

FEMA, April 17, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
LONG ISLAND LIGHTING COMPANY)	Docket No.50-322-0L-3
)	(Emergency Planning
(Shoreham Nuclear Power)	Proceeding)
Station, Unit 1))	

DIRECT TESTIMONY OF THOMAS E. BALDWIN,
JOSEPH H. KELLER, ROGER B. KOWIESKI
AND
PHILIP H. MCINTIRE
CONCERNING PHASE II EMERGENCY PLANNING

The Federal Emergency Management Agency and the Nuclear Regulatory Commission entered into a Memorandum of Understanding (MOU) on January 14, 1980, which defines inter-agency responsibilities with respect to emergency preparedness. Included in that MOU is an agreement whereby FEMA would make findings as to whether offsite emergency response plans are adequate. Such findings are referred to as "interim" because they are provided outside the formal procedures set forth in FEMA's own regulations as contained in 44 C.F.R. 350, and they reflect the status of planning at the time of evaluation. Requests for interim findings are usually made by the NRC to FEMA to assist the NRC staff in their presentations during the licensing process.

By the terms of the MOU, FEMA is also responsible for providing "expert witnesses" to testify before the Atomic Safety Licensing Board.

On September 15, 1983, NRC requested FEMA pursuant to the terms of the MOU TO REVIEW Revision I of the LILCO Transition Plan which had been submitted by the licensee applicant, the Long Island Lighting Company, to the NRC. On September 23, 1983 FEMA's Executive Deputy Director requested the Director of FEMA's Region II to initiate a full RAC review of LILCO's Transition Plan Revision 1. Revision 2 and Revision 3 were subsequently submitted to FEMA On December 30, 1983 pursuant to the terms of the MOU for review by the RAC. The RAC review of Revision 3 was discussed and consolidated at a meeting of the RAC which was held in the FEMA Region II office on January 20, 1984. These review comments were finalized and forwarded to FEMA Headquarters on February 21, 1984. The RAC review of Revision 3 was transmitted to the NRC on March 15, 1984. A copy of the RAC review is appended to this testimony and constitutes a part thereof.

The standards used in reviewing these plans are included in the joint NRC/FEMA guidance document entitled, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants", NUREG 0654/FEMA REP-1, Rev.1.

The purpose of this testimony is to address the contentions relating to offsite preparedness at the Shoreham Nuclear Power Station, as admitted by Board Order of February 3, 1984.

Q.1. Please state your name and business address?

A. Thomas E. Baldwin - Argonne National Laboratories,
55 Hilton Avenue, Garden City, New York 11530

A. Joseph H. Keller - Westinghouse Idaho Nuclear Company, Inc.,
P.O. Box 4000, Idaho Falls, ID 83401

A. Roger B. Kowieski - Federal Emergency Management Agency,
26 Federal Plaza, New York, New York 10278

A. Philip H. McIntire - Federal Emergency Management Agency,
26 Federal Plaza, New York, New York 10278

Q.2. Do you have statements of professional qualifications?

A. Yes. Our statements of professional qualifications are attached to this testimony.

Q.3 When did Thomas Baldwin first become involved in emergency planning?

A. Mr. Baldwin became involved in radiological emergency planning in February, 1982 under a contract for support to the Federal Emergency Management Agency entered into by my employer.

Q.4. When did Thomas Baldwin first become involved in a review of emergency planning as it relates to the Shoreham Nuclear Power Station?

A. Mr. Baldwin became involved with the review of the Shoreham Nuclear Power Station radiological emergency response plan when he received a letter from Mr. Frank P. Petrone, Director FEMA Region II, dated October 4, 1983.

Q.5. Please describe the nature of that involvement up to the present time.

A. Mr. Baldwin was originally requested to review Revision 1 of the plan. Subsequently he received Revision 2 and 3 which were also reviewed. On January 10, 1984 he attended a meeting in Hicksville, New York during which LILO staff explained changes made to the plan in Revision 3. He participated in the RAC meeting of January 20, 1984 to discuss and consolidate the RAC review of Revision 3.

Q.6. When did Joseph Keller first become involved in emergency planning?

A. Mr. Keller became involved in radiological emergency planning in August 1979, when a contract for support to the Federal Interagency Task Force on Offsite Emergency Instrumentation for Nuclear Incidents was entered into by his employer. He was assigned the responsibility of principal investigator on the contract.

Q.7. When did Joseph Keller first become involved in a review of emergency planning as it relates to the Shoreham Nuclear Power Station?

A. Mr. Keller became involved with the review of the Shoreham Nuclear Power Station radiological emergency response plan when he received a letter from Frank P. Petrone, Director FEMA Region II, dated October 4, 1983.

Q.8. Please describe the nature of that involvement up to the present time.

A. Mr. Keller was originally requested to review Revision 1 of the plan. Subsequently he received Revision 2 and 3 which were also reviewed. He participated in the RAC meeting of January 20, 1984 to discuss and consolidate the RAC review of Revision 3.

Q.9. When did Roger Kowieski first become involved in emergency planning?

A. Mr. Kowieski first became involved in emergency planning in 1978 as Regional Dam Safety Coordinator. In 1981, Mr. Kowieski was appointed by the Regional Director as the Chairman, Regional Assistance Committee, responsible for the REP Program. Since that time he managed the REP program and Dam Safety activities in FEMA, Region II.

Q.10. When did Roger Kowieski first become involved in emergency planning as it relates to the Shoreham Nuclear Power Station?

A. Mr. Kowieski first became involved in a discussion of the emergency planning issue in 1982, at a meeting with representatives of Suffolk County, NRC, New York State and FEMA in Hicksville, New York.

Q.11. Please describe the nature of that involvement up to the present time.

A. Since submission of the LILCO Transition Plan on October 4, 1983, Mr. Kowieski coordinated the review of this plan by Regional Assistance Committee, including Revisions 1, 2 and 3. He chaired the RAC meeting of January 20, 1984 when the RAC review of Revision 3 was discussed and a consensus reached. He then finalized the submission of the RAC review to the National Office.

Q.12. When did Philip McIntire first become involved in emergency planning?

A. In 1966 he joined the Office of Emergency Planning on Washington, D.C. This was a predecessor agency of the Federal Emergency Management Agency. In 1975 he first became involved in emergency radiological planning when the Federal Disaster Assistance Administration became a member of the Committee that preceded the Regional Advisory Committee.

Q.13. When did Philip McIntire first become involved in emergency planning as it relates to the Shoreham Nuclear Power Station?

A. Mr. McIntire first become involved in a discussion of the emergency planning issue for Shoreham in 1982, at a meeting with representatives of Suffolk County, NRC, New York State and FEMA in Hicksville, New York.

Q.14. Please describe the nature of that involvement up to the present time.

A. Since submission of the LILCO Transition Plan on October, 4, 1983, Mr. McIntire monitored the review of this plan by Regional Assistance Committee, including Revisions 1, 2 and 3. He monitored in the RAC meeting of January 20, 1984 when the RAC review of Revision 3 was discussed and consolidated. He coordinated the submission of the RAC review to the FEMA National Office.

Q.15. In the course of your review of offsite emergency planning at the Shoreham Nuclear Power Station, what documents submitted by the NRC through the NRC-FEMA MOU have you and your staffs reviewed.

A. We have review the LILCO Transition Plan, Revision 3, which consists of the following four volumes:

- Local Offsite Radiological Emergency Response Plan;
- Volumes I and II of the implementing procedures for the plan; and
- Appendix A, Evacuation Plan

Q.16. What other documents have you relied on in your review of the Revision 3 of the LILCO Transition Plan for the Shoreham Nuclear Power Station?

