

March 6, 1995

Mr. Ted C. Feigenbaum
Senior Vice President and Chief Nuclear Officer
North Atlantic Energy Service Corporation
Post Office Box 300
Seabrook, NH 03874

SUBJECT: NRC INSPECTION NO. 50-443/94-15

Dear Mr. Feigenbaum:

This refers to your November 15, 1994 correspondence, in response to our September 2, 1994 letter.

Thank you for providing us with the information we requested, as documented in your letter.

Based on our review of the information provided, relating to the changes in staff augmentation in Seabrook's Radiological Emergency Plan, Revision 14, we agree with your conclusion that the changes do not decrease the effectiveness of the Plan. Accordingly, unresolved item 50-443/94-15-01 is considered closed.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

James H. Joyner

James H. Joyner, Chief
Facilities Radiological Safety
and Safeguards Branch
Division of Radiation Safety
and Safety

Docket No. 50-443

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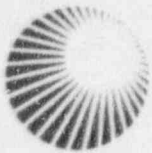
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Senior Vice President &
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NYN- 94128

November 15, 1994

U.S. Nuclear Regulatory Commission
Washington, DC 20555

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References: (a) Facility Operating License No. NPF-86, Docket No. 50-443
(b) USNRC Letter dated September 2, 1994, "Seabrook Station Emergency Preparedness (EP) Program Inspection No. 50-443/94-15," J.H. Joyner to T.C. Feigenbaum

Subject: Transmittal of Supplemental Information Regarding Emergency Response Organization Staffing

Gentlemen:

In a letter dated September 2, 1994 [Reference (b)], the NRC requested additional information in response to an unresolved item identified during an emergency preparedness inspection. Specifically, during the review of Revision 14 to the Seabrook Station Radiological Emergency Response Plan (SSREP), the inspectors noted a change to the number and timing of North Atlantic Energy Service Corporation (North Atlantic) emergency response personnel committed to augment the on-shift emergency response organization (ERO). Although this revision took exception to some of the guidance contained in NUREG-0654/FEMA-REP-1, Rev. 1, at Table B-1, North Atlantic had concluded that this change did not reduce the effectiveness of the emergency plan. However, the inspection report identified that the evaluation of this change provided to the inspectors may not have adequately supported this conclusion.

During a subsequent conversation with the NRC, North Atlantic committed to assemble the full evaluation of the change to the augmented staffing table and to forward it to the NRC for review. During the process of assembling the full evaluation of this revision, North Atlantic determined that additional changes to the staffing table would further clarify how the tasks stated in NUREG-0654 would be addressed. As with Revision 14 to the SSREP, the total staffing for the ERO was unaffected by these clarifications. Accordingly, the enclosure contains North Atlantic's full evaluation of the changes to the augmented staffing plan.

North Atlantic is confident that the current augmented staffing plan is adequate to satisfy both the functional requirements of the emergency plan and the intent of the regulatory guidance contained in NUREG-0654. Based on this, North Atlantic concludes that Revision 14 to SSREP did not reduce the effectiveness of the emergency plan, and the SSREP continues to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50 Appendix E. Notwithstanding this, North Atlantic will revise the

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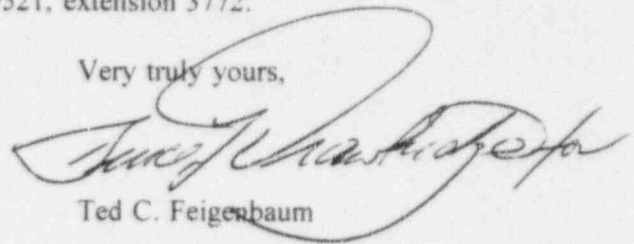
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November 15, 1994
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SSREP to add the aforementioned clarifications to the augmented staffing table to more clearly delineate task responsibility.

Should you have any questions regarding this letter or its enclosure, please contact Mr. James M. Peschel, Regulatory Compliance Manager, at (603) 474-9521, extension 3772.

Very truly yours,



Ted C. Feigenbaum

TCF:JES/jes

Enclosure

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North Atlantic
November 15, 1994

ENCLOSURE TO NYN-94128

EVALUATION OF CHANGES TO THE SEABROOK STATION RADIOLOGICAL EMERGENCY PLAN AUGMENTED STAFFING TABLE

The following provides an evaluation of changes made to the Seabrook Station Radiological Emergency Response Plan (SSREP), Revision 14, with regard to the number and timing of emergency response personnel committed to augment the on-shift emergency response organization (ERO).

1. Background

A. Regulatory Requirements and Guidance

Onsite emergency plans for nuclear power reactors must meet the planning standards contained in 10CFR50.47. One of these standards, requires that:

On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

Contained in the criteria for preparing and evaluating emergency plans, NUREG-0654/FEMA-REP-1, is Table B-1 which contains guidance as to the minimum emergency functions that must be performed and the staffing needed to satisfy the planning standard. The Seabrook Station Radiological Emergency Plan (SSREP) contains a comparison of the augmented emergency response organization (ERO) against the guidance of NUREG-0654/FEMA-REP-1, Rev.1, Table B-1 (Table B-1). This comparison is presented in Figure 8.15 of the SSREP.

