropriate.

6.0 FINAL CONDITIONS

6.1 The Radiological hazards associated with the plume exposure pathway have been defined by the best means available.

6.2 All calculated and measured parameters have been logged on the appropriate data reduction forms.

6.3 All information and data forms have been given to the Emergency Coordinator.

6.4 Environmental Samples have been taken and analyzed.

APPENDIX A

Whole Body Dose/Dose Rate Projections At 1/2 Mile From In-Plant Parameters

1.0 Determine the value of the following parameters and log them on Data Reduction Sheet A.

1.1 Time after Shutdown, t (HRS)
(if reactor is operating, set t = 0 HRS)

1.2 Containment Personnel Hatch Monitor Response, Dc (R/hr)
(If applicable)

1.3 Containment Pressure, Pc (PSIG)

1.4 High Range Noble Gas Stack Monitor Response, Ds (mr/hr)
(If applicable)

1.5 Steam line radiation levels (if applicable)

1.5.1 Affected steam line

1.5.2 Steam line radiation level, D_{SL} (mr/hr)

1.6 Wind Speed (previous 15 minute average), u (mph).

1.7 Met Tower Delta Temperature, ΔT (^{o}F).

1.8 Number of Primary Vent Stack (PVS) Fans Operating.

1.9 Estimated Duration of Accident
(only if accurate estimate can be established)

2.0 From the following table and the value of ΔT, determine the atmospheric Stability Class and log it on Data Reduction Sheet A.

DELTA TEMPERATURE ΔT (^{o}F)	PASQUILL ATMOSPHERIC STABILITY CLASS
$T < -1.74$	A
$-1.73 \leq T \leq -1.55$	B
$-1.54 \leq T \leq -1.37$	C
$-1.36 \leq T \leq -0.46$	D
$-0.45 \leq T \leq +1.36$	E
$+1.37 \leq T \leq +3.64$	F
$+3.65 < T$	G

3.0 From the containment Personnel Hatch Monitor Response, determine the LOCA designation from the following table and log it on Data Reduction Sheet A.

CONT. PERSONNEL HATCH MONITOR RESP.	LOCA DESIGNATION	TYPE OF LOCA
$10^2 \geq D_C \geq 0$	RC Leakage	Large Primary Coolant Leak
$10^4 \geq D_C \geq 10^2$	II	Gap Release LOCA
$D_C > 10^4$	III	Fuel Melt LOCA

4.0 If the Containment Personnel Hatch Monitor response is greater than 100 mR/hr, then determine the total noble gas release rate and the 1/2 mile whole body dose rate using the Containment Leakage Nomogram as described below. Log these results on Data Reduction Sheet A. If this monitor is less than 100 mR/hr, go to step 5.0 since offsite doses will be negligible.

4.1 Locate the "Time after Shutdown" axis, at the appropriate value of t(hrs), draw a verticle line through the curves of parameters f and J.

4.2 At the intersections of this vertical line with the appropriate LOCA designation curves of parameters f and J, draw a horizontal line to the right, through the appropriate diagonal lines of "Release Rate" and Cont. Hatch Mon.".

4.3 From the parameter J horizontal line, locate the intersection of the appropriate "Cont. Hatch Mon." response and proceed vertically downward and read the value of the "Noble Gas Release Rate, Q(Ci/sec)". Record this value on Data Reduction Sheet A.

4.4 From the parameter f horizontal line, locate the intersection of the appropriate "Release Rate" diagonal lines (as determined in step 4.3), proceed vertically upward. At the intersection of the appropriate "ATMOSPHERIC STABILITY CLASS", proceed horizontally to the right. At the appropriate wind speed intersection, proceed vertically upward and read the value of the "OFFSITE DOSE RATE" @ 1/2 Mile, mr/hr.

4.5 Adjust the above parameters for actual containment pressure, (Pc), by multiplying by K where K = Pc (PSIG)/55. Record this value on Data Sheet A.

4.6 Multiply this value by the estimate of the duration of the release to obtain the projected whole body dose if applicable. Record this value on Data Reduction Sheet A.

5.0 If the Primary Vent Stack normal range noble gas monitor response is high off-scale, then determine the total noble gas release rate and the 1/2 mile whole body dose rate using the STACK RELEASE NOMOGRAM as described below. Log these results on Data Reduction Sheet A. If this monitor is low offscale, assume 1 mr/hr.

NOTE: If neither of the above conditions exist, go to step 6.0.

5.1 Locate the "Time After Shutdown" axis, at the appropriate value of t(HRS), proceed vertically upward.

5.2 At the intersection of the appropriate LOCA designation curve of parameter J, draw a horizontal line to the right, through the "PVS High Range Mon." diagonal lines.

5.3 At the intersection of the horizontal line from parameter J with the appropriate value of the "PVS High Range Mon." response, proceed vertically downward and read the value of the appropriate "Noble Gas Release Rate, Q(UCi/sec)" for 1 or 2 PVS fans operating. Record this value on Data Reduction Sheet A.

5.4 At the intersection of the horizontal line from parameter J with the appropriate value of the "PVS High Range Mon." response, proceed upward parallel with these lines to the end of the lines. At this point proceed vertically upward to the appropriate "Atmospheric Stability Class" lines. At this intersection point, proceed horizontally to the right. At the intersection with the appropriate "Wind Speed" line, proceed vertically upward and read the value of the "OFFSITE DOSE RATE @ 1/2 Mile, mr/hr" for 1 or 2 PVS fans operating. Record this value on Data Reduction Sheet A.

5.5 Multiply the estimate of the duration of the release by the above result to obtain the projected whole body dose. Record this value on Data Reduction Sheet A.

6.0 If the safety relief valves or the atmospheric steam dumps have been operated, and radiation levels are/have been observed on the Main Steam Lines, then proceed as follows to determine the noble gas release rate and offsite dose rate at 1/2 mile. If either of the above conditions have not been met, go to Appendix B and complete those items.

6.1 For operation of the Safety Relief (S/R) Valves, proceed as follows.

6.1.1 Calculate the noble gas release rate, $Q_{S/R}$, from the steam line dose rate, D_{SL} (mr/hr), as follows. Record this value on Data Reduction sheet A.

$$Q_{S/R}\ (UCi/sec) = 2.38 \times 10^5 \times D_{SL}\ (mr/hr)$$

6.1.2 Using the Containment Leakage Nomogram, determine the Offsite Dose Rate at 1/2 mile, as follows.

6.1.2.1 Locate the release rate value calculated above on the diagonal "RELEASE RATE" lines.

6.1.2.2 From the bottom of this line, proceed vertically upwards. At the intersection of the appropriate "Atmospheric Stability Class" line proceed horizontally to the right to the appropriate wind speed line.

At this intersection, proceed vertically upward and read the value of the "OFFSITE DOSE RATE at 1/2 Mile". Record this value on the Data Reduction Sheet A.

6.1.3 Multiply this result by the estimate of the duration of the release to obtain the projected whole body dose. Record this value on Data Reduction Sheet A.

6.2 For operation of the Atmospheric Steam Dump (ASD), proceed as follows.

6.2.1 Calculate the noble gas release rate, Q_{ASD}, from the steam line dose rate, D_{SL}, as follows. Record this value on Data Reduction Sheet A.

Q_{ASD} (UCi/sec) = $2.06 \times 10^4 \times D_{SL}$ (mr/hr)

6.2.2 Using the Containment Leakage Nomogram and the value of Q_{ASD}, determine the Offsite Dose Rate at 1/2 mile using the steps in 6.1.2.