A. We have used NUREG-0654, FEMA-REP-1, Rev.1, Criteria for Preparation and Evacuation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, published November, 1980 in preparing our review of the LILCO Transition Plan.

Q.17. Is the panel authorized to present to the Board the current FEMA evaluation of the LILCO Transition Plan, Revision 3, for the Shoreham Nuclear Power Station as it relates to offsite emergency preparedness? Does your testimony represent the current FEMA evaluation?

A. Yes.

CONTENTION 20

Q.18. 20-Does the plan contain provisions for 24 hour-a-day Emergency Broadcast System capability for people without FM radios?

A. According to Burrelli's New York State Media Directory, WALK broadcasts A.M. from 5:00 AM to 2:00 AM, and broadcasts FM 24 hours-a-day. The plan does not specifically address how the emergency notification will be given to the population without FM radios when the AM station is off the air. However, it is our understanding that WALK AM can resume broadcasting in any emergency.

It should be noted that the RAC review indicated concern about the use of the term "EBS" (see Attachment 2 of RAC review, Section E-5).

CONVENTION 21

Q.19. 21-Does the Public Education portion of the plan conform to current criteria and guidance for disseminating information in languages other than English?

A. A Joint FEMA/NRC Issuance; Guidance Memorandum #20, deals with foreign language translation of public education brochures and safety messages. If 5% of the citizens of voting age in a political subdivision (counties and independent cities) are members of a single language minority, then translation of public education information in the plume exposure pathway EPZ is warranted.

A determination as to the effectiveness of the public education program for the total population, including minority language groups, could not be made during the plan review stage. The effectiveness of the public education program would be evaluated at an exercise of emergency response preparedness at SNPS.

CONTENTION 22

Q.20. 22.D-Does the EPZ identified in the LILCO Transition Plan divide any major population centers or political boundaries?

A. The plume exposure pathway EPZ divides the following villages:

- ° Port Jefferson - Zone Q
- ° Terryville - Zone K
- ° Riverhead - Zone P

However, the boundary of the plume exposure EPZ follows recognizable landmarks (e.g., roads, highways, railroads, etc.) which follow as nearly as possible the 10-mile radius of the EPZ and, therefore, conform to NUREG-0654 criteria. These landmarks are delineated on maps included in Appendix A of the plan. These landmarks should be narratively described in the text of public education materials (e.g. brochures, wall calendars with maps, telephone book inserts, etc.) to ensure that populations potentially affected by protective action recommendations understand whether they are inside the plume exposure EPZ.

CONVENTION 24

Q.21. 24-Does NUREG-0654 FEMA-REP 1. Rev. 1, Section II A 3, require letters of agreement from all emergency response organizations to be contained in the Radiological Emergency Response Plan?

A. NUREG-0654, Section II A 3, requires each plan to contain written agreements referring to the concept of operations between Federal, State and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. A signature page format is appropriate in lieu of separate letters of agreement for organizations where response functions are covered by laws, regulations or executive orders.

Letters of agreement are required from support organizations assigned emergency response roles. In those cases where privately owned resources are an essential part of the response capability, agreements with the owners are required to assure that the appropriate resources will be made available in an emergency.

During the course of an exercise the ability to field the necessary resources, including equipment and personnel as outlined in the letters of agreement, would be tested.

Q.22.

This question intentionally left blank
pending Board's ruling on Summary Disposition
motions on Contentions 24B, 33, 45, 46 and 49.

Q.23. 24.E-What is the status of agreements between LILCO and school personnel,
including nursery school personnel, charged with protecting children in
school in the event of a radiological emergency at SNPS?

A. No letters of agreement with schools could be located in the plan.
However, the plan takes the following planning factors into consideration
(see Appendix A pages II-19 and 20):

Officials of public and private schools located in the Plume Exposure Emergency Planning Zone (EPZ), as well as schools located outside the EPZ but with students who live in the EPZ, have the responsibility in a radiological emergency of providing their students with the best possible protection. There are three general alternatives available to provide for the safety of the children during an emergency. The first alternative is an early dismissal, whereby all students would be returned to their homes. The second alternative is evacuation, whereby all students would be relocated to reception centers outside the 10-mile Emergency Planning Zone (EPZ). The third alternative is sheltering students at their schools until conditions are safe for the children to either return home or be relocated. The best alternative will depend on the nature of the emergency, plant conditions, weather conditions, and time of day.

In the event of an emergency, schools will be notified of any Alert or higher emergency classification by the Emergency Broadcast System and by telephone. Each public school district, parochial school, and nursery school in the EPZ will have a tone alert receiver which will automatically activate and transmit the EBS message. The EBS message will advise the schools to implement specific protective actions and may contain general information about the condition of the plant, radiological conditions, etc. In addition, each school district superintendent and individual in charge of the private schools in the EPZ will be contacted by telephone by either the Public Schools Coordinator or Private Schools Coordinator to verify that the EBS message was received and to receive requests for additional assistance.

If nursery schools are advised to evacuate the children to reception centers, LERO will provide the necessary transportation.

Q.24. 24.F-Does the LILCO Transition Plan contain letters of agreement with bus companies or other vehicle providers called for in the plan to evacuate all transit-dependent individuals, including school children? What are the implications of the current status of these letters of agreement?

A. Letters of intent from bus and ambulance suppliers are included in Appendix B for the following resources:

- ° Bus companies - approximately 1560 vehicles including buses, vans, coaches, flexetts, etc.
- ° Ambulance companies - approximately 225 vehicles including ambulances, ambuletts, etc.

However, these letters of intent do not commit the bus and ambulance companies to supply equipment to LERO in the event of a radiological emergency at the Shoreham site, because contracts have not as yet been finalized with the bus or ambulance suppliers.

The letters of intent included in Appendix B indicate that LILCO is attempting to arrive at mutually acceptable contracts to assure that these resources will be made available in the event of a radiological emergency at the Shoreham Nuclear Power Station.

Q.25. 24.G-Do the letters of intent that presently exist provide for enough ambulances to meet the needs of Hospitals, Special Facilities, Handicapped, etc., as outlined in the LILCO Transition Plan?

A. The RAC review of the LILCO Transition Plan has concentrated on assessing whether various elements of the plan comply with the Planning Standards and Evaluation Criteria set forth in NUREG-0654. An assessment of whether the number of ambulances identified in the plan (see Procedure OPIP 3.6.5, Health Care Facilities Listing) are actually available would be determined during an exercise.

Q.26. 24.I-Does the LILCO Transition Plan contain letters of agreement providing access and permission to utilize those "Transfer Points" not presently owned by LILCO?

A. While there are no letters of agreement for the use of these facilities, the RAC, in its review of the LILCO Transition Plan, did not identify the lack of written agreements with the owners of non-LILCO facilities as an area of concern that would be sufficient to find the plan inadequate in this regard (see NUREG-0654 evaluation criteria C.4).

Q.27. 24.J-Does the LILCO Transition Plan contain letters of agreement with the special facilities (Association for the Help of Retarded Children Facilities, United Cerebral Palsy Facilities, John T. Mather Memorial Hospital, St. Charles Hospital, Central Suffolk Hospital, Maryhaven Center of Hope and BOCES Learning Center) to implement evacuation procedures set forth in the Plan?