B. Original North Atlantic Planning Basis

In the early versions of the SSREP, Figure 8.15 was added to provide a comparison against NUREG-0654, Table B-1. At that time, all of the ERO members that performed a Table B-1 function were listed, not simply those that represented the minimum staffing relied upon to perform the given function. This represented a significant over-commitment in staffing as compared with the guidance of Table B-1. For example, Figure 8.15 listed Control Room Operators and Auxiliary Operators since they are part of the augmented ERO, however, Table B-1 does not indicate any need to augment the on-shift ERO with these positions.

The over-commitment in augmented ERO staffing resulting from the original planning basis was noted by NRC inspectors during the initial emergency preparedness program inspection conducted during the week of December 9, 1985. Inspection Report 85-32, Section (2), Augmentation of Onsite Emergency Organization, states that "Figure 8.15 of the Emergency Plan describes staffing for the initial phase (on shift) and augmentation phase during emergencies. The individuals assigned to major functional areas during each phase exceeds the minimum staffing requirements of Table B-1, NUREG-0654."

C. NRC Safety Evaluation Report

NUREG-0896, Safety Evaluation Report related to the operation of Seabrook Station, Unit 1 and 2, Supplement 1, dated April 1983, Section 13.3.2.2, contained two observations related to augmented ERO capabilities and functions.

The near-term ERO consists of four individuals who may be contacted at all times and who represent four key areas of specialization (Emergency Direction, Dose Assessment and Protective Actions, Corporate Coordination, and Technical Support) and is headed by the Emergency Director... In addition, other personnel will be notified to support the immediate needs that station conditions dictate as determined by the short-term ERO. This will be accomplished in accordance with a notification scheme that provides flexibility to support all emergency functions. These personnel and the operating shift personnel provide the base for establishing the long-term ERO and initiate or continue those actions necessary to terminate the emergency, assess onsite and offsite radiological conditions, provide technical support, and coordinate station activities with the initial response of offsite authorities (state, Federal and local), the media and requested assistance.

Augmentation of the ERO continues with the notification and arrival of the long-term ERO members. These personnel report directly to emergency activity areas and assume responsibilities associated with the following disciplines: direction, administration, coordination, technical assistance and operations.

These statements are unaffected by the changes made in Revision 14 of the SSREP.

2. Summary of SSREP Revision 14 Changes and Evaluation of Changes

Revision 14 to the SSREP incorporated several changes to Figure 8.15. A summary of the changes and a summary of the evaluation of the changes is described below.

A. The number of ERO staff included on Figure 8.15 as augmenting the on-shift ERO within 60 minutes was reduced from 37 to 25.

Attachment 1 compares Revision 14 of Figure 8.15 to that of Revision 13, with regard to 60 minute augmented staffing requirements. Attachment 2 provides a comparison of NUREG-0654, Table B-1, 60 minute staffing requirements with the Revision 14 Seabrook Station 60 minute augmented ERO. Attachment 3 provides an evaluation of the 60 minute augmented ERO staffing changes to SSREP Figure 8.15 incorporated in Revision 14 of the SSREP.

It should be noted that the staffing of the ERO remains at 128 and is unchanged by Revision 14. This is evidenced by the fact that Figures 8.3, 8.4 and 8.5, which describe the augmented ERO staffing, were not revised. All these positions, including those formerly listed on Figure 8.15, are still called out, either by pager or the Emergency Response Organization Notification System (ERONS). ERONS is an automated, telephone-based callout system.

B. The method for notifying the augmented ERO responders included on Figure 8.15 was changed from ERONS to pagers.

This change also resulted in enhancing the ERO callout process by changing the notification method for Figure 8.15 augmented responders from ERONS to pagers. Notification by pager reduces the elapsed time between emergency declaration and responder notification. Additionally, pager notification obviates the need for the responder to be at home to receive an emergency notification. Pager notification increases the likelihood that Figure 8.15 augmented responders can report within 60 minutes, and that additional personnel, in excess of those required to fulfill the staffing guidance of Figure 8.15, may also be available.

C. The ERO positions that had previously been included in Figure 8.15 as 30 minute augmentation positions are now 60 minute augmentation positions.

Under the regulatory guidance contained in NUREG-0654, Table B-1, and NUREG 0737, Supplement 1, Table 2, 11 ERO positions would have been required to be filled within 30 minutes. Revision 14 provides that all of these positions will be filled within 60 minutes. North Atlantic has determined that this change does not reduce the effectiveness of the emergency plan since either the specified functions are adequately addressed by other on-shift personnel, or there are no emergency planning-related provisions or station procedures specifically anticipating the use of these personnel prior to activation of emergency response facilities. The deletion of the reference to 30-minute responders does not adversely affect the station's ability to assess or respond to an accident.

Attachment 4 provides a summary table delineating how the specified functions of the NUREG-0654 30 minute responders are addressed with the current staffing plan. North Atlantic intends to include a similar table in a future revision of the SSREP for clarification purposes. Additionally, Attachment 5 provides a position-specific justification of why augmentation by these individuals within 60 minutes rather than 30 minutes does not decrease the effectiveness of the emergency plan.

D. The number of augmented ERO responders performing radiation protection (in-plant) tasks within 60 minutes has been reduced by one.

This change is justified by the provisions of the station radiation protection program, enhanced radiation protection training requirements and station-specific arrangements for dosimetry and radiation monitoring. The detailed evaluation of this specific revision is contained in Attachment 6.