7.0 When the appropriate information is available, assure that the following appendicies are completed.

APPENDIX B

Thyroid Dose Assessment From Inplant and Offsite Measurements

1.0 Inplant Analysis of PVS iodine cartridge

NOTE: Proceed to step 2.0 if PVS sample has not been taken

1.1 Obtain sample according to procedure 7.1

1.2 Once the PVS charcoal cartridge has been analyzed, on the plant GeLi (if available), or the SAM II (if plant GeLi is not available) proceed as follows.

1.2.1 If counted on the plant GeLi, the primary desired output information is the activity of I-131 (UCi). Log this result on Data Reduction Sheet B.

1.2.2 If counted on the SAM II, obtain the net count rate from the sample and the instrument efficiency. Log these results on data sheet B. Determine the sample activity using the lower left quandrant of the "Field Sample Thyroid Dose Nomogram" by locating the I-131 Count Rate (cpm)" axis, proceed toward the right to the appropriate counting efficiency (%), then proceed down and read the "SAMPLE ACTIVITY, UCi (I-131)". Record this result on Data Reducton Sheet B.

1.3 Determine the I-131 concentration at 1/2 mile offsite as follows.

1.3.1 Calculate the I-131 release rate, Q_{I-131}, (in UCi/sec) as follows and log this result on Data Sheet B.

$$Q_{I-131} = \frac{(A_F)\ (F_{STACK})}{(F_F)\ (t)}$$

where: A_F= Activity on charcoal cartridge, UCi
F_F= Flow rate to the charcoal cartridge, CFM
t= time since beginning of release that cartridge was in the sample stream, sec.
F_{STACK}= Flow rate out the PVS (CFM)
For 1 Fan, F_{STACK} = 45,000 CFM
2 Fans, F_{STACK}= 60,000 CFM

1.3.2 Obtain the 1/2 mile diffusion factor from Table B-1 and the Stability Class, and log this valve on Data Reduction Sheet B.

NOTE: If stability Class E, F, or G, use value of Max. Ground Level X/Q.

1.3.3 Observe the wind speed (mph), convert this to meters/sec as follows and log on Data Reduction Sheet B.

(m/sec) = .447×(mph).

1.3.4 Determine the value of X/Q (sec m^{-3}) as follows and log it on Reduction Sheet B.

$$X/Q \text{ (sec } m^{-3}) = \frac{(u\ X/Q)}{u}$$

1.3.5 Calculate the 1/2 mile I-131 concentration as below and log it on Data Reduction Sheet B.

$$C \text{ (UCi/cc)} = Q_{I\text{-}131} \times (X/Q)$$

1.4 Determine the Projected Adult and Newborn Thyroid Dose as follows.

1.4.1 Estimate the duration of the accident ("Inhalation Time"), log this on Data Sheet B.

Note: Use 2 hours if no other value is available.

1.4.2 Using the "Field Sample Thyroid Dose Nomogram" determine the appropriate Projected Doses as follows.

a) Locate the "I-131 air concentration, UCi/cc" axis.

b) From the appropriate concentration value, proceed vertically upward to the "Inhalation Time (Hours)" value.

c) From this intersection proceed horizontally to the right and read the value of the Adult and Newborn Thyroid Dose. Log these results on Data Sheet B.

1.5 Report Projected Dose Results to the Emergency Coordinator.

TABLE B.1

Diffusion Factors for Elevated Releases, $(UX/Q)m^{-2}$

Pasquil Stability Class	1/2 Mile Value	Distance Of Max. Ground Level Concentration, Mile	Max. Ground Level Value
A	6.3×10^{-6}	0.5	--
B	2.3×10^{-5}	0.5	--
C	4.0×10^{-5}	0.5	--
D	2.9×10^{-5}	0.5	--
E	9.5×10^{-5}	1.0	3.1×10^{-5}
F	3.0×10^{-8}	2.0	2.0×10^{-5}
G	0.0	5.0	9.2×10^{-6}

2.0 ANALYSIS OF OFFSITE AIR SAMPLE RESULTS

2.1 Obtain the following survey team sample results, sample location, sample flow rate (CFM), sample collection time and sample count results. Log them on Data Sheet B.

2.2 Obtain an estimate of the duration of the accident and log it on Data Sheet B.

NOTE: Use 2 hours if no other value is available.

2.3 Using the "Field Sample Thyroid Dose Nomogram" and the above information, determine the Adult and Newborn Thyroid Dose as follows.

2.3.1 Locate the "I-131 Count Rate (cpm)" axis (lower left quadrant).

2.3.2 From the appropriate cpm value, proceed to the right to the I-131 counting efficiency line.

NOTE: RM-14 counting efficiency is:

0.24%

2.3.3 From this point, proceed vertically upwards to the appropriate "Sampling Flow Rate" line.

2.3.4 Proceed horizontally to the right to the value of the sample collection time.

2.3.5 From the point proceed vertically downward to the estimate of the "Inhalation time (hours)" line.

2.3.6 From this line, proceed horizontally to the right and read the value of the Adult and Newborn Thyroid Dose Estimate. Log these results on Data Sheet B.

2.4 If the projected Newborn Thyroid Dose is greater than 10^{-1} Rem, make a recommendation to the Emergency Coordinator that these samples should be immediately returned to the EOF for further analysis.

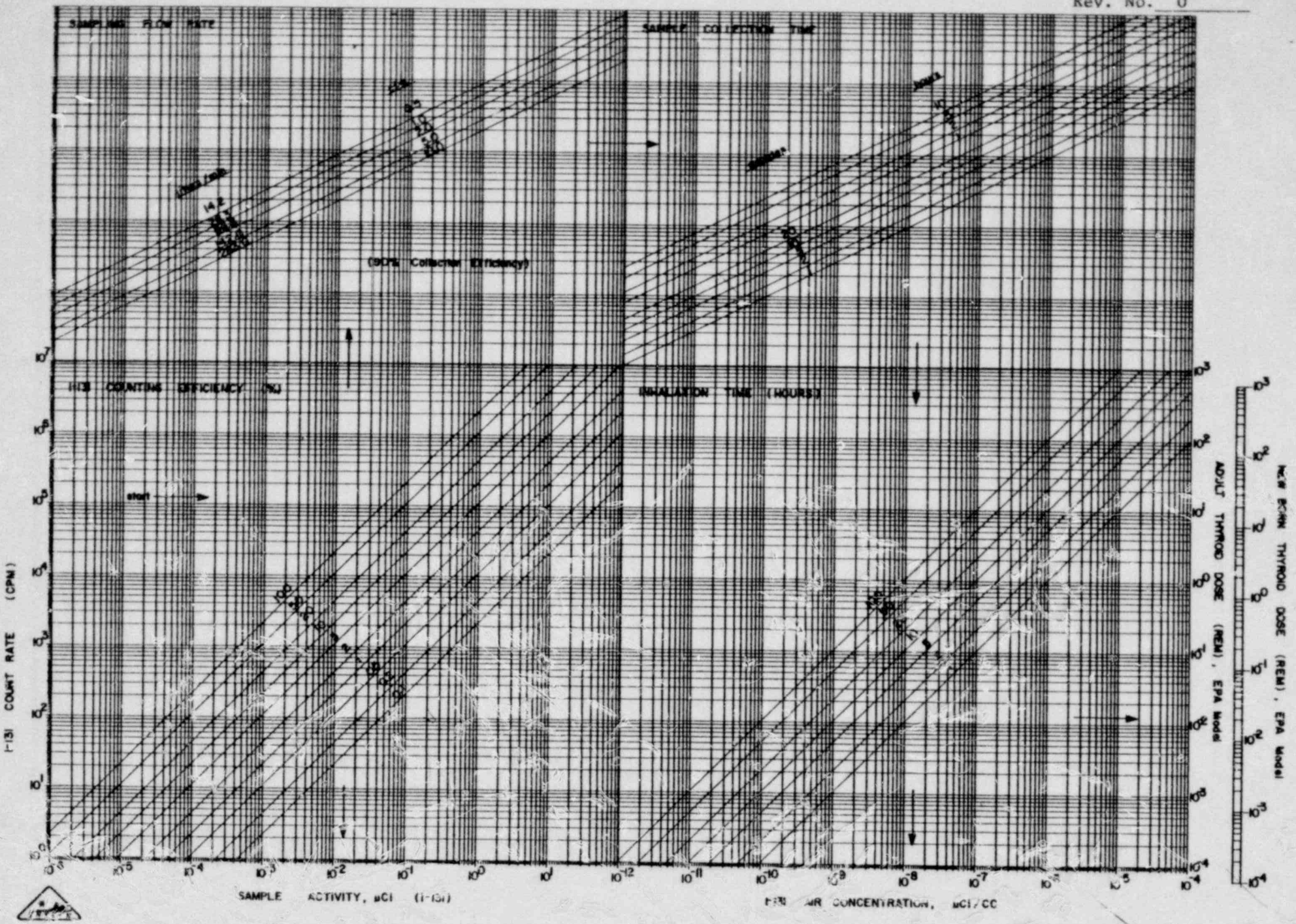
NOTE: All field samples will be eventually returned to the EOF for further more accurate analysis.