A. The Association for the Help of Retarded Children Facilities, United Cerebral Palsy Facilities, John T. Mather Memorial Hospital, St. Charles Hospital, Maryhaven Center of Hope and BOCES Learning Center are not identified in the plan as support organizations having an emergency response role within the Emergency Planning Zones. Therefore, letters of agreement from any of these facilities which do not have identified emergency response roles are not necessary.

It should be noted that only Central Suffolk Hospital has been identified as a support facility. A letter of agreement could not be located in the plan for this support response organization.

Q.28. 24.K-Does the LILCO Transition Plan contain letters of agreement with drivers, ambulance corps, or other medical personnel to be used in evacuating special facilities and the handicapped, or transporting injured persons?

A. The letters of intent from ambulance suppliers included in Appendix B of the plan specifies that manned vehicles will be provided in an emergency.

Q.29. 24.L-Does the LILCO Transition Plan contain letters of agreement which will provide services to dispatch ambulances for use during a radiological emergency?

A. See answer to Contention 24.F.

Q.30. 24.M-Does the LILCO Transition Plan contain letters of agreement with bus companies, unions, or other groups to provide drivers for implementation of early school dismissal or evacuation/relocation of school children?

The LERO Transportation Support Coordinator is responsible for driver support. The LILCO Transportation Plan states that the utility will provide trained, licensed LILCO employees as a major source of bus drivers (Appendix A, III-36). The RAC has recommended that the plan should specify the number of drivers that have been trained and licensed to respond to a radiological emergency at SNPS.

Q.31. 24.N-Does the LILCO Transition Plan contain letters of agreement with the facilities to be used as relocation centers for school children, hospital patients, handicapped individuals or residents of special facilities?

A. An identification of which relocation centers would be utilized by each school could not be located in the plan. Suffolk County Community College, BOCES in Islip, and SUNY in Stony Brook are the primary relocation centers. Two back-up centers (SUNY - Farmingdale, St. Joseph's College - Patchogue) have been identified.

The inventory of requirements for protecting persons evacuated from special facilities is shown in Procedure OPIP 3.6.5, Attachment 2. If these persons are to be sent to relocation facilities different from the general public relocation centers, the listing of the special relocation facilities must be finalized and supported by letters of agreement.

Q.32. 24.O-What would be the impact on the LILCO Transition Plan if Suffolk County Community College would not be available as a relocation center?

A. Another relocation center or centers with facilities to accommodate the potentially evacuated population that would be estimated to arrive at the Suffolk County Community College relocation center would need to be arranged for and these arrangements would need to be supported by letters of agreement. Any replacement relocation center that is contemplated should be at least 5 miles, and preferably 10 miles, beyond the boundaries of the plume exposure pathway EPZ.

Q.33. 24.P-Does the LILCO Transition Plan contain letters of agreement with the American Red Cross to provide services at relocation centers?

A. Appendix B of the LILCO Transition Plan contains a letter from the utility confirming LILCO's discussions with the Red Cross that the agency will fulfill its usual emergency response functions, including setting up and operating relocation centers for the public. However, a signed letter confirming these arrangements is not presently included in Appendix B of the plan.

Q.34. 24.R-What agreements exist with the State of Connecticut with regard to the recommendation and implementation of protective actions for those portions of the ingestion exposure pathway EPZ located in Connecticut?

A. No formal agreements for the implementation of ingestion pathway protective actions in Connecticut could be located in the plan.

Section 3.6 (page 3.6-8) of the plan states that control of the ingestion exposure pathway EPZ will be directed by the LERO Health Services Coordinator. Section 3.4 E (page 3.4-4) provides for communications from LERO to the State of Connecticut via commercial telephone and centrex. Procedure OPIP 3.6.6 contains ingestion pathway procedures, PAGs, and agricultural resource information, including food processing plants and dairy farms in Connecticut.

Q.35. 24.S-Do letter of agreement exist in the LILCO Transition Plan to provide for the initial training, annual retraining and participation in drills and exercises for emergency workers, including those who are responsible for accident assessment, police, security and fire fighting personnel, first aid and rescue personnel, and medical personnel?

A. With respect to non-LILCO personnel including police, security, and fire fighting personnel, the participation of these personnel cannot be assured since LILCO/LERO does not have mutual aid agreements with these organizations that are supported by a letter(s) of agreement.

The RAC has recommended in its review of the LILCO Transition Plan that it should be clarified in the plan whether DOE-RAP personnel will participate in the radiological monitoring exercises. This clarification was requested since the letter of agreement between DOE and LILCO limits DOE radiological assistance to "advice and emergency action essential for the control of immediate hazards to health and safety" (i.e., in an actual emergency) - see Appendix B, page APP-B-1.

Q.36. 24.T-Does the LILCO Transition Plan contain a letter of agreement with the U.S. Coast Guard to provide for the alert and notification of individuals on the beaches and marinas within the EPZ?

A. The LILCO Transition Plan provides for notification of the U.S. Coast Guard (USCG), which provides public notification services for the general public on the waters within the Emergency Planning Zone. Additionally, the U.S. Coast Guard provides private and commercial vessel traffic control, and restricts access to affected areas in concert with LERO efforts. The letter of agreement in Appendix B (see page APP-B-8) assures that the U.S. Coast Guard will provide these emergency support services to LILCO if they are needed in an emergency at SNPS. However, this letter is not specific with regard to the notification of individuals on beaches and in marinas.

CONTENTION 26

Q.37. 26.A.1-Are there adequate provisions for staffing at the LILCO Customer Service Office in Hicksville and sufficient back-up personnel from Hewlett and Brentwood to ensure that the necessary emergency worker notification functions can be performed?

A. An operator is on duty in the LILCO Customer Service Office in the Hicksville Operations Center 24 hours-a-day.

LILCO Customer Service is the designated primary notification point of the LERO. As such, LILCO Customer Service is responsible for receiving initial and early follow-up notifications of an emergency from SNPS and verifying information contained in the notification messages. When the communication center in the Local EOC is activated, LILCO's responsibility for receiving the notifications will shift from Customer Service to the Local EOC Communications Center. This is expected to occur during the early stages of an Alert emergency classification. Once the Local EOC is activated by the Director of Local Response, primary responsibility for receiving all further notifications will rest with the Lead Communicator in the EOC. No discussion of the availability of back-up personnel at either the Hewlett or Brentwood facilities could be located in the plan.

Q.38. 26.A.2-Does the LILCO Transition Plan contain adequate provisions for receiving initial notification of an emergency and verifying the information received?

A. The Radiological Emergency Communications System (RECS) is the primary notification system to be used by LILCO in notifying LERO should an emergency occur at SNPS. If notification were received via the RECS line, no verification call-back would be needed. Commercial telephone is identified as the backup notification system to RECS. If notification were received in this manner, call back verification would be required. These procedures are detailed in Procedure OPIP 3.3.1, and are considered adequate to ensure that LERO will be able to receive and verify notification in the event of an emergency.

Q.39. 26.C-Is the paging equipment identified in the LILCO Transition Plan adequate to assure that key emergency response personnel will be promptly alerted and notified?

A. Although there are no specific NUREG-0654 requirements for paging systems, the LILCO Transition Plan provides for the use of these devices. The operating procedures by which emergency workers will call in to verify that they have been notified are described in the plan (see page 3.4-5). However, specifics regarding the range over which the pagers will operate, performance standards for these units, and details by which emergency workers will confirm that they have received the appropriate message could not be located in the plan.