3. Conclusion

In summary, the changes incorporated into SSREP Revision 14 affecting Figure 8.15 do not decrease the effectiveness of the SSREP or emergency response capabilities, and the SSREP continues to meet the standards of 10 CFR 50.47(b) and the requirements of 10 CFR 50 Appendix E.

ATTACHMENT 1
COMPARISON OF REVISION 13 and REVISION 14
60 MINUTE AUGMENTED STAFFING REQUIREMENTS

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>Rev. 13 Number</u>	<u>Rev. 14 Number</u>	<u>Revised Position Titles</u>	<u>Pager Wearer</u>
Plant Operations and Assessment of Operational Aspects		Shift Supervisor (SRO)	0	0	N/A	N/A
		Shift Foreman (SRO)	0	0	N/A	N/A
		Control Room Operators	1	0	N/A	N/A
		Auxiliary Operators	2	0	N/A	N/A
Emergency Direction and Control (Emergency Coordinator)		Shift Technical Advisor, Shift Supervisor or designated facility manager	0	0	N/A	N/A
Notification/ Communication	Notify licensee, State, local and Federal personnel & maintain communication		3	3	Site Emer Director	Yes
					Emer Operations Mgr	Yes
					ERO Tech Liaison	Yes
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations	Senior Manager	1	1	Response Manager	Yes
	Facility (EOF) Director					
	Offsite Dose Assessment	Senior HP Expertise	2	1	EOF Coordinator	Yes
	Offsite Surveys		6	4	2 Monitors/2 Drivers	Yes
	Onsite (out-of-plant)		2	2	HP Technician	Yes
	In-plant surveys	HP Technicians	3	2	HP Technician	Yes
Plant System Engineering, Repair and Corrective Actions	Chemistry/Radiochemistry	Rad/Chem Technicians	3	1	Chem Technician	Yes
	Technical Support	Shift Technical Advisor	0	0	N/A	N/A
		Core/Thermal Hydraulics	1	1	Reactor Engineer	Yes
		Electrical	1	1	TSC Elec Eng	Yes
		Mechanical	1	1	TSC Mech Eng	Yes
	Repair and Corrective Actions	Mechanical Maintenance/ Rad Waste Operator	2	2	Mech Main Personnel	Yes
			1		N/A	Yes
		Electrical Maintenance/ I&C Technician	2	2	Elec Main Personnel	Yes
			2	1	I&C Personnel	Yes

ATTACHMENT 1
COMPARISON OF REVISION 13 and REVISION 14
60 MINUTE AUGMENTED STAFFING REQUIREMENTS

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>Rev. 13 Number</u>	<u>Rev. 14 Number</u>	<u>Revised Position Titles</u>	<u>Pager Wearer</u>
Protective Actions (In-plant)	Radiation Protection: a. Access Control b. HP Coverage for repair, corrective actions, search and rescue first-aid & firefighting c. Personnel monitoring d. Dosimetry	HP Technicians	4	3	HP Coordinator Rad Controls Coord HP Technician	Yes Yes Yes
Firefighting	--	--	Local Support	Local Support	N/A	N/A
Rescue Operations and First-Aid	--	--	Local Support	Local Support	N/A	N/A
Site Access Control and Personnel Accountability	Security, firefighting communications, personnel accountability	Security Personnel	All per Security plan	All per Security plan	N/A	N/A
PERSONNEL TOTAL			37	25		

ATTACHMENT 2
COMPARISON OF TABLE B-1 60 MINUTE STAFFING REQUIREMENTS
WITH REVISION 14 SEABROOK STATION 60 MINUTE AUGMENTED ERO

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>0654 Number</u>	<u>SS ERO Number</u>	<u>SS Position Titles</u>
Plant Operations and Assessment of Operational Aspects		Shift Supervisor (SRO)	0	0	N/A
		Shift Foreman (SRO)	0	0	N/A
		Control Room Operators	0	0	N/A
		Auxiliary Operators	0	0	N/A
Emergency Direction and Control (Emergency Coordinator)		Shift Technical Advisor, Shift Supervisor or designated facility manager	0	0	N/A
Notification/ Communication	Notify licensee, State, local and Federal personnel & maintain communication			3	Site Emer Director Emer Operations Mgr ERO Technical Liaison
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations	Senior Manager	1	1	Response Manager
	Facility (EOF) Director				
	Offsite Dose Assessment	Senior HP Expertise	1	1	EOF Coordinator
	Offsite Surveys		4	4	2 Monitors/2 Drivers
	Onsite (out-of-plant)		2	2	HP Technician
	In-plant surveys	HP Technicians	2	2	HP Technician
Plant System Engineering, Repair and Corrective Actions	Chemistry/Radiochemistry	Rad/Chem Technicians	1	1	Chem Technician
	Technical Support	Shift Technical Advisor	0	0	N/A
		Core/Thermal Hydraulics	1	1	Reactor Engineer
		Electrical	1	1	TSC Elec Eng
		Mechanical	1	1	TSC Mech Eng
	Repair and Corrective Actions	Mechanical Maintenance/ Rad Waste Operator	2	2	Mech Main Personnel
		Electrical Maintenance/ I&C Technician	2	2	Elec Main Personnel
			1	1	I&C Personnel