2.5 Once samples are returned to the EOF for analysis, make provision to count samples on the SAM II.

2.6 Analyze SAM II results on the "Field Sample Thyroid Dose Nomogram" according to the steps outlined in 2.3 of this Appendix.

2.7 Report Projected Dose results to the Emergency Coordinator.

FIELD SAMPLE THYROID DOSE NOMOGRAM



APPENDIX C

Dose/Dose Rate Projections At Distances Greater Than 1/2 Mile

1.0 WHOLE BODY DOSE PROJECTIONS

1.1 Obtain the 1/2 mile whole body dose projections made from in-plant parameters. Appendix A.

1.2 Project these dose estimates to other distances of interest by using the Effective Gamma Dose Diffusion Factors, (UX/Q) listed in Tables C.1 and C.2 for Elevated and Ground Level releases, respectively. Log these results on Data Sheet C.

$$D_X = D_{1/2} \times \frac{[\bar{u}(X/Q)_\gamma]X}{[\bar{u}(X/Q)_\gamma]1/2}$$

1.3 Dose rates measured by the offsite teams may be projected to other distances by ratioing the UX/Q values at the desired distance to the at the distance of the measured value.

2.0 THYROID DOSE PROJECTIONS

2.1 Obtain the 1/2 mile thyroid dose estimate made from in-plant parameters.

2.2 Project these dose estimates to other distances of interest by using Concentration Diffusion Factors, u X/Q, listed in Tables C.3 and C.4 for elevated and ground level releases, respectively. Log these results on Data Sheet C.

$$D_X = D_{1/2} \times \frac{[\bar{u}(X/Q)\ ]X}{[\bar{u}(X/Q)\ ]1/2}$$

2.3 Concentrations or Doses measured by the offsite teams may be projected to other distances by ratioing the UX/Q value at the desired distance to the UX/Q value at the distance of the measured value.

TABLE C.1

MAINE YANKEE

EFFECTIVE GAMMA DOSE DIFFUSION FACTORS $\left(\frac{u\,X}{Q}, M^{-2}\right)$

ELEVATED LEVEL RELEASE

(All values should be multiplied by 10^{-6})

Downwind Distance	Stability Category						
	Pasquill A	Pasquill B	Pasquill C	Pasquill D	Pasquill E	Pasquill F	Pasquill G
0.5 miles	7.9	16.0	19.0	19.0	18.0	17.0	17.0
1.0 miles	1.2	4.1	8.0	9.9	9.7	8.9	8.6
2.0 miles	0.62	0.67	2.9	4.6	4.9	4.8	4.4
3.0 miles	0.42	0.42	1.5	2.8	3.2	3.3	3.0
4.0 miles	0.31	0.31	0.93	1.9	2.3	2.5	2.3
5.0 miles	0.25	0.25	0.64	1.4	1.8	2.0	1.9
6.0 miles	0.21	0.21	0.47	1.1	1.4	1.6	1.6
7.0 miles	0.18	0.18	0.35	0.91	1.2	1.4	1.4
8.0 miles	0.16	0.16	0.29	0.77	1.0	1.2	1.2
9.0 miles	0.14	0.14	0.24	0.66	0.89	1.1	1.1
10.0 miles	0.12	0.12	0.20	0.57	0.78	0.97	0.97

TABLE C.2

MAINE YANKEE

EFFECTIVE GAMMA DOSE DIFFUSION FACTORS $\left(\frac{u\,X}{Q}, M^{-2}\right)$

GROUND LEVEL RELEASE

(All values should be multiplied by 10^{-6})

Downwind Distance	Stability Category						
	Pasquill A	Pasquill B	Pasquill C	Pasquill D	Pasquill E	Pasquill F	Pasquill G
0.5 miles	8.3	19.0	26.0	34.0	37.0	41.0	47.0
1.0 miles	1.3	4.3	9.5	14.0	16.0	18.0	20.0
2.0 miles	0.63	0.68	3.1	5.7	6.9	8.3	9.4
3.0 miles	0.42	0.42	1.6	3.3	4.2	5.2	6.0
4.0 miles	0.31	0.31	0.97	2.2	2.9	3.7	4.4
5.0 miles	0.25	0.25	0.66	1.6	2.2	2.9	3.4
6.0 miles	0.21	0.21	0.49	1.3	1.7	2.3	2.8
7.0 miles	0.18	0.18	0.37	1.0	1.4	2.0	2.4
8.0 miles	0.16	0.16	0.30	0.85	1.2	1.7	2.0
9.0 miles	0.14	0.14	0.24	0.72	1.0	1.5	1.8
10.0 miles	0.13	0.13	0.20	0.62	0.92	1.3	1.6

TABLE C.4

MAINE YANKEE

PLUME CENTERLINE EFFUELNT CONCENTRATION DIFFUSION FACTORS $\left(\frac{u\,X}{Q}, M^{-2}\right)$

GROUND LEVEL RELEASE

(All values should be multiplied by 10^{-6})

Downwind Distance	Stability Category						
	Pasquill A	Pasquill B	Pasquill C	Pasquill D	Pasquill E	Pasquill F	Pasquill G
0.5 miles	6.4	26.0	60.0	160.0	260.0	450.0	920.0
1.0 miles	1.4	4.9	19.0	60.0	110.0	210.0	350.0
2.0 miles	0.77	1.1	5.9	21.0	41.0	85.0	170.0
3.0 miles	0.55	0.73	3.0	12.0	24.0	52.0	110.0
4.0 miles	0.43	0.56	1.8	7.6	16.0	38.0	79.0
5.0 miles	0.36	0.46	1.2	5.5	12.0	29.0	61.0
6.0 miles	0.31	0.40	0.92	4.3	9.6	23.0	50.0
7.0 miles	0.26	0.35	0.72	3.5	7.9	20.0	42.0
8.0 miles	0.23	0.32	0.58	3.0	6.7	17.0	36.0
9.0 miles	0.21	0.29	0.49	2.5	5.8	15.0	32.0
10.0 miles	0.19	0.26	0.42	2.2	5.1	13.0	29.0

APPENDIX D

Evaluations of Environmental Station's Samples, Soil Samples, and Other Environmental Media

1.0 ENVIRONMENTAL STATION SAMPLES

1.1 Make arrangements to collect and remove the filter media at the environmental sample stations in the downwind direction of the plume (a 90^{o} sector).