Q.40. 26.D-Does the cascading notification scheme which depends upon commercial telephone provide reasonable assurance that a sufficient number of personnel will be promptly notified and mobilized in the event of an emergency at SNPS?

A. The provisions for alerting and activating emergency response personnel in each response organization as described in Section 3.3, pages 3.3-1-4; Figures 3.3.2, 3.3.3, and 3.3.4; and Procedure OPIP 3.3.2 are adequate.

Although the plan specifies in the text that the "procedures for notification and activation of emergency response personnel are the same as those for a site area emergency," a list of persons/groups/organizations to be notified for mobilization at general emergency is not presently included in the plan. The plan is adequate in satisfying the requirements of NUREG-0654 planning element F.1.e, provided that the notification list for persons/groups/organizations to be mobilized at general emergency is added to the plan.

Q.41. 26.E-Does the LILCO Transition Plan provide for the timely notification of non-LILCO emergency support organizations and personnel (i.e.: hospitals, relocation centers, bus companies, ambulance companies)?

A. Provision for the timely notification of non-LILCO emergency support organizations and personnel representing other organizations including hospitals, relocation centers, bus companies, and ambulance companies are adequate as described in Section 3.3, pages 3.3-1-4; Figures 3.3.2, 3.3.3 and 3.3.4; and Procedure OPIP 3.3.2 of the LILCO Transition Plan.

However, as noted in the answer to contention 26.D, a list of persons/groups/organizations to be notified for mobilization at general emergency is not presently included in the plan.

Q.42 26.E-Is there an adequate back-up notification system to non-LILCO emergency support organizations and personnel representing Brookhaven National Laboratory, the U.S. Coast Guard, and the Federal Aviation Administration?

A. The primary means of notifying non-LILCO emergency workers from Brookhaven National Laboratory, the U.S. Coast Guard, and the Federal Aviation Administration is by commercial telephone from the LILCO Emergency Operations Center in Brentwood, Long Island, New York.

The back-up means of notifying these organizations is as follows (see Figure 3.4.1, Summary of Communication Systems):

- Brookhaven National Laboratory (i.e., Brookhaven Area Office) dedicated telephone line from the LERO Emergency Operations Center in Brentwood, New York
- U.S. Coast Guard - Federal Telephone System from the LILCO Control Room at SNPS
- Federal Aviation Administration - Federal Telephone System from the LILCO Control Room at SNPS

These back-up means for notifying the above Federal agencies are considered adequate.

Q.43. 26.E-Does the LILCO Transition Plan limit the notification of non-LILCO emergency support organizations to the declaration of a site area or general emergency?

A. Section 3.3, pages 3.3-1-4; Figures 3.3.2, 3.3.3, and 3.3.4; and Procedure OPIP 3.3.2 of the LILCO Transition Plan establish the provisions for alerting and activating emergency response personnel in each response organization, including non-LILCO emergency support organizations at each emergency classification level. There are some non-LILCO emergency workers who are notified only at the site area or general emergency classification level.

CONTENTION 27

O.44. 27.A and B-Does the LILCO Transition Plan specify estimated mobilization times required for emergency workers to arrive at their assigned duty stations after they have been notified to report?

A. Estimated mobilization times required for emergency workers to arrive at their assigned duty stations after they have been notified to report under either normal or adverse conditions could not be located in the plan. However, with the exception of element I.8, which requires that mobilization times are available for radiological field monitoring teams, there are no specific NUREG-0654 requirements that estimated mobilization times should be included for other emergency workers. The mobilization time for the DOE-RAP team is estimated to be approximately one (1) hour (see Attachment 2.2.1, page 1 of 17).

Q.45. 27.C,D and E-Does the LILCO Transition Plan specify estimated deployment times required for field workers to arrive at their field assignments (including receipt of dosimetry, briefing information, emergency vehicles, and communications equipment) after they have arrived at their assigned staging area or dispatch location?

A. The LILCO Transition Plan does not specify estimated deployment times required for field workers to arrive at their field assignments after they have arrived at their staging areas or dispatch locations. The inclusion of these deployment times is not specifically required by NUREG-0654, but the effective response of emergency workers to field assignments is evaluated during an exercise.

Q.46. 27.F-Can a determination be made at this time whether there are adequate provisions in the LILCO Transition Plan for the timely arrival of workers (e.g., traffic guides, bus drivers - those required to report at Site Area or General Emergency Classification levels) at their field locations?

A. The plan contains no information upon which to base a determination as to whether the arrival of emergency workers required to report to field assignments would be timely. However, it should be noted that Procedure OPIP 3.3.3 provides for the early notification and standby of many emergency workers prior to them being dispatched to their assigned field locations.

CONTENTION 28

Q.47. 28-Does the LILCO Transition Plan provide for adequate and reliable communications with Federal emergency response organizations (FEMA, U.S. Coast Guard, FAA)?

A. The LILCO Transition Plan provides for two separate communication systems as shown in Figure 3.4.1 by which LERO can contact FEMA, the U.S. Coast Guard, and the FAA.

a) Commerical telephone line from the EOC, or,

b) Federal Telephone System from the plant control room.

The existence of two separate means of communication with these Federal agencies is considered adequate.

Contention 29

Q.48. 29-What provisions are contained in the LILCO Transition Plan for the staffing and maintenance of communications equipment at the EOC, staging areas, transfer points, ambulance dispatch stations or other communication posts in an emergency?

A. The plan specifies communicators for both radio and telephone. Eight separate communicators are listed (Figure 4.1.2 (2 of 2)) in the EOC. The ambulance dispatch stations will use their normal communication network. Each Transfer Point Coordinator will be supplied with a radio (Procedure OPIP 3.6.4, page 4 of 4) as will traffic guides, road crews, and evacuation route spotters (Procedure OPIP 3.6.3, Attach 1-2-3). Communications repair capabilities during an emergency could not be located in the plan.

Q.49. 30-Are provisions contained in the LILCO Transition Plan sufficient to ensure effective communication among LILCO field emergency personnel (including security functions)? Does the plan indicate whether the radio frequencies assigned to this communications system are available to the public? Does the plan indicate how the mobile radios are powered, duration of operating time, ability to recharge and remain operative over a long period of time? Does the plan indicate the range of these radios and whether they are all on the same frequency? Are these radios, attached to vehicles or are they hand-held?

A. The LILCO Transition Plan establishes the LILCO Emergency Radio System which provides four dedicated radio frequencies for communications between the Staging Area Coordinators or the local EOC emergency response coordinators (in Brentwood, Long Island, New York) and field emergency response personnel. These radio frequencies are dedicated for the following groups (see page 3.4-3 of the plan):

- * Patchogue Staging Area to Patchogue dispatched Traffic Guides and Bus Transfer Points
- * Riverhead Staging Area to Riverhead-dispatched Traffic Guides and Bus Transfer Points

- ° Port Jefferson Staging Area to Port Jefferson dispatched Traffic Guide and Bus Transfer Points
- ° EOC to Road Crews, Evacuation Route Spotters, and Ambulance Dispatch Stations

The LERO frequencies are not published for public use. However, an individual with a scanner could easily "lock-on" and receive any transmission. From a review of the various procedures, it appears that the radios are hand-held, portable, and battery operated. The plan review did not identify operating time, range, or recharge requirements for the radios. These items are normally evaluated during an exercise.

CONTENTION 31

Q.50 31-Does the LILCO Transition Plan adequately provide for back-up communications equipment between emergency response coordinators at the EOC and field emergency response personnel?