ATTACHMENT 2
COMPARISON OF TABLE B-1 60 MINUTE STAFFING REQUIREMENTS
WITH REVISION 14 SEABROOK STATION 60 MINUTE AUGMENTED ERO

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>0654 Number</u>	<u>SS ERO Number</u>	<u>SS Position Titles</u>
Protective Actions (In-plant)	Radiation Protection: a. Access Control b. HP Coverage for repair, corrective actions, search and rescue first-aid & firefighting c. Personnel monitoring d. Dosimetry	HP Technicians	4	3	HP Coordinator Rad Controls Coord HP Technician See Att. 6
Firefighting	--	--	Local Support	Local Support	N/A
Rescue Operations and First-Aid	--	--	Local Support	Local Support	N/A
Site Access Control and Personnel Accountability	Security, firefighting communications, personnel accountability	Security Personnel	All per Security plan	All per Security plan	N/A
PERSONNEL TOTAL			26	25	

ATTACHMENT 3
EVALUATION OF 60-MINUTE AUGMENTED ERO STAFFING CHANGES
TO FIGURE 8.15 INCORPORATED IN SSREP, REVISION 14

POSITION/FUNCTION	DESCRIPTION OF CHANGE	BASIS/JUSTIFICATION
Plant Operations and Assessment of Operational Aspects	Change number of Control Room Operators and Nuclear System (Auxiliary) Operators from 1 and 2, respectively, to 0 for both.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 does not specify augmentation by Control Room Operators or Nuclear System (Auxiliary) Operators. Station programs and procedures do not require additional Control Room Operators and NSOs within 60 minutes to obtain or maintain a station shutdown.
Notification/Communication	Change personnel performing these functions from Emergency Operations Manager, EOF Coordinator, and Communicator to Site Emergency Director, Emergency Operations Manager, and ERO Technical Liaison.	The Site Emergency Director is responsible for relieving the STED of State notification responsibilities; the Emergency Operations Manager is responsible for relieving the STED of NRC communications; and the ERO Technical Liaison initiates and maintains communications with the NH PUC Engineer and the MEMA Nuclear Engineer.
Senior HP Expertise	Change number of personnel from 2 to 1; delete requirement for Dose Assessment Specialist.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 1 individual with "Senior HP Expertise". The EOF Coordinator is trained in dose assessment and protective action decision-making.

ATTACHMENT 3
EVALUATION OF 60-MINUTE AUGMENTED ERO STAFFING CHANGES
TO FIGURE 8.15 INCORPORATED IN SSREP, REVISION 14

POSITION/FUNCTION	DESCRIPTION OF CHANGE	BASIS/JUSTIFICATION
Offsite Surveys	Change number of personnel from 6 to 4 by deleting 1 HP Technician and 1 Driver. Replace term "HP Technician" with "Monitors".	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 4 individuals to perform "Offsite Surveys". The term "Monitors" is used since not all assigned personnel are "HP Technicians". Two teams (staffed by 4 individuals) are sufficient for early accident phase field monitoring.
In-Plant Surveys	Change number of personnel from 3 to 2.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 2 individuals to perform "In-plant Surveys". Two individuals are sufficient for early accident phase surveys of in-plant areas. Since it is unlikely that in-plant surveys would be conducted except for those required to support coverage for repair and corrective actions, an HP Technician could perform both of these tasks at the same time.
Chemistry/ Radiochemistry	Change number of personnel from 3 to 1.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 1 individual to provide "Chemistry/Radiochemistry" expertise. Two chemistry technicians (1 on-shift and 1 augmented) are sufficient for early accident phase chemistry support, e.g., lab operations and obtaining samples.

ATTACHMENT 3
EVALUATION OF 60-MINUTE AUGMENTED ERO STAFFING CHANGES
TO FIGURE 8.15 INCORPORATED IN SSREP, REVISION 14

POSITION/FUNCTION	DESCRIPTION OF CHANGE	BASIS/JUSTIFICATION
Technical Support	For "Electrical", change I&C Coordinator to TSC Electrical Engineer. For "Mechanical", change Engineering Coordinator to TSC Mechanical Engineer.	Previously, the TSC staff included 2 "TSC Engineers" with no discipline specified. Also, personnel assigned to the positions of Engineering Coordinator and I&C Coordinator may not have been fully knowledgeable of mechanical or electrical engineering design and analysis. This change split out the two existing engineer positions by establishing two new ERO position titles - TSC Mechanical Engineer and TSC Electrical Engineer. This change facilitates assignment of better qualified personnel to provide discipline-specific mechanical and electrical engineering support.
Repair and Corrective Actions	Change number of personnel providing "Mechanical Maintenance" expertise from 2 to 1.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 1 individual to provide "Mechanical Maintenance" expertise. One individual is sufficient to provide early accident phase mechanical maintenance support, i.e., prior to TSC and OSC activation.
Repair and Corrective Actions	For "Rad Waste Operator", change Nuclear Systems Operator to Mechanical Maintenance Personnel.	Mechanical Maintenance Personnel offer greater assignment flexibility for implementing "Repair and Corrective Actions". Onshift Nuclear Systems Operators are capable of operating radwaste-related systems to the extent necessary to support early phase accident responses.