1.2 At the station record the time of removal, the flow indication on the flow totalizer, the timer indication and the integrity of the system. Log this information on Data Sheet D.

1.3 Once the samples have returned to the EOF, place all filters in labeled poly bags for analysis by the Yankee Mobil Van and/or other facilities.

1.4 Calculate the total flow through the filters since the beginning of the release as follows and hold this with the filter. Record this on Data Sheet D.

1.4.1 Divide the total flow indication by the timer indication to obtain the system flow rate.

1.4.2 Multiply this value by the time the system was exposed to the plume (estimate) and convert this value to cm^3.

1.5 Upon the arrival of the Yankee Mobil Van, send these samples for analysis or send samples directly to the Environmental Lab in Westborough.

2.0 After the urgency of the accident has subsided, make provisions to collect soil, vegetation, water and milk samples downwind of the plume under the direction of the Emergency Coordinator.

2.1 Solid samples should be placed in clean poly bags in a manner as to avoid cross contamination of samples.

2.2 Liquid samples should be collected in 1-5 gallon clean plastic bottles.

2.3 All samples should be labeled as follows:

time of collection,
location of sample,
name of individual.

3.0 Once analysis of samples is complete, results should be sent to the NSD Radiological Engineering Group for further analysis and dose analysis.

DATA REDUCTION SHEET A

-Whole Body Projected Dose/Dose Rate at 1/2 Mile-

1.0 Required Input Information

Calculation #	1	2	3	4	5
Time After Shutdown, t(hrs)					
Cont. Pers. Hatch Mon, Dc (mr/hr)					
High Range Stack Mon, Ds (mr/hr)					
# of Stack Fans					
Affected Steam Line #					
Steamline Dose Rate, DSL (mr/hr)					
Wind Speed, (mph)					
T (°F)					
Estimated Duration of Release (If appropriate)					

2.0 Stability Class (check one)

Calculation #	A	B	C	D	E	F	G
1							
2							
3							
4							
5							

3.0 LOCA Type (check one)

Calculation #	RC Leakage	LOCA II	LOCA III
1			
2			
3			
4			
5			

(Sheet A con't)

4.0 Calculation Results (from Nomogram)

Calculation #	CONTAINMENT RELEASE Q(uCi/sec)	CONTAINMENT RELEASE 1/2 Mile Dose Rate D(mr/hr)	CONTAINMENT RELEASE 1/2 Mile Dose D(mr)	STACK RELEASE Q(uCi/sec)	STACK RELEASE 1/2 Mile Dose Rate D(mr/hr)	STACK RELEASE 1/2 Mile Dose D(mr)	SRV OR ASD RELEASE Q(uCi/sec)	SRV OR ASD RELEASE 1/2 Mile Dose Rate D(mr/hr)	SRV OR ASD RELEASE 1/2 Mile Dose D(mr)
1									
2									
3									
4									
5									

Proc. No. 2.50.10
Rev. No. 0

DATA REDUCTION SHEET B

Thyroid Dose Assessment from Inplant and Offsite Measurements

1.0 Inplant Measurements (PVS Release)

1.1 Sample Removal

Sample #	Time Sample Removal	PVS Sample Dose Rate R/hr	Sample Flow Rate	Sample Purge Conditions		
				Time of Purge	Flow Rate	Length of Purge
1						
2						
3						
4						
5						

1.2 Sample Analysis (check one)

Sample #	1	2	3	4	5
MCA/GeLi					
SAM II					

(Sheet B cont'd)

Sample #	PVS Sample Activity uCi (I-131)	PVS I-131 Q (uCi/sec)	1/2 Mile u X/Q, m^{-2}	$\bar{u}$ (m/sec)	X/Q (sec m^{-3})	1/2 mile I-131 Concentration uCi/cc
1						
2						
3						
4						
5						

1.4 Projected Thyroid Doses (From "Field Sample..." Nonogram)

Sample #	I-131 Conc. @ 1/2 Mile (From Above)	Estimate (If of Release (available) Duration, Hrs	Projected Thyroid Doses, REM	
			Adult	Newborn
1				
2				
3				
4				
5				

(Sheet B con't)

2.0 Offsite Sample Analysis

Sample Location	Sample Flow Rate	Collection Time	Estimate of Release Duration, Hrs	FIELD ANALYSIS			SAM II ANALYSIS		
				CPM	Thyroid Dose, REM		CPM	Thyroid Dose, REM	
					Adult	Newborn		Adult	Newborn

(Sheet C Con't)

2.0 Thyroid Dose Projections

(A) Distance of Measured or Estimated Dose, Xo (mi)	(B) Value of (u X/Q) at Location (A) (Table C.2)	(C) Indicate Either 'M' For Measured or "C" for Calculated Dose at Location (A)	(D) Distance of Desired Dose Projection X(mi)	(E) Value of (u X/Q) at Location (D) (Table C.2)	(F) (E) - (B)	(G) Projected Dose at Location (D) (F) x (C)

DATA REDUCTION SHEET D

Evaluations of Environmental Stations Samples,
Soil Samples and Other Environmental Media

1.0 Environmental Stations Samples

Location of Environmental Station	Time of Sample Removal	Flow Totalizer Reading	Timer Indication	Sample Flow Rate	Flow Through System During Plume Passage (cm^3)

(Sheet D Con't)

2.0 Other Environmental Samples

Sample Location	Type of Sample	Approximate Volume of Sample	Time Sample Taken	Initials	Destination of Sample

Dept. Head	Proc. No. 2.50.12
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.12 EMERGENCY OFF-SITE RADIATION MONITORING PROCEDURE

1.0 DISCUSSION

This procedure provides a means for rapidly assessing the radiological impact of accidental releases of radioactive material. Offsite radiation monitoring surveys are important during and following an accident since decisions regarding protective actions for the public will be based on survey results.

During the initial stages of the accident, projected offsite whole body dose rates will be made based on source term evaluations and effluent monitor responses. These dose rate projections represent sector average dose rates based on the observed meteorological conditions. The offsite survey results represent specific locations and therefore may not coincide with the projection from in-plant parameters due to actual variations in plume behavior.

The task of each monitoring team is to collect and transmit information to and/or receive instructions from the Emergency Operations Facility (EOF). An important consideration in the initial survey is speed. Therefore, the survey consists of simple methods to quickly approximate the magnitude of the accident. Once these initial surveys are completed, subsequent surveys and additional analysis will be made to obtain more complete radiological results.

The general area for sampling locations will be determined by the Emergency Coordinator and assigned to the appropriate off-site survey team. The main objectives of the survey teams are:

1. Locate the appropriate plume sampling location by observation of the dose rates across the plume.

2. Upon arrival at the determined sampling location, take appropriate beta-gamma and air sample surveys as described in this procedure.

The process of determining the appropriate plume sampling location should consider the expected variation in cross-plume dose rates and concentrations which are depicted in the following sketch.

Plume Concentration

Plume Dose Rate

Plume Centerline

It should not be expected that a rapid increase and decrease in dose rate would be observed in traversing across the plume but rather a long plateau region. The sampling location should be chosen as the "best estimate" of the center of this dose rate plateau.

2.0 OBJECTIVE

2.1 To locate the appropriate plume sampling location, perform radiological surveys and report results to the Emergency Coordinator.

3.0 REFERENCES

4.0 PRECAUTIONS

4.1 Use care so as not to contaminate your person and equipment. Apply good health physics practices.

4.2 During foul weather, use care not to damage filters by exposing them to the elements.

4.3 Use tweezers to handle filters to prevent cross-contamination of filters and cartridges.

4.4 Vehicles with installed radios must be kept running to operate radios.

4.5 Radio communications with the EOF may be temporarily lost in certain locations due to the presence of valleys and hills. If this should happen, report survey results over the radio regardless of the communication conditions. If necessary, use another offsite survey team for radio communication relay to the EOF.