A. There are no specific NUREG-0654 requirements for backup communications capabilities between emergency coordinators at the EOC and field emergency response personnel. However, the LILCO Transition Plan identifies four (4) radio frequencies (see page 3.4-3), each dedicated for specific groups of emergency field workers. These separate frequencies are accessed through the staging areas and the EOC. We have not been able to evaluate the multi-channel capabilities of LERO's radio equipment because the specifications of these units are not included in the plan. Therefore, the back-up communications capabilities between emergency response coordinators at the EOC and emergency workers in the field cannot be evaluated at this time.

CONTENTION 32

Q.51. 32-Would the relay of messages from response coordinators at the EOC to field personnel through the staging areas delay the implementation of emergency actions?

A. To the extent that communications between field personnel and their coordinators are shown to be effective in communications drills and/or exercises, the relay of messages, or lack of direct communication, should not delay the implementation of emergency actions.

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motions on Contentions 24B, 33, 45, 46 and 49.

CONTENTION 34

Q.53 34.A,B and C-Does the plan indicate whether the emergency radio system described in the LILCO Transition Plan is compatible with the radio communications equipment that is presently utilized by the hospitals and ambulances that would be called upon to respond under provisions of the plan? Does the LILCO Transition Plan indicate whether the LILCO emergency communication system has direct access to the radio frequencies utilized by the hospitals and ambulances identified in the plan? Does the use of existing radio frequencies for communications with hospitals and ambulances specified in the LILCO Transition Plan hinder the ability to implement response by fixed and mobile medical support facilities?

A. The LILCO Transition Plan makes the following statement regarding radio communications links between LERO (i.e. the local EOC in Brentwood, Long Island, New York) and hospitals, fixed ambulance dispatch stations and mobile ambulances (see Section 3.4-C, page 3.4-3 of the plan):

Hospitals, fixed ambulance dispatch stations, and the mobile ambulances are equipped with their own radios which are used in day-to-day operations and will be coordinated through their normal channels. LERO personnel will have direct radio or telephone communication with applicable normal dispatch locations. This communications link will enable LERO personnel to alert ambulance dispatchers to the need for ambulance service as the requirement arises. The dispatchers in turn will contact the various ambulance units to satisfy LERO's needs.

It is accepted practice to rely on existing radio links that have been established between hospitals, ambulance dispatch stations, and mobile ambulances. Reliance on these existing links would be expected to facilitate, rather than hinder, the ability to carry out the plan.

The LILCO Transition Plan indicates that it is not necessary for the EOC to be in direct contact with ambulance vehicles, emergency medical services, and hospitals identified in the plan. This is because the plan specifies that LERO personnel will "alert ambulance dispatchers to the need for ambulance service as the requirement arises", and, that "the dispatchers in turn will contact the various ambulance units to satisfy LERO's needs" (see Section 3.4-C LILCO Emergency Radio System).

Communications with fixed and mobile medical support facilities are specified in the plan as follows:

	<u>Means</u>
° Ambulance dispatch stations	commercial telephone and radio
° Ambulance drivers	radio link via dispatch station
° Hospitals	commercial telephone and radio links via ambulance dispatch stations and mobile ambulance units.

With respect to radio frequencies used by field emergency response personnel, the LILCO Transition Plan states that "hospitals, fixed ambulance dispatch stations, and the mobile ambulances are equipped with their own radios which are used in day-to-day operations, and will be coordinated through their normal channels. (see Section 3.4-C, page 3.4-3). These provisions adequately meet the requirements for communications with fixed and mobile medical support facilities required by planning standard F.2 in NUREG-0654.

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CONTENTION 55

Q.58. 55-Does the LILCO Transition Plan adequately provide for the prompt notification and mobilization of key command and control personnel to ensure that the fixed siren system can be activated in a timely fashion?

A. The answer to this question is covered in the responses to contentions 26C and 26D.

CONTENTION 56

Q.59. 56-Does the LILCO Transition Plan provide an adequate back-up alert and notification system in the event of a partial or total failure of the LILCO siren system? Will this back-up system meet the 15-minute notification requirements of NUREG-0654? Does the LILCO Transition Plan establish procedures to ensure that route alert drivers will be able to notify the public if their dosimeter readings exceed specified levels?

A. The LILCO Transition Plan stipulates that "siren activation will be verified by telephone survey (to be conducted by Marketing Evaluations, Inc.). In the event of partial or total siren failure a route alerting system will be implemented in which LILCO emergency vehicles, equipped with public address units, will drive through affected the areas in the plume exposure EPZ alerting residents to listen to the local Emergency Broadcasting System (EBS) radio station (see Section 3.3-E, page 3.3-4, Notification of the Public).

In the event that route alerting becomes necessary, Procedure OPIP 3.3.4, page 4 of 7, establishes the following procedures:

5.3 Route Alerting

5.3.1. The Evacuation Coordinator will direct the Special Facilities Evacuation Coordinator to initiate route alerting.

5.3.2 The Special Facilities Evacuation Coordinator will:

- a. Obtain the listing of all non-activated sirens from the Coordinator of Public Information.
- b. Contact the appropriate Lead Traffic Guide and direct that route alert drivers be dispatched to the areas requiring warning. Inform the Lead Traffic Guide which sirens are located in the downwind zones and direct that the Route Alert Drivers be dispatched to these zones before sending drivers to the other zones.
- c. When teams have been dispatched, notify the Evacuation Coordinator.

An estimate of the amount of time required to implement and execute the route alerting backup alternative to the siren alerting system could not be located in the LILCO Transition Plan. Therefore, it cannot be determined whether the route alerting procedures described in the plan are sufficient to satisfy that these special arrangements will assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ (see NUREG-0654, Appendix 3, Section B.2.C, page 3-3). Route alerting would be evaluated at an exercise or communications drill.

The plan specifies that emergency workers, including route alert drivers would be trained to inform their immediate supervisor if the reading on their low-range dosimeter goes beyond 200 mr. The Director of Local Response, as advised by the Radiation Health Coordinator, is responsible for authorizing exposures in excess of the EPA general public PAGs. Therefore, route alert drivers may be requested to continue their route alert assignments if their dosimeter readings are within acceptable limits for emergency workers.

CONTENTION 57

Q.60. 57-Are there adequate provisions in the LILCO Transition Plan for notifying special facilities and other organizations equipped with tone-alert radios within the plume exposure EPZ to assure that these organizations would have sufficient time to implement recommended protective actions?

A. The LILCO Transition Plan provides for an alert system currently consisting of 89 fixed sirens mounted throughout the plume exposure EPZ. In addition to the fixed sirens,

there is a system of tone activated alert radios for warning those organizations with a large number of people such as schools, hospitals, nursing homes, handicapped facilities and major employers. Each special facility will be equipped with a Tone Activated Radio receiver which, upon activation by the EBS signal from WALK radio (97.5 FM), will automatically broadcast the emergency messages. This system will provide these special facilities with direct notification during an Alert, Site Area Emergency and General Emergency (See Section 3.3-E, page 3.3-4 of the plan).

However, there is no specific requirement in NUREG-0654 for the activation of tone-alert radios, prior to notification of the general public, to provide additional alerting or preparation time for the implementation of protective actions by special facilities. It should be noted that the plan provides for notification and early dismissal of schools at the alert emergency classification level.

The procedures for activating the tone-alert radios through WALK-FM radio is covered in the answer to Contention 20.

Q.61. 58-Are there adequate procedures in the LILCO Transition Plan to utilize telephones to verify that special facilities and individuals are aware of the need to evacuate and to ascertain their needs for assistance?