ATTACHMENT 3
EVALUATION OF 60-MINUTE AUGMENTED ERO STAFFING CHANGES
TO FIGURE 8.15 INCORPORATED IN SSREP, REVISION 14

POSITION/FUNCTION	DESCRIPTION OF CHANGE	BASIS/JUSTIFICATION
Repair and Corrective Actions	Change number of personnel providing "I&C Technician" expertise from 2 to 1.	Bring SSREP staffing goals into closer alignment with NUREG 0654, Table B-1 guidance. Table B-1 specifies augmentation by 1 individual to provide "I&C Technician" expertise. One individual is sufficient to provide early accident phase mechanical maintenance support, i.e., prior to TSC and OSC activation.
Protective Actions (In-plant)	Change personnel performing this task from 4 Health Physics Technicians to 1 Health Physics Coordinator, 1 Radiological Controls Coordinator and 1 Health Physics Technician.	As discussed in Attachment 6, 4 augmented Health Physics Technicians are not required for Access Control, HP Coverage for search and rescue and firefighting, Personnel Monitoring, or Dosimetry during the early phases of an accident.

ATTACHMENT 4
COMPARISON OF TABLE B-1 30 MINUTE STAFFING REQUIREMENTS
WITH REVISION 14 SEABROOK STATION STAFFING AND RESPONSE BASIS

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>0654 Number</u>	<u>Onshift ERO Position Performing Task</u>
Plant Operations and Assessment of Operational Aspects		Shift Supervisor (SRO)	0	N/A
		Shift Foreman (SRO)	0	N/A
		Control Room Operators	0	N/A
		Auxiliary Operators	0	N/A
Emergency Direction and Control (Emergency Coordinator)		Shift Technical Advisor, Shift Supervisor or designated facility manager	0	N/A
Notification/Communication	Notify licensee, State, local and Federal personnel & maintain communication		1	CR Comm, Security, STED & Work Control Coordinator
Radiological Accident Assessment and Support of Operational Accident Assessment	Emergency Operations Facility (EOF) Director	Senior Manager	0	N/A
	Offsite Dose Assessment	Senior HP Expertise	1	STED/Work Control Coordinator
	Offsite Surveys		2	None - See Att. 5
	Onsite (out-of-plant)		1	HP Technician, NSO, Fire Fighter/EMT or Chem Technician
	In-plant surveys	HP Technicians	1	HP Technician, NSO, Fire Fighter/EMT or Chem Technician
	Chemistry/Radiochemistry	Rad/Chem Technicians	0	N/A

ATTACHMENT 4
COMPARISON OF TABLE B-1 30 MINUTE STAFFING REQUIREMENTS
WITH REVISION 14 SEABROOK STATION STAFFING AND RESPONSE BASIS

<u>Major Functional Area</u>	<u>Location/Major Tasks</u>	<u>Position Title or Expertise</u>	<u>0654 Number</u>	<u>Onshift ERO Position Performing Task</u>
Plant System Engineering, Repair and Corrective Actions	Technical Support	Shift Technical Advisor	0	N/A
		Core/Thermal Hydraulics	1	Shift Technical Advisor
		Electrical	0	N/A
		Mechanical	0	N/A
	Repair and Corrective Actions	Mechanical Maintenance/ Rad Waste Operator	0	N/A
		Electrical Maintenance/	1	NSO
Protective Actions (In-plant)	Radiation Protection:	I&C Technician	1	None - See Att. 5
		HP Technicians	2	HP Technician NSO Fire Fighter/EMT Chem Technician
a. Access Control b. HP Coverage for repair, corrective actions, search and rescue first-aid & firefighting c. Personnel monitoring d. Dosimetry	--	--	Local Support	N/A
Firefighting	--	--	Local Support	N/A
Rescue Operations and First-Aid	--	--	Local Support	N/A
Site Access Control and Personnel Accountability	Security, firefighting communications, personnel accountability	Security Personnel	All per Security plan	All per Security plan
PERSONNEL TOTAL			11	

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Notify licensee, State, local and Federal personnel & maintain communication

Number Required
within 30 min.: 1

Onshift ERO
Positions
to which the
Major Task
is assigned:

- a. licensee - Control Room Communicator and Security
- b. State - Short Term Emergency Director or Work Control Coordinator
- c. local - Notified by State under NHRERP and MARERP
- d. Federal - Short Term Emergency Director or Work Control Coordinator

Basis for the
Assignment:

As indicated above, the SSREP separates each notification subtask and assigns it to different several groups and individuals, not just one. This arrangement distributes the work load that would be performed by one individual under NUREG 0654 Table B-1 to several individuals.

Following the initial emergency notification, both State response plans require only one brief verification callback to the Control Room before continuous communications are later established upon EOF activation. Neither State response plan requires continuous communications with North Atlantic emergency response facilities until their respective State Emergency Operations Centers are activated. Upon activation, their procedures direct that communications with North Atlantic be conducted through the EOF.

Numerous drills and exercises have demonstrated that onshift personnel can adequately perform "Notification/Communication" tasks within the first 60 minutes without adversely impacting other response actions.