5.0 PROCEDURE

5.1 Complete the steps in Appendix A prior to leaving the EOF.

5.2 Complete the steps in Appendix B in transit toward the sampling location.

5.3 Perform the steps in Appendix C at the sampling location and at the sample counting location.

5.4 Throughout the offsite sampling effort, be sure to make periodic checks of the pocket dosimeter reading. If greater than 1 R of cumulative exposure is observed, notify Emergency Coordinator and move out of the plume and await further instructions.

6.0 FINAL CONDITIONS

6.1 Off-site surveys have been completed, all actions performed have been initialed and the results recorded.

6.2 Upon returning to the EOF, log-in the dosimeter reading with the radiological assistant.

6.3 Return all equipment to its original status.

6.4 Check with the Emergency Coordinator for additional assignments.

APPENDIX A

STEPS TO BE COMPLETED

PRIOR TO LEAVING THE EOF

DATE _____ TEAM MEMBERS _____

TIME _____ _____

TEAM # _____

1.0 PERFORM THE FOLLOWING CHECKS ON THE BATTERY OPERATED AIR SAMPLER

1.1 Install (1) set of filters in the filter holder. _____

1.2 Take air sampler to vehicle and attach cable leads to proper battery terminals. _____

1.3 Switch to "ON" position. _____

1.4 Check flow meter (should be at least 1 cfm flow rate). _____

1.5 Turn off sampler and discard filters. _____

2.0 CHECK THE EBERLINE RM-14 COUNT RATE METER

RM-14 _____
Ser. No.

2.1 Inspect instrument for physical damage. _____

2.2 Connect HP-210 probe to the RM-14 count rate meter. The cable connects to the front of the RM-14 labeled detector. Response switch on from panel should be in the "SLOW" position. The rest switch on the back of the instrument should be in the down position. _____

2.3 Turn operation switch to BATTERY check position. The pointer should read in the BATT OK area. _____

2.4 Verify instrument response to radiation with the radiation check source in the emergency kit. _____

2.5 Place the HP-210 probe in the SH-4 sampler holder. _____

2.6 Background check of RM-14-HP-210 probe _____ cpm. _____

3.0 PERFORM THE FOLLOWING CHECKS ON THE LOW RANGE G.M. DETECTOR

3.1 Check the low range G.M. Detector for battery response and verify using radiation check source that the instrument responds to radiation. (Note: If using the E-140 place the SLOW/FAST response knob in the mid-position. _____

3.2 E-140 _____ (circle one)
E-400 Ser. No.

4.0 In the event of faulty equipment, notify Radiological Assistant.

5.0 Check vehicle for contamination before leaving EOF. If contamination is found, notify the Emergency Coordinator. _____

6.0 Place all monitoring equipment in a vehicle equipped with radio communications. _____

7.0 Verify radio communications with the EOF. _____

8.0 Check with the Emergency Coordinator and determine the general area location for the plume survey. _____

NOTE: The decision to use respiratory protection devices and protective clothing will be made by the Emergency Coordinator.

9.0 Observe the vehicle odometer reading and log it below. _____

Odometer Reading _____

10.0 Pick up personnel monitoring devices (TLD and High Range Dosimeter) before leaving EOF and log in pocket dosimeter initial reading. _____

Team Member	Dosimeter Reading (mr)
_____	_____
_____	_____

11.0 Proceed to the area specified by the Emergency Coordinator and complete Appendix B. _____

Destination to be Surveyed

_____

APPENDIX B

TO BE COMPLETED ENROUTE TO INITIAL SAMPLING LOCATION

NOTE: 1. The individual driving the vehicle will not perform radio communications while driving the vehicle.

2. Radio communications with the EOF should begin by addressing EOF and then identifying the Team name.

i.e., "Emergency Operation Facility, this is Team # ____ (Relay Message) over".

1.0 While in transit to the sampling area, observe instrument readings using the GM survey meter and the RM-14 detector at the vehicle window. If significant increases in radiation levels are observed, contact the EOF and report the levels and the locations. _____

2.0 Upon arrival at the sampling area, observe the radiation levels. If it is possible to do so, traverse the plume while observing the radiation readings. If it is not possible to traverse the plume, due to road access limitations, proceed to step 4.0. _____

3.0 Choose a sampling location that represents the center of a dose rate plateau across the plume or the highest reading across the plume. Do not spend greater than 5 minutes locating a sampling location. _____

4.0 Report the specific sampling location that has been chosen to the EOF and complete the steps in Appendix C. _____

APPENDIX C

STEPS TO BE COMPLETED AT

SAMPLING LOCATION AND SAMPLE COUNTING LOCATION

1.0 AIR SAMPLING AND BETA-GAMMA SURVEY

1.1 Load the air sampler with both a particulate and iodine filter. _____

NOTE: Use charcoal cartridges unless silica gel is specified by Emergency Coordinator.

1.2 Clip the cables to the battery terminals of the vehicle and start air sampler and record time started on envelope. _____

1.3 Check air flow indication and record on data sheet. _____

1.4 Continue to observe flow rate during sample period. _____

1.5 Run sampler for 15 minutes unless the Emergency Coordinator has specified other than 15 minutes. _____

1.6 At each air sample location, take the following surveys while air samplers are running using the low range G.M. Detector. Record the information on the Survey Form. _____

a. Monitor the radiation levels at waist level with the beta window closed. _____

b. Monitor the radiation levels at waist level with the beta window open. _____

c. With the beta window open, check the radiation levels 2" above the ground. Scan approximately 1 m^2 area. _____

1.7 After the air sample has run for the specified time, disconnect sampler and move to an area outside the plume for sample counting. _____

2.0 SAMPLE COUNTING

2.1 Once outside the plume area, remove the iodine cartridge and count with HP-210 probe and record results on survey form. _____

2.2 Place the iodine cartridge back into the sampler and run the sampler for an additional 2 minutes to purge the cartridge of any noble gases. _____

2.3 After purging, remove both samples (particulate and iodine) from sampler and count with HP-210 probe. Record results and report all results to the Emergency Coordinator. _____

2.4 Place sample filters in plastic bags and record sampling data (time of sampling, sampling duration, location, flow rate (CFM), counting results, and team #) on the bag and sample envelopes. Retain samples for further analysis at the EOF. _____

2.5 If additional samples are requested by the EOF, repeat Appendix B and complete data on survey form. _____

Dept. Head	Proc. No. 2.50.14
Plant Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.14 EMERGENCY RADIATION EXPOSURE CONTROL

1.0 DISCUSSION:

During a plant emergency, high levels of radiation and/or radioactivity may be encountered. These levels may range from slightly above those experienced during normal plant operation to several hundred Rem in a short period of time . Under all situations, whether it is immediate actions to regain control of the emergency or for life-saving purposes, care should be taken to minimize personnel exposures from external and/or internal sources of radiation.

Specific exposure guidelines for entry or re-entry into areas in order to remove injured persons, and/or undertake corrective actions, are defined in Table I. The Plant Manager or his designatee will authorize emergency dose guidelines consistent with these or more restrictive dependent upon emergency conditions. The senior Medical Team Representative and the senior Health Physics Representative present should discuss the hazards involved in rescue procedures with the members of the response team prior to undertaking any rescue mission.

Considerations to be made prior to allowing personnel to accept risks associated with rescue operations will include:

1. Female employees of child-bearing age should not be allowed to participate;

2. Volunteers above the age of 45 years should be given priority;

3. The individual(s) awareness of the consequences that such an exposure can have; and

4. All practicable protective measures to limit exposure.

Every attempt will be made to maintain exposure to individuals providing other emergency functions within 10CFR20 regulatory limits and "as low as reasonably achievable." Overall emergency exposure limits, however, are as specified in Table I.