A. The LILCO Transition Plan satisfies the criteria for NUREG-0654 planning standard F, Emergency Communications, which requires 24 hour-per-day back-up means of communication with emergency response organizations (including special facilities). The plan stipulates that commercial telephones can be used as an alternate means of communication with hospitals, nursing homes, handicap facilities, and schools (see Section 3.4-E, Commercial Telephone and Centrex). As a complement to the sirens and tone-alert radios used to notify these facilities, commercial telephone is considered an acceptable means of communication for LERO to verify evacuation recommendations, and to obtain information from special facilities regarding needs for assistance they may require. With respect to mobility-impaired individuals residing at home, their special needs will be assessed based on information they provide on the survey cards, which are to be returned to LILCO. A directory of mobility-impaired persons is being compiled based on the completed survey cards. In the event of an emergency at SNPS, the LERO Home Coordinator is responsible for ensuring the evacuation of individuals who need assistance to evacuate their homes. The procedure by which the Home Coordinator verifies requests for assistance by telephone during an emergency are detailed in Procedure OPIP 3.6.5 (see Section 5.1.2.f, page 3 of 20).

With respect to separately domiciled hearing-impaired individuals, the plan makes the following provision:

In the case of the deaf population at home, a LERO representative will be dispatched to their homes to inform them of the need to take protective action. For those deaf who are also disabled, they will be sent an appropriate vehicle to assist them in their evacuation. (see Section 3.3, page 3.3-4 of the LILCO Transition Plan).

Based on its review of the plan, the RAC has considered these provisions for protecting mobility-impaired persons (including verification of their requests by telephone for assistance during an emergency) to be adequate provided that the directory of non-institutionalized mobility-impaired individuals has been completed.

CONTENTION 59

Q.62. 59-Does the LILCO Transition Plan indicate whether the Coast Guard has the capability of notifying the general public on the waterways within the 10-mile EPZ within 15 minutes of the initial notification?

A. The LILCO Transition Plan makes the following statement in Section 2.2, page 2.2-2:

United States Coast Guard

The United States Coast Guard (USCG) provides public notification services for the general public on the waters within the Emergency Planning Zone. Additionally, the U.S. Coast Guard provides private and commercial vessel traffic control and restricts access to affected areas in concert with LERO efforts.

However, the LILCO Transition Plan is not specific with regard to the U.S. Coast Guard's capability for notifying the general public on the waterways within 15 minutes of the initial notification. The Standard Guide for Evaluation of Alert and notification Systems for Nuclear Power Plants (FEMA 43/September 1983) specifies that:

The design report (describing special alerting methods) should include a description, including any assumptions made, of any analyses or calculations necessary to verify that individuals in the areas in which the special alerting method is used can be provided an alert signal within 45 minutes when the design objective is to ensure coverage of the population who may not have received the initial notification (Section E.6.4.4.1, General Acceptance Criteria for Special Alerting Methods).

The Criteria for Acceptance established in Appendix 3 of NUREG-0654, recognize that there may be special circumstances under which it may not be possible to assure that both an alert signal and an informational or instructional message can be provided to the population on an area-wide basis throughout the plume exposure EPZ, within 15 minutes. Under these conditions, the minimum acceptable design objectives for coverage by the system provide that:

- c) Special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ.

The basis for any special requirements exceptions (e.g., for extended water areas with transient boats or remote hiking trails) must be documented. Assurance of continued notification capability may be verified on a statistical basis.

CONTENTION 60

Q.63. 60-Does the LILCO Transition Plan contain adequate guidelines for determining when selective sheltering will be recommended by LERO officials and what populations would be subject to these recommendations?

A. Selective sheltering options are discussed on page 3.6-5 of the LILCO Transition Plan as follows:

Selective Sheltering

This protective action may be ordered at projected doses below the accepted PAGs to minimize radioactive exposure, particularly to pregnant women and children. The Selective Sheltering option will provide this flexibility.

This protective action strategy has been adopted from the New York State Radiological Emergency Preparedness Plan (III-50,51). It would not be recommended without consultation with N.Y. State Commissioner of Health.

EPA's plume exposure PAGs, including recommended protective actions are listed in Table 3.6.1 of the LILCO Transition Plan.

CONTENTION 61

Q.64. 61.A,G,H and I-Does the sheltering available for persons who may be advised to shelter during a radiological emergency at SNPS provide adequate protection?

A. Sheltering is one of the possible protective action recommendations. The plan provides sheltering factors for various types of structures and procedures, whereby the decision-maker is to compare projected exposures to the EPA PAGs in making the decision with regard to protective action recommendations.

Q.65. 61.B-Does the LILCO Transition Plan indicate what actions individuals traveling in vehicles should take if sheltering is advised?

A. The LILCO Transition Plan provides for emergency information bulletins to be transmitted to the public using a network of Long Island radio stations similar to the Emergency Broadcast System (EBS). The draft messages that may be used for providing instructions to the public are contained in Procedure OPIP 3.8.2. Instructions that "people in the affected zones who are not at home should seek shelter inside buildings," are contained in the following draft messages:

- Site Area Emergency (Sheltering)
- General Emergency (Sheltering)
- General Emergency (Sheltering and Evacuation)

Q.66. 61.C.1-Does the LILCO Transition Plan contain adequate provisions to indicate that the necessary preplanning for the sheltering of school children, including consideration of sheltering capacities and shielding capabilities of school buildings, is satisfactorily addressed?

A. The plan establishes that tone-activated radio receivers will be provided to special facilities, including schools. These tone-alert radios will receive EBS messages which, as appropriate, would carry the following instructions:

All schools within the plume exposure emergency planning zone are advised to shelter, that is, to keep children indoors with outside ventilation sources closed off.

Parents should not drive to school to meet their children, since the children are protected in school.

Commercial telephone is used to complement the tone-alert radio system, and to verify information transmitted via EBS.

The draft EBS messages contained in Procedure OPIP 3.8.2 contain the following information pertaining to the procedures for sheltering:

Sheltering is to remain indoors with all windows and doors closed. Air conditioners/heaters should be turned off, fires should be extinguished, and fireplace dampers closed. The people who should shelter are in planning zones...

These procedures will enable schools to shelter their students.

The LILCO Transition Plan indicates in Appendix A (see page II-20) that preplanning for the sheltering of school children has been considered under the following conditions:

- When schools within the plume exposure EPZ are in session, the schools will be advised to take the same protective actions as those advised for the general public.
- If some combination of sheltering and no action is recommended for the general public, the schools would be advised to shelter.
- If schools are in the process of opening, they will be advised to implement sheltering or evacuation.

The plan does not specify sheltering capacities and/or shielding capabilities for school buildings. Although there are no specific requirements for these guidelines to be included in off-site radiological emergency preparedness plans, within the definition of sheltering given in the plan, it is projected that the schools would be sufficient to accommodate the sheltering of their students in the event of a radiological emergency.

With respect to children on their way home due to early dismissal, see the answer to Contention 69C.

Q.67. 61.D and E-Are there adequate provisions contained in the LILCO Transition Plan for providing sheltering to transients on beaches, on boats, in parks, or in other outdoor recreational areas?