Augmented ERO
Positions that
Assume Major
Task within
60 minutes:

- a. licensee - not required; initial callout completed by onshift personnel
- b. State - Site Emergency Director and ERO Technical Liaison
- c. local - Notified by State under NHRERP and MARERP
- d. Federal - Emergency Operations Manager

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Offsite Dose Assessment

Number Required
within 30 min.: 1

Onshift ERO
Positions to
which the
Major Task
is assigned:

Short Term Emergency Director/Work Control Coordinator

Basis for the
Assignment:

Primary responsibility for initial offsite dose assessment is assigned to the Work Control Coordinator in the Control Room. This task is carried out at the direction of the Shift Superintendent/Short Term Emergency Director. Authorization and timely transmission of protective action recommendations is the responsibility of the Shift Superintendent/Short Term Emergency Director.

The Offsite Dose Projection System (ODPS) can be operated on selected Main Plant Computer System terminals located in the Control Room and the TSC. ODPS can also be operated on a back-up laptop computer located in the Control Room. ODPS uses the same dose projection and plume dispersion model as the METPAC system used by dose assessment personnel in the EOF.

The PAR methodology used by the Control Room (contained in SSER Procedure ER 1.2) is identical to the PAR methodology used by the EOF (contained in SSER Procedure ER 5.4).

Experience in numerous drills and exercises, as well as Licensed Operator Requalification Training, has confirmed the Operators' proficiency in making timely and appropriate protective action recommendations. This fact was noted by NRC Inspectors during the annual EP program inspection conducted the week of July 25, 1994. The inspectors observed three crews assess and classify postulated events. They noted in the Inspection Report that all PARs were correct except one and that that one was conservative.

The inspectors concluded that "no errors made by the crews in the walk-throughs would have resulted in an adverse effect on the ability to protect the public health and safety..." and that "the training of shift supervisory personnel was adequate based on performances observed."

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

Augmented ERO
Positions that
Assume Major
Task within
60 minutes: EOF Coordinator

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Offsite Surveys

Number Required
within 30 min.: 2

Onshift ERO
Positions
to which the
Major Task
is assigned: None

Basis for the
Assignment: Determination of early offsite protective action recommendations are primarily based on plant indications, not offsite monitoring results. This is in keeping with existing regulatory guidance, examples of which are noted below.

1. USNRC Memorandum, Status Report on Guidance to Licensees on Protective Action Recommendations for Severe Accidents, Congel to Kwiatkowski, dated October 29, 1991, states 1) "Initial scoping of an accident is to be based on plant observables, i.e., predetermined emergency action levels, and not projected doses", and 2) "Following the implementation of the initial, early protective actions near the plant, dose projections and field monitoring should be performed to determine if the protective actions should be expanded with field monitoring data being the preferred basis for relocation from sheltered areas."
2. EPA 400-R-92-001, Section 2.4, recommends that "Emergency response plans for facilities should make use of Emergency Action Levels (EALs), based on in-plant conditions, to trigger notification of and recommendations to offsite officials to implement prompt evacuation or sheltering in specified areas in the absence of information on actual releases or environmental measurements."

Additionally, offsite monitoring personnel responding prior to EOF activation could not be effectively deployed or utilized. The EOF staff members that provide direction and support to the survey teams, as well as subsequent data analysis capabilities, would not be able to perform their functions in a coordinated fashion until the EOF is operational. Likewise, key ERO and State decision-makers would not be in a position to effectively use analysis results from offsite monitoring data until the EOF and State EOCs were activated.

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

Augmented ERO
Positions that
Assume Major
Task within
60 minutes: Offsite Monitoring/Sampling Personnel

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: On-site (out of plant) Surveys

Number Required
within 30 min.: 1

On-shift ERO

Positions
assigned the
Major Task:

Onshift Health Physics Technicians, Nuclear System Operators, Firefighter/EMT personnel, Chemistry Technicians and selected Radwaste Department personnel

Basis for the
Assignment:

In circumstances where a field measurement is required to determine or confirm that an EAL has been exceeded, the function would be performed by the on-shift Health Physics Technician. The pertinent EALs defined in SSER ER 1.1 are 12(a), 12(b), 12(d) and 12(e). For each of these EALs, indications from plant instrumentation in conjunction with the Offsite Dose Projection System (ODPS) would be the preferred method of determining whether the EAL has been exceeded.

Determination of early offsite protective action recommendations (PARs) are primarily based on plant indications. This is in keeping with current regulatory guidance. The PAR methodology used by the Control Room is driven primarily by plant indications consistent with the current guidance.

Following emergency declaration and prior to activation of the TSC and OSC, it is unlikely that onsite surveys would be conducted. During this time, the on-shift ERO personnel would be focused on completing required notifications, activating the augmented ERO, and taking mitigating actions.

In the event that an on-site survey were required prior to TSC and OSC activation, additional on-shift personnel are qualified to operate the survey meters used for conducting on-site surveys, including the RO-2 and RO-2A. These personnel include 5 on-shift Nuclear System Operators, 2 on-shift Firefighters/EMTs, and 1 on-shift Chemistry Technician. Training on these survey instruments is included in GT1071C, Radiation Worker Supplemental Training.