The Radiological Controls Supervisor, or a designated alternate, is responsible for developing emergency radiological protection programs for plant staff and support personnel. Emergency kits are provided with high range self-reading dosimeters. Each individual reporting to the site will be provided a TLD badge. Dose records will be maintained at each center based upon the results of the self-reading dosimeters. This information will be cross-referenced with TLD badge data.

Guideline action levels for continuous habitability of all emergency centers is presented in Table II.

This procedure consists of three parts as follows:

5.0 Search and Rescue of Personnel
6.0 Emergency On-Site Assistance
7.0 Personnel Dosimetry Record-keeping

The following tables and forms are attached:

Table I Emergency Dose Limits
Table II Emergency Center Protective Action Criteria
HP Personnel Exposure Log

2.0 OBJECTIVE:

To specify emergency worker dose guidelines, including emergency center habitability, and the methods to perform emergency personnel dosimetry and record-keeping.

3.0 REFERENCES:

NRCP 39

4.0 PRECAUTIONS:

1. During any emergency involving radiological hazards, exposure to personnel should be minimized consistent with the nature of the emergency response required.

2. Utilize radiological protective measures and equipment whenever practical.

3. Administer potassium iodide (KI) to all Rescue, Assistance, Site boundary and Off-Site teams prior to potential iodine exposure, if practicable.

5.0 PROCEDURE:

5.1 Personnel Search and/or Rescue

A. Immediate Life-Saving Rescue Required

1. Within the limits allowed by the urgency of the situation, make every reasonable effort to assemble as much of the following as can be brought to bear:

a. pertinent information (i.e., what happened, what may happen, what hazards are present, what can be done, etc.).

b. available protective and monitoring equipment and possible rescue devices.

c. backup assistance from others nearby or request assistance from the Control Room.

2. Evaluate available information and discuss rescue approach with senior Medical and Health Physics personnel prior to attempt, if practicable.

3. If available, other personnel in the area should render assistance, keep the Technical Support Center advised and monitor the time rescuer(s) are in a high radiation area.

4. Perform rescue mission consistent with good first aid practices and as dictated by dose rates encountered and the guidelines discussed above.

   NOTE: Work as quickly as is consistent with safety and avoid sources of high dose rates within the rescue area, whenever practicable.

B. Organized Search and Rescue - following a personnel accountability check

1. Upon notification of missing personnel, the Technical Support Coordinator will page on the Femcc to determine if missing personnel may be unharmed, but isolated in some area of the plant or plant site.

2. If personnel are unaccounted for, the Technical Support Coordinator requests assistance from the Operations Support Center or the Emergency Coordinator.

3. If practicable, the Rescue Team quickly assembles any additional protective equipment or survey meters which may be needed at the H.P. Control Point.

4. Concurrently with 3 above, a member of the Rescue Team scans the Radiation Work Permits posted on the RWP board in an effort to learn the possible location of missing personnel.

5. Conduct a search, keeping all members of the rescue team in the same general area (i.e., frequent visual checks), but each searching independently.

6. When victim or victims are located, notify the Technical Support Center immediately. This should be followed up with additional relevant information (i.e., nature and extent of injuries, dose rates encountered, etc.) as this information develops.

7. Limit exposure of rescuers to appropriate level specified in Table I.

8. Treat victims in accordance with 2.50., Medical Emergency Plan.

6.0 EMERGENCY ON-SITE ASSISTANCE

A. Actions to Stabilize the Plant from an Emergency

1. The Plant Shift Superintendent or Technical Support Coordinator requests assistance from the Operations Support Center or the Emergency Operations Facility by specifying:

   a. the problem and its location; and
   b. the corrective actions to be undetaken.

2. If practicable, the Plant Assistance Team proceeds to the H.P. Control Point and quickly asembles any additional protective equipment or survey meters that may be needed depending on the circumstances.

3. The Plant Assistance Team proceeds to the specified area.

4. If practical, evaluate conditions and pre-plan activities prior to entry into the incident or work area.

5. Work as quickly as is consistent with safety and avoid high dose rates whenever practicable.

6. Perform only those assigned duties intended to control the emergency, but as dictated by the dose rates encountered and the appropriate emergency exposure limits specified in Table I.

7. Report progress and/or completion of the assigned work to the Technical Support Coordinator by radio or Femco.

7.0 PERSONNEL DOSIMETRY RECORD-KEEPING

A. In-plant Emergency Centers

1. The Health Physics representative assigned to each Emergency Center insures that:

   a. Habitability action guidelines specified in Table II are observed, unless otherwise directed by plant management, and

   b. All assigned personnel at the Emergency Center are wearing their TLD badge and pocket dosimeter.

2. All personnel assigned duties in a high radiation area, or in the vicinity of the incident, have been issued a high range dosimeter prior to leaving their assigned Emergency Center.

3. All personnel are responsible for periodically reading their dosimeter and noting their level of exposure. Notify Center Health Physics representative if dosimeter level approaches full scale.

4. Upon being relieved, each person shall report to his assigned Emergency Center where his dosimeter reading will be logged on HP-Personnel Exposure Log.

5. Following each shift change, the Health Physics representative assigned to the Technical Support Center shall collect the dosimetry logsheets from the Operations Support Center and forward them to the Radiological Assistant at the Emergency Operations Facility (EOF).

B. Emergency Operations Facility (EOF)

1. The Radiological Assistant, or his designated representative insures that:

   a. Habitability action guidelines specified in Table II are observed, unless otherwise directed by plant management, and

   b. All plant personnel at the EOF are wearing their required dosimetry.

2. Prior to leaving the EOF, all personnel assigned to Rescue, Site Boundary Monitoring, or Plant Assistance Teams shall turn in their low range (500 mR) dosimeters to the Radiological Assistant who will log the reading on HP-Personnel Exposure Log. A zeroed high range dosimeter will be issued for use within the plant.

3. All personnel are responsible for peroidically reading their dosimeters and noting their level of exposure.

4. All non-MY emergency personnel arriving at the EOF will be assigned a visitor's TLD badge by the Radiological Assistant, if necessary.

5. At the conclusion of each shift, or as people are individually relieved, all personnel will turn in their TLD badges and dosimeters to the Radiological Assistant prior to leaving the EOF.

6. The Radiological Assistant, or a designated assistant, will log all dosimeter results on HP-Personnel Exposure Log.

   NOTE: It is suggested that separate log sheets be maintained for each non-MY group (e.g., NRC, FEMA, EPA, CEP, Health Eng., State Police, etc.).

7. The Radiological Assistant is responsible for maintaining an accumulative exposure record for each individual present in-plant, or at the EOF, on a current shift basis.

   NOTE: In-plant Emergency Center logsheets will be delivered to the EOF at the conclusion of each shift.

8. When appropriate, TLD badges will be exchanged by the Radiological Assistant, and used badges will be sent to the YNSD Mobile Processing Lab, or to YNSD Environmental Lab for processing.

9. As TLD results become available, they will be logged on HP-Personnel Exposure Log by the Radiological Assistant.

10. The Radiological Assistant shall maintain personnel exposure records manually until such time as the computer based record keeping function is again available and logsheet data has been properly entered.