A. The draft EBS messages that may be used for providing instructions to the public are contained in Procedure OPIP 3.8.2. Instructions that "people in the affected zones who are not at home should seek shelter inside buildings" are contained in the following draft messages:

- * Site Area Emergency (sheltering)
- * General Emergency (sheltering)
- * General Emergency (sheltering and evacuation)

The Plan does not specify the availability of buildings, their sheltering capacities and/or shielding capabilities, that could be used by people who are not at home, including those on beaches, on boats, in parks or in other outdoor recreational areas. However, it should be noted that there are no specific requirements in NUREG-0654 with regard to sheltering for transients on beaches, in parks, on boats and/or in other recreational areas.

CONTENTION 63

Q.68. 63-Does the LILCO Transition Plan contain adequate guidelines for determining when selective evacuation will be recommended by LERO officials, and what populations (i.e. those with low tolerance for radiation) would be subject to these recommendations?

A. Selective evacuation options are discussed on page 3.6.6 of the LILCO Transition Plan as follows:

Selective Evacuation

Selective Evacuation may be implemented to evacuate from the affected area of the plume exposure EPZ members of the general public who might have a low tolerance to radiation exposure. Specifically, this would include pregnant women and children 12 years and under.

This protective action strategy has been adopted from the New York State Radiological Emergency Preparedness Plan (III-53,54). It may be implemented for projected dose levels of 1 to 5 rems whole body or 5 to 25 rems to the thyroid, but not without consultation with the N.Y. State Commissioner of Health.

EPA's plume exposure PAGs, including recommended protective actions are listed in Table 3.6.1 of the LILCO Transition Plan.

CONTENTION 64

Q.69. 64-Does the LILCO Transition Plan contain adequate provisions for considering wind shifts during evacuation?

A. Yes, the plan contains adequate provisions for considering wind shifts during an evacuation. A protective action recommendation, in this case an evacuation, is preceded by assessment and dose projection. Forecasted meteorological conditions are considered in the initial step of developing any protective action recommendations.

The procedures include a precaution to consider meteorological conditions, and to review and recalculate dose projections and resulting protective action recommendations if changes occur. The only means of evaluating the effectiveness of procedure implementation would be an exercise.

CONTENTION 66

Q.70. 66.A-Does the LILCO Transition Plan identify an adequate number of tow trucks to deal with potential impediments to evacuation?

A. According to the inventory located in Procedure OPIP 3.6.3 (see page 46-A of 46), twelve (12) tow trucks are available for removing disabled vehicles from evacuation routes. Based on its review of the LILCO Transition Plan, the RAC has determined that provisions for the removal of cars by tow trucks is adequate. It should be noted that there are no specific guidelines in NUREG-0654 for determining whether the number of tow trucks identified in a radiological emergency preparedness plan would be adequate to remove disabled cars in the event of an emergency.

Q.71. 66.B-What provisions are contained in the LILCO Transition Plan for the timely dispatch of tow trucks or other heavy equipment to the site of an obstruction?

A. The LILCO Transition Plan makes the following provisions for dealing with potential impediments to evacuation:

• Disabled vehicles

At the direction of the Traffic Control Coordinator, traffic control posts will be established, and potential impediments to evacuation will be removed through the use of tow trucks or other heavy equipment (see Section 3.6, page 3.6-6 of the LILCO Transition Plan).

Q.72. 66.C-Does the LILCO Transition Plan make any provision for the evacuation of persons whose automobiles become disabled enroute?

A. Section 3.6 (see page 3.6-6) of the LILCO Transition Plan makes the following provision:

Those persons without a means to evacuate will be transported by buses that will follow the pre-established routes identified in the public information brochure. The Transportation Support Coordinator will coordinate bus operations and ensure an adequate supply of buses and drivers, refer to Bus Route Procedure 3.6.4.

Procedure OPIP 3.6.4 (see page 6 of 42) stipulates that it is the responsibility of the Transfer Point Coordinator to monitor the progress of the evacuation, and dispatch buses until all evacuees are picked up.

Q.73. 66.D-Are there adequate assurances in the LILCO Transition Plan that snow removal will be undertaken by the local organizations in the event of a radiological emergency an SNPS?

A. According to page 2.2-4 of the plan, it is anticipated that snow removal will be provided by local organizations in their normal fashion during an emergency. During severe snow or an ice storm, the plan recommends selective or general sheltering until the hazard is mitigated. Based on

its review of the plan, the RAC has suggested that pre-emergency planning for snow removal on the evacuation routes be further developed to include administrative procedures, SOPs, etc. These procedures have been recommended to insure that the snow removal strategy would coincide with any evacuation scheme that might be chosen.

It should also be noted that no letters of agreement with local snow removal organizations could be located in the LILCO Transition Plan.

Q.74. 66.F-What provisions are contained in the LILCO Transition Plan for dispensing gasoline during an evacuation, and how may these provisions impact an evacuation?

A. The Road Crew Procedure contained in Procedure OPIP 3.6.3 provides that vehicles requiring fuel will be provided with three (3) gallons of gasoline from fuel trucks at assigned locations.

CONTENTION 67

Q.75. 67.A 1,2 and 3-Does the LILCO Transition Plan adequately provide for transportation for the transit-dependent general population?
Specifically, are there a sufficient number of buses available?

A. As indicated in the answer to Contention 24F, the LILCO Transition Plan identifies approximately 1560 buses (including buses, vans, coaches, flexetts, etc.) for use in evacuating the transit-dependent general population. However, the letters of intent with the bus companies designated to supply these vehicles have not as yet been finalized. Therefore, it cannot be determined at this time whether the 333 forty-passenger buses that have been estimated as required in Appendix A (see page IV-74b) to evacuate the transit-dependent general population would actually be available for use by LERO.

Q.76 67.C-Will the use of Transfer Points, as outlined in the LILCO Transition Plan, and/or the possible use of mutiple bus runs impact the timely evacuation of the transit-dependent general population from the plume exposure EPZ?

A. Guidelines for the preparation of Evacuation Time Estimates within the Plume Exposure Pathway Emergency Planning Zone are contained in Appendix 4 of NUREG-0654. to the extent that the evacuation time estimates

contained in Appendix A of the plan have been assessed during the RAC review of the plan, these estimates meet the NUREG-0654 standards (see consolidated RAC review of the LILCO Transition Plan, dated February 10, 1984, appended to this testimony). Any further assessment of the effect of "Transfer Points" and/or multiple bus runs on the evacuation time estimates, that are contained in the plan would require technical evaluation of the methodology and/or assumptions used to develop these estimates.

Q.77 67.D-Are there adequate provisions in the LILCO Transition Plan to ensure that transit-dependent evacuees at the Transfer Points will be adequately protected while awaiting transportation to the relocation centers?

A. The LILCO Transition Plan does not contain specific procedures detailing how transit-dependent evacuees would be protected if they must await the arrival of transportation vehicles at the Transfer Points designated in the plan. It should be noted, however, that in its review of the plan, the RAC noted that there are no specific provisions detailing how protective action recommendations would be developed in the absence of an actual release (see RAC review comments for element I.8 and J.10.m). Therefore, it has been recommended that the plan should specify that protective actions such as sheltering, and especially evacuation could be implemented prior to significant releases based on a technical assessment of plant conditions.

CONTENTION 68

Q.78. 68-Does the LILCO Transition Plan specify under what circumstances an early dismissal of schools is implemented? Are there adequate provisions for the protection of school children, if different protective actions are recommended for the general population?