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

Augmented ERO
Positions that
Assume Major
Task within
60 Minutes: Offsite Monitoring/Sampling Personnel

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: In-plant Surveys

Number Required
within 30 min.: 1

Onshift ERO
Positions
to which the
Major Task
is assigned:

Onshift Health Physics Technicians, Nuclear System Operators, Firefighter/EMT personnel, Chemistry Technicians and selected Radwaste Department personnel

Basis for the
Assignment:

In-plant surveys required to confirm that an emergency action level had been exceeded would be performed by the onshift HP Technician. Following emergency declaration, there is little likelihood that any in-plant surveys, except those required to support emergency repairs, would be undertaken within the first 60 minutes since the resulting data would not significantly alter pre-established emergency response actions. Surveys supporting emergency repairs are addressed under the NUREG 0654, Table B-1 category of "Radiation Protection". Systematic in-plant surveys may be undertaken following TSC and OSC activation.

In the event that a survey of an in-plant area was required, other personnel are available to perform this task prior to TSC and OSC activation. These positions include Nuclear System Operators, Firefighter/EMT, Chemistry Technicians, and selected Radwaste Department personnel. These individuals are GT1071C qualified. GT1071C, Radiation Worker Supplemental Training, is intended for personnel who require unescorted access into RCA areas normally unoccupied or not recently surveyed. Individuals completing this course are knowledgeable in the proper operation of survey meters including the RO-2 and RO-2A.

Augmented ERO
Positions that
Assume Major
Task within
60 minutes:

Health Physics Technicians

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Core/Thermal Hydraulics

Number Required
within 30 min.: 1

Onshift ERO
Positions
to which the
Major Task
is assigned: Shift Technical Advisor

Basis for the
Assignment: Within the first 60 minutes of an accident, Control Room operators would still be within the Emergency Operating Procedure network (i.e., Emergency Response Procedures, Functional Restoration Procedures or Emergency Contingency Actions procedures). Operators would likely not have exhausted their established procedures to the point where independent recommendations concerning core damage mitigation would be sought. If needed, the Shift Technical Advisor, who has received training in Mitigating Core Damage, could adequately perform this function until the arrival of the Reactor Engineer.

Augmented ERO
Positions that
Assume Major
Task within
60 minutes: Reactor Engineer

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Electrical Maintenance

Number Required
within 30 min.: 1

Onshift ERO
Positions

Assigned the
Major Task: 1 Nuclear System Operator

Basis for the
Assignment:

SSREP Figure 8.15 assigns 2 electrical maintenance personnel to augmented ERO 60 minute reporting positions. Augmented personnel performing electrical maintenance corrective actions would not be deployed until the TSC and OSC are activated. These facilities provide the requisite direction, control, and logistical support necessary to prepare and dispatch maintenance personnel to perform corrective actions effectively. The electrical maintenance personnel could not be effectively utilized until the TSC and OSC are activated to perform these functions. Experience has indicated that the time required for these facilities to activate, evaluate conditions, set priorities, assemble tools and documentation, and establish appropriate work controls will approach 60 minutes.

During the first 60 minutes, the on-shift ERO would be focused on completing required notifications, activating the ERO and taking mitigating actions. The Control Room would not have the time to focus on performing the proper work control functions for deployment of repair teams into the plant.

Augmented ERO

Positions that
Assume Major

Task within
60 Minutes: Two electrical maintenance personnel

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Instrument and Control Technician

Number Required
within 30 min.: 1

On-shift ERO
Positions to
which the
Major Task is
assigned: None

Basis for not
assigning an
I & C Tech.
within 30
minutes:

SSREP Figure 8.15 assigns one I & C Technician as an augmented ERO 60 minute reporting position. Augmented personnel performing repair and corrective actions would not be deployed until the TSC and OSC are activated.

These facilities provide the requisite direction, control, and logistical support necessary to prepare and dispatch personnel to perform repair and corrective actions effectively. The I & C Technician could not be effectively utilized or safely deployed until the TSC and OSC are activated to perform these functions. Experience has indicated that the time required for these facilities to activate, evaluate conditions, set priorities, assemble tools and documentation, and establish appropriate work controls will approach 60 minutes.

During the first 60 minutes, the on-shift ERO would be focused on completing required notifications, activating the ERO and taking mitigating actions. The Control Room would not have the time to focus on performing the proper work control functions for deployment of repair teams into the plant.

Augmented ERO
Positions that
Assume Major
Task within
60 Minutes: One I & C Technician

ATTACHMENT 5
EVALUATION OF REVISION TO
AUGMENTATION TIMING FOR FIGURE 8.15 PERSONNEL

NUREG 0654

Major Task: Radiation Protection

Number Required
within 30 min.: 2

Onshift ERO

Positions

to which the

Major Task

is assigned:

Onshift Health Physics Technicians, Nuclear System Operators, Firefighter/EMT personnel, Chemistry Technicians and selected Radwaste Department personnel as discussed in detail in Attachment 6.

Basis for the
Assignment:

As discussed in Attachment 6, augmented HP Technicians are not required for Access Control, HP Coverage for search and rescue, and firefighting, Personnel Monitoring, or Dosimetry during the early phases of an accident. They would not be required for repair and corrective actions since teams would not be dispatched within the first 60 minutes for the reasons discussed above under Electrical Maintenance, above.