8.0 FINAL CONDITIONS:

1. Deliver all personnel exposure records to the Radiological Controls Supervisor.

Proc. No. 2.10.24
Rev. No. 5

PERSONNEL EXPOSURE LOG

Emergency Center _____

Affiliation _____ Period _____ To _____

Name	SS Number	Dosimeter Readings IN	OUT	DATE	Accum. Dose (Dosimeter)	Period Dose	TLD Dose in Computer (Initial)

TABLE I

EMERGENCY DOSE GUIDELINES

1. 5 Rem to the whole body	Dose limit applied to emergency center habitability determination.
2. 12.5 Rem to the whole body	Dose limit applied to in-plant activities required to correct or prevent plant degradation.
3. 25 Rem to the whole body	Maximum allowable dose to an emergency worker for the duration of the accident.
4. 100 Rem to the whole body	Immediate evaluation and action required for saving of life. When efforts are completed, revert to limits 1 through 3 above, as appropriate.

TABLE II

EMERGENCY CENTER PROTECTIVE ACTION GUIDELINES

RADIOLOGICAL CONDITION	REQUIRED PROTECTIVE ACTION
1.0 Whole Body Dose/Dose Rates	
a) 50 mr/hr	Increase frequency of radiation monitoring. Frequent evaluation of center high range dosimeter.
b) 1R on center high range dosimeter	Initiate Center Evacuation Planning.
c) 4R on center high range dosimeter	Initiate a phased Center Evacuation
2.0 Thyroid Dose	
a) Any positive indication of iodine airborne concentration	Administer potassium iodide (KI)
3.0 Airborne Particulate Concentration	
a) 3×10^{-7} unidentified (100MPC)	Don respirators with organic canisters for continued occupation of Center.
b) 3×10^{-6} unidentified (1000MPC)	Evacuate Center
4.0 Contamination	
a) 1000 dpm/100cm^2(B,γ) 100 dpm/100cm^2(γ)	Lab coats, shoe covers, gloves.
b) 10,000 dpm/100cm^2(B,γ) 1000 dpm/100cm^2(γ)	Full protective clothing.

Dept. Head	Proc. No. 2.50.15
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.15 RELEASE OF PUBLIC INFORMATION

1.0 DISCUSSION

Release of public information for all incidents at or relating to the Maine Yankee Atomic Power Company will be given by the Central Maine Power Company Public Affiars and Information Services located in Augusta.

The Central Maine Power Company Public Affairs and Information Services will coordinate information and make periodic press releases until the situation has been resolved and/or conditions are stable.

2.0 OBJECTIVE

Coordinate the release of Public Information during emergencies.

3.0 PROCEDURE

3.1 The Plant Manager or his designated alternate will provide updated information to the corporate headquarters in Augusta. The Central Maine Power Company Public Affairs and Information Services will provide a spokesperson to brief the news media and release information concerning the accident at the Central Maine Power Company headquarters in Augusta. News media personnel at the Emergency Operations Facility will be periodically briefed of accident conditions by a spokesperson from the Public Affairs and Information Services.

3.2 In a large scale accident involving the coordination of information from many sources, a centralized news media center in the Bath Armory may be established.

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Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.16 OFF-SITE PROTECTIVE ACTION RECOMMENDATIONS

1.0 DISCUSSION

This procedure describes the criteria which will be used in recommending protective actions to the State authorities during the initial phase of an emergency. The criteria, provided herein for the choice of protective actions, is consistent with the projected dose commitment values established by EPA's "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents".

The initial notification to State authorities by Maine Yankee requires a protective action recommendation for the Site, Area, or General Emergency conditions. By using the Containment Leakage and Primary Vent Stack Nomograms a protective action recommendation based on whole body doses at one-half mile will be given. (See Table 1).

Subsequent recommendations to State authorities concerning whole body, thyroid doses, and exposure thru the food chain will be made by the Emergency Coordinator based on accident conditions and actual field sample measurements.

2.0 OBJECTIVE

Outline the guidlines for recommending protective action to the State authorities.

3.0 REFERENCES

EPA-520/1-75-001, "Manual of Preotective Action Guides and Protective Actions for Nuclear Accidents".

4.0 PRECAUTIONS

1. No recommendations will be made to off-site authorities concerning projected thyroid dose until actual field samples have been analyzed or evaluation of Primary Vent Stack sample for Iodine release has been completed.

5.0 PROCEDURE

1. Calculate the dose at one-half mile using the Containment Leakage and/or Primary Vent Stack Nomograms.

   NOTE: If a release is taking place from both locations, add the two together to obtain the dose at 1/2 mile.

2. Use the dose obtained from Step 1 to give the appropriate protective action recommendation using Table I.

6.0 FINAL CONDITIONS

Initial protective action recommendations to State authorities has been made.

TABLE I

INITIAL PROTECTIVE ACTION RECOMMENDATIONS

Projected Dose (MREM) at 1/2 Mile	Plant Condition	Recommendation
Whole Body Dose 0 to 100 MR/HR	Release expected to last for greater than two hours	No protective actions recommended.
Whole Body Dose 100 MR/HR to 500 MR/HR	Release expected to last for greater than two hours.	Seek shelter Protective action guidelines not exceeded.
Whole Body Dose 500 MR/HR to 2500	Release expected to last for greater than two hours.	Seek shelter Protective action guidelines may be exceeded.
Whole Body Dose greater than 2500 MR/HR	Release expected to last greater than two hours.	Off-site doses exceeding PAG's in downwind affected areas. Recommend evacuation of downwind areas up to 5 miles.

Dept. Head	Proc. No. 2.50.17
Plt. Mgr.	Class. A
PORC	Rev. No. 0
Mgr. of Ops.	Issue Date
	Review Date

2.50.17 EMERGENCY NOTIFICATION

1.0 DISCUSSION

Plant resources are anticipated to be sufficient to cope with most of the emergency conditions. The minimum shift staff requirement is designed to handle immediate response to all emergencies. During normal work hours it is expected that personnel on site will cope with all the Plant activities necessary to properly implement emergency procedures. During back shifts and weekends it will be necessary to notify varying numbers of off-duty personnel, depending upon Plant conditions, to report to the Plant.

2.0 OBJECTIVE

To outline a system of Plant personnel and outside agency notification that insures that resources are available to implement all emergency actions.

3.0 REFERENCES

Emergency Procedures 2.50.1, 2.50.2, 2.50.3 and 2.50.4.

4.0 PRECAUTIONS

NA.

5.0 PROCEDURE

5.1 Review Table 1, page 10, for proper call sequence.

5.2 Proceed to the proper appendix to obtain notification lists.

5.3 Complete notifications in required sequence.

6.0 FINAL CONDITIONS

6.1 Required notifications have been made.

APPENDIX A

PLANT SHIFT SUPERINTENDENT - EMERGENCY CALL LIST

1. Maine State Police - Notify for All Emergency Classifications.

   A. State Police Radio
   B. Phone: 289-2155
   C. Microwave to CMp dispatcher - request he notify State Police.

2. On Call Supervisor - Notify for All Emergency Classifications.

   The On Call Supervisor schedule is posted in the Control Room.

   Names withheld for reasons of privacy

   1.
   2.
   3.
   4.
   5.
   6.

3. CMP Dispatcher - Notify for All Emergency Classifications.

   Use the microwave system.

4. Shift Technical Advisor - Notify for All Emergency Classifications.

   Use Plant page or phone

5. Off-Site Local Assistance - When needed.

Bath Hospital	443-5524
Wiscasset Fire Dept.	882-6232
Wiscasset Police Dept.	882-5542
Wiscasset Ambulance Service	882-7878

6. American Nuclear Insurers 203-677-7305

   NOTE: ANI maintains a 24-hour coverage emergency notification number. The number is (203) 667-7305. During normal office hours (8:00 a.m. - 4:00 p.m.) this number will be answered by a receptionist who will transfer an incoming emergency call to an appropriate individual in the office. Outside of normal office hours this phone line is covered by an answering service. The answering service will intercept the call and obtain the name, affiliation, and phone number of the caller. They will then notify a designated ANI staff member who will in turn call back the facility to obtain appropriate information regarding the nuclear accident.

APPENDIX B

SHIFT TECHNICAL ADVISOR - EMERGENCY CALL LIST

1. NRC - Notify for All Emergency Classifications

   A. Red Phone - In Control Room or Technical Support Center.

      Once contact is made the phone should be kept open and manned. The STA should assign an available knowledgeable Plant member to man the phone.

2. Maine Yankee Nuclear Support Div. - Notify for All Emergency Classifications.

   Workday Office Number _____

   Start at top of the list and work down until a contact is made.

   Names Withheld for reasons of privacy.

   1.
   2.
   3.
   4.
   5.

APPENDIX C

ON CALL SUPERVISOR - EMERGENCY CALL LIST

NOTE: In each of the following notification lists start at the top of the list and work down until a contact is made.

When a contact is made, make sure that the individual reached has a phone list - then instruct him to continue the notification process starting with the next name after his and continuing to the end of the list if the type emergency requires.

1. Plant Management List

Notification Criteria

Unusual Event - Notify one - Standby.
Alert - Notify all - Report as necessary.
Site Area - Notify all - All report.
General - Notify all - All report.

Names withheld for reason of privacy.

2. Operations Support List

Notification Criteria

Unusual Event - Notify one supervisor - Standby.
Alert - Notify one supervisor from each group - Report as necessary.
Site Area - Notify all - Report as required to fill shifts.
General - Notify all - Report as required to fill shifts.

A. Operations - Names withheld for reasons of privacy.

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44.
45.

B. Maintenance - Names withheld for reasons of privacy.

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19.
20.

C. Instrument & Control - Names withheld for reasons of privacy.

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2.
3.
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5.
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7.
8.
9.
10.

3. Technical Support List

Notification Criteria

Unusual Event - Notify one from each group - Standby.
Alert - Notify one from each group - Report as necessary.
Site Area - Notify all - Report.
General - Notify all - Report.

A. Radiological Control Supervisors

Names withheld for reasons of privacy.

1.
2.
3.
4.

B. Reactor Engineering

Names withheld for reasons of privacy.

1.
2.
3.
4.

C. Computer Engineering

Names withheld for reasons of privacy.

1.
2.
3.

D. Plant Engineering

Names withheld for reasons of privacy.

1.
2.
3.

E. Chemistry Supervisor

Names withheld for reasons of privacy.

1.
2.
3.
4.

4. Emergency Coordination List

Notification Criteria

Unusual Event - Notify as necessary.
Alert - Notify all - Standby.
Site Area - Notify all - All report.
General - Notify all - All report.

A. Qualified Emergency Coordinators

Names withheld for reasons of privacy.

1.
2.
3.
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9.
10.
11.
12.
13.
14.
15.

B. Qualified Offsite Survey Personnel

Names withheld for reasons of privacy.

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20.

C. Qualified Radiological Evaluation Assistants

Names withheld for reason of privacy.

1.
2.
3.
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5.
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7.
8.
9.
10.

D. Qualified Communications Assistants

Names withheld for reasons of privacy.

1.
2.
3.
4.
5.

APPENDIX D

CMP DISPATCHER - EMERGENCY CALL LIST

NOTE: In each of the following notification lists, start at the top of the list and work down until a contact is made.

When a contact is made, make sure that the individual reached has a phone list so that notification can be continued if necessary.

Corporate Management List - Notify for all emergency classifications.

Work day office number: 725-4217

Names withheld for reasons of privacy.

1.
2.
3.

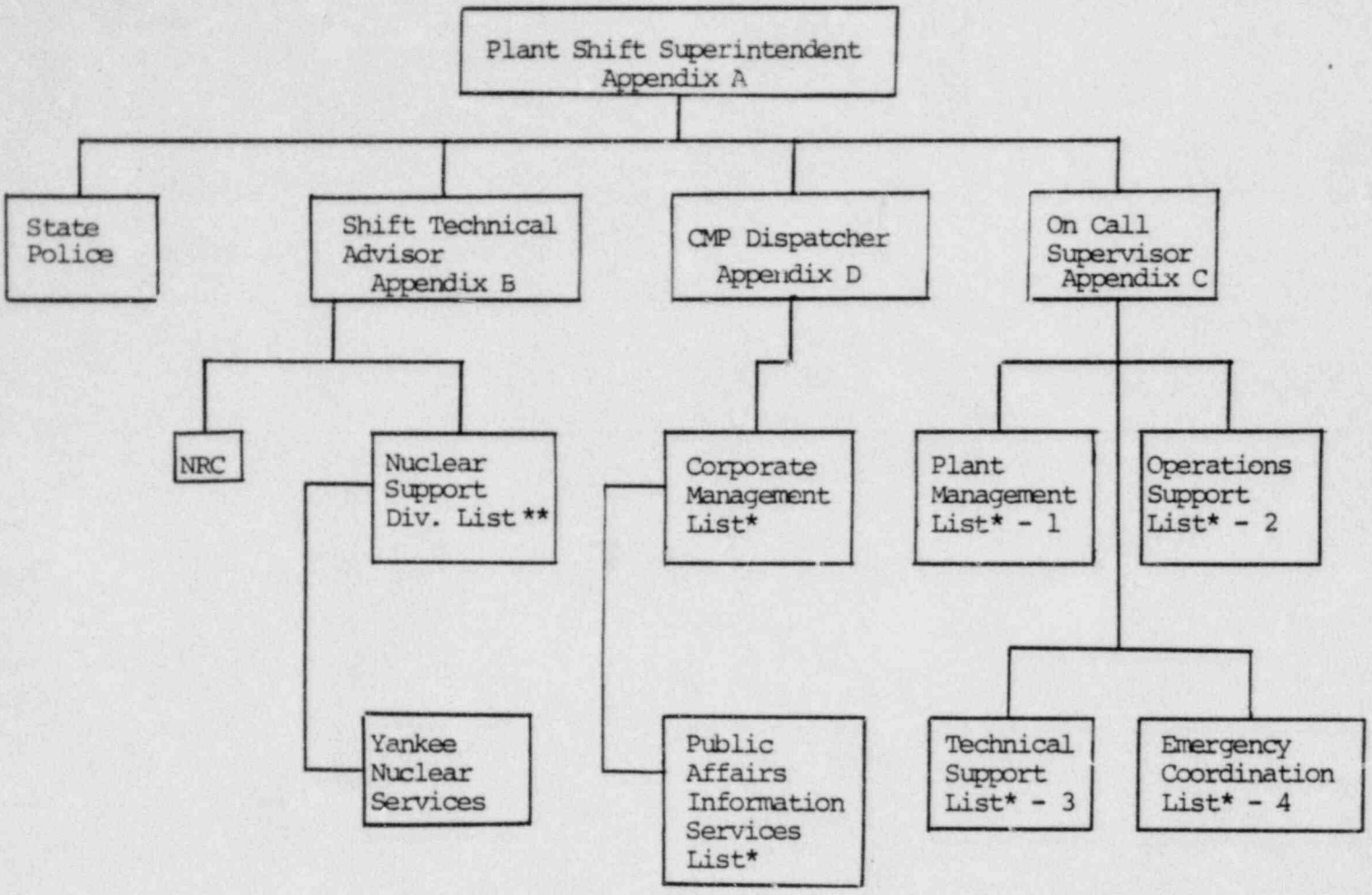
Public Affairs Information Service List - Notify for all emergency classifications.

Note: Corporate Management or the CMP dispatcher may initiate this list.

Names withheld for reasons of privacy.

1.
2.
3.
4.

Table - 1



*The first person reached on the list calls the others.