Augmented ERO

Positions that

Assume Major

Task within

60 minutes:

Health Physics Coordinator, Radiological Controls Coordinator and Health Physics Technician

ATTACHMENT 6
EVALUATION OF REVISED PERSONNEL ASSIGNMENTS TO AUGMENTED
RADIATION PROTECTION DUTIES REQUIRED BY THE SSREP

Regulatory Basis

The guidance for augmented Emergency Response Organization (ERO) staffing to perform in-plant radiation protection tasks is presented in NUREG-0654/FEMA-REP-1, Rev. 1 at Table B-1. The listed tasks include:

- Access Control
- HP Coverage for repair, corrective actions, search and rescue first aid & firefighting
- Personnel monitoring
- Dosimetry

NUREG 0654 Table B-1 assigns these activities to a total of 4 augmented persons with the title of Health Physics (HP) Technicians.

Seabrook Station Radiological Emergency Plan Commitment

The SSREP describes the augmented ERO in Figure 8.15. Revision 13 indicated that 4 HP Technicians were assigned to meet the above guidance.

Revision 14 to the SSREP

This revision changes personnel performing in-plant radiation protection tasks from 4 HP Technicians to the following ERO personnel:

- 1 Health Physics Coordinator
- 1 Radiological Controls Coordinator
- 1 HP Technician

Justification for Revision

Several unique characteristics of the Seabrook Station organization and facility allow for satisfactory performance of the Radiation Protection tasks listed in Table B-1 of NUREG 0654 using an alternative staffing approach. These characteristics include certain provisions of the Station Radiation Protection Program, enhanced radiation protection training requirements, and specific station physical arrangements and layouts regarding dosimetry and radiation monitoring. This is discussed below.

ATTACHMENT 6
EVALUATION OF REVISED PERSONNEL ASSIGNMENTS TO AUGMENTED
RADIATION PROTECTION DUTIES REQUIRED BY THE SSREP

1. ACCESS CONTROL

HP Technicians are not required to effect access control measures during the early phases of an accident. The HP Coordinator can provide overall direction for this task from the TSC while the Radiological Controls Coordinator controls RCA access at the OSC [Health Physics Access Control Point (HPACP)]. In addition, the Station Radiation Protection Program Manual, Section 2.2, specifically allows HP supervisory personnel to authorize deviations from normal practices (e.g., granting emergency-related entries into the RCA without an HP Technician being present).

2. HP COVERAGE

Not all response personnel entering the RCA (or unknown areas) need coverage by an HP Technician. For example, 2 of the 4 functions called out in Table B-1, search and rescue first-aid and firefighting, are performed by Fire Fighter/EMT personnel and Nuclear Systems Operators (NSOs). These individuals are GT1071C qualified. GT1071C, Radiation Worker Supplemental Training, is intended for personnel who require unescorted access into RCA areas normally unoccupied or not recently surveyed. Chemistry Technicians and Radwaste Technicians are also GT1071C qualified.

Since NSOs may perform basic mechanical and electrical system troubleshooting and corrective action tasks, only personnel performing specialized repair or corrective actions (e.g., Mechanical Maintenance, Electrical Maintenance, and I&C) would need coverage by an HP Technician during the early phases of an accident.

In addition, Self Contained Breathing Apparatus (SCBA) kits are available near the HPACP to facilitate entries into areas with high airborne radioactivity concentrations or where conditions are unknown.

3. PERSONNEL MONITORING

HP Technicians are not required to perform personnel monitoring during the early phases of an accident. Alarming frisker portal monitors are positioned at the HPACP and routinely used by station radiation workers. In addition, radiation workers are trained in personal monitoring techniques. Personal monitoring instruments (portable friskers) are readily available at the HPACP. Furthermore, the HP Coordinator and Radiological Controls Coordinator would be available to perform personnel monitoring at the TSC and OSC, respectively.

ATTACHMENT 6
EVALUATION OF REVISED PERSONNEL ASSIGNMENTS TO AUGMENTED
RADIATION PROTECTION DUTIES REQUIRED BY THE SSREP

4. DOSIMETRY

Dosimetry can be obtained and returned without the assistance of HP Technicians during the early phases of an accident. It is routine station practice for radiation workers to obtain and return their dosimetry without the aid of HP Technicians. Radiation worker dosimetry is readily available from racks located adjacent to the HPACP. The HP Coordinator and Radiological Controls Coordinator are also available to facilitate dosimetry issuance within their respective facilities.

As noted in the above discussion, 3 of the 4 tasks assigned to HP Technicians by NUREG 0654, Table B-1, can be performed by other ERO members with no adverse impact to overall emergency response capabilities. In addition, due to enhanced HP training requirements for certain ERO members, HP Technicians are partially relieved of the fourth task, HP Coverage. The types and magnitude of tasks envisioned by NUREG 0654 as necessitating 4 HP Technicians would not exist at Seabrook Station during the early phases of an accident. Two (2) HP Technicians (1 on-shift and 1 augmented) are available to provide coverage for specialized repair and corrective action teams.

Since it is unlikely that the NUREG-0654 Table B-1 function of "in-plant surveys" would be conducted except for those required to support coverage for repair and corrective actions, an HP Technician could perform both of these tasks at the same time.

Finally, concerning the task of onsite surveys, TSC and OSC activation would typically occur before a team would be dispatched to perform systematic onsite surveys. During the initial phases of an accident, a onsite survey (e.g., a simple site boundary reading to confirm the magnitude of a release) could be adequately performed by 1 HP Technician. Therefore, 1 of the 2 HP Technicians assigned to this task category could be made available to support more pressing needs (e.g., dispatch of a specialized repair or corrective action team).