A. Appendix A of the LILCO Transition Plan makes the following provision for early dismissal of schools in the event of a radiological emergency at the Shoreham Nuclear Power Station:

In the event of an emergency, schools will be notified of any Alert or higher emergency classification by the Emergency Broadcast System and by telephone. Each public school district, parochial school, and nursery school in the EPZ will have a tone alert receiver which will automatically activate and transmit the EBS message. The EBS message will advise the schools to implement specific protective actions and may contain general information about the condition of the plant, radiological conditions, etc. In addition, each school district superintendent and individual in charge of the private schools in the EPZ will be contacted by telephone by either the Public Schools Coordinator or Private Schools Coordinator to verify that the EBS message was received, and to receive requests for additional assistance.

Upon an initial declaration of an Alert or a Site Area Emergency where no protective action is recommended for the general public, school officials will be advised to implement their early dismissal plans if schools are in session. Students would return home as expeditiously as possible by their customary mode of transportation. If one of these declarations occurs when schools are in the process of opening, school officials will be advised to have arriving buses return their students to their homes, and to have students who do not normally use buses to return home in their usual manner. If school is not in session and an Alert or higher emergency classification is declared, school officials will be advised to cancel classes for all schools in the EPZ until the emergency is terminated.

If schools within the EPZ are still in session when a protective action is recommended for the general public in any area of the EPZ, the schools will be advised to take the same protective action. That is, if some combination of sheltering and no action is recommended for the general public, then the schools would be advised to shelter and put their buses on standby. If some combination of sheltering and evacuation is recommended for the general public, then the schools would be advised to evacuate to pre-designated reception centers. If schools are in the process of opening, then they will be advised to implement sheltering or evacuation, as appropriate, when their students arrive.

Those schools outside the EPZ which have students living in the EPZ will retain those students at the school when the school day ends, if any protective actions are recommended for the general public in any area of the EPZ (See Appendix A, Section II, page II-20 of the LILCO Transition Plan).

We consider that the plan contains adequate provisions for protecting school children, provided that the plan is revised to ensure that the implementation of protective actions takes into account an assessment of plant conditions prior to actual releases.

CONTENTION 69

Q.79. 69.B-Does the LILCO Transition Plan discuss the details of the early dismissal plans for schools or school districts within the plume exposure EPZ?

A. Provisions for the early dismissal of schools within the plume exposure EPZ specified in the answer to contention 68 are considered adequate, provided that the plan is revised to ensure that the implementation of protective actions takes into account an assessment of plant conditions prior to actual releases.

Q.80 69.C.1 & 2-Does the LILCO Transition Plan provide sufficient time to allow school children to arrive home, so that they are under the care of their parents, in the event of implementation of an early dismissal?

A. The LILCO Transition Plan does not specify the amount of time required for school children to arrive home if schools are dismissed early. However, there are no specific NUREG-0654 standards for returning children home in the event that an early dismissal of schools. As noted in the answer to contention 67D, there are no provisions detailing how protective action decisions would be developed in the absence of an actual release (see RAC review comments for element I.8 and J.10.m). Therefore, the RAC has recommended that the plan should specify that the early dismissal of schools could be implemented prior to actual releases.

Q.81 69.D-Does the LILCO Transition Plan address the care of children being dismissed from school pursuant to early dismissal, and returning to an empty house without adult supervision?

A. Considerations pursuant to the care of children returning to an empty house as a result of early school dismissal could not be found in the plan, nor is this specifically required by NUREG-0654.

Q.82. 69.E-Does the LILCO Transition Plan contain any procedures that address the situation wherein the emergency escalates after early dismissal procedures have been initiated, but before the children have been returned to their homes?

A. The answer to this question is the same as that given for Contentions 69.C.1 & 2.

CONTENTION 70

Q.83 70-Does the LILCO Transition Plan identify relocation centers for the schools within the plume exposure EPZ, and does it contain procedures for reuniting children with their families at these centers?

A. Appendix A of the LILCO Transition Plan provides that "if some combination of sheltering and evacuation is recommended for the general public, then the schools would be advised to evacuate to pre-designated reception centers." A list of educational facilities that may be affected within the plume exposure EPZ is contained on pages II-10 and 10a of Appendix A of the plan.

Suffolk County Community College, BOCES in Islip, and SUNY In Stony Brook are the primary relocation centers. Two back-up centers (SUNY - Farmingdale, St. Joseph's College - Patchogue) have been identified. However, an identification of which schools are pre-designated for which reception centers and procedures for reuniting children with their families at these centers could not be located in the plan. Furthermore, the plan establishes procedures for the early dismissal of schools and returning school children home to be reunited with their families at the alert emergency classification level. However, procedures for reuniting children with their families at relocation centers in the event that schools and the general population would be evacuated simultaneously could not be located in the plan.

CONTENTION 71

Q.84. 71.A.1-Does the LILCO Transition Plan indicate where the buses would be located and their accessibility to LILCO employees, if necessary, during a radiological emergency?

A. The plan designates the locations of the various bus companies which have provided letters of intent to supply buses to LERO. However, the plan does not assign LERO drivers to any specific bus company. The plan does provide, in Procedure OPIP 3.6.4, page 2 that the bus coordinator would assign the drivers to specific bus companies depending upon which sections of the plume exposure EPZ are to be evacuated. Based on the plan review conducted by the RAC, it is not possible to determine at this time the accessibility of buses to LILCO drivers. The issue of bus accessibility would be assessed during an exercise based on interviews with selected bus companies.

Q.85. 71.A.2-Does the LILCO Transition Plan contain provisions for the supervision of children at schools, in buses and at relocation centers?

A. The LILCO Transition Plan makes the following provision in Procedure OPIP 3.6.5, Section 5.3 - Evacuation of schools:

NOTE

OFFICIALS OF PUBLIC AND PRIVATE SCHOOLS LOCATED IN THE 10-MILE EMERGENCY PLANNING ZONE (EPZ) HAVE THE RESPONSIBILITY IN A RADIOLOGICAL EMERGENCY TO PROVIDE THEIR STUDENTS WITH THE BEST POSSIBLE PROTECTION AND ARRANGE FOR THEM TO BE SAFELY REUNITED WITH THEIR FAMILIES AT THE EARLIEST OPPORTUNITY. THE LERO DIRECTOR OF LOCAL RESPONSE WILL PROVIDE GUIDANCE AND INSTRUCTIONS TO ACCOMPLISH THESE PURPOSES (BASED ON PREPLANNING BY SCHOOL OFFICIALS FOR THEIR OWN FACILITIES).

Q.86. 71.B-1-Does the LILCO Transition Plan contain information regarding the amount of time necessary to evacuate children in nursery schools and other school populations within the plume exposure EPZ to relocation center facilities?

A. The LILCO Transition Plan is predicated on the assumption that there will be an early dismissal of schools at the alert emergency classification level and, therefore, the evacuation time estimates for the general population shown in the plan include school children. This issue is addressed in Appendix A of the plan (see page V-1) which makes the following stipulation:

Whether or not school is in session at the onset of an accident should not significantly influence evacuation travel times. Specifically, school being in session could serve to extend the trip generation time somewhat.*

(footnote) * Children are assumed to be released from school to the home concurrently with the commuter trips from work to home. The departure of the family from home to initiate the evacuation trip is, in general, delayed due to school being in session, only if the children return home later than the commuter.

Q.37. 71.8.2--Does the LILCO Transition Plan rely on multiple bus runs, more than one trip by each bus, in order to evacuate all school children, and is the number of these multiple bus runs sufficient to transport all school children out of the plume exposure EPZ in a timely fashion?

A. The LILCO Transition Plan stipulates in Section 3.6 (see pages 3.6-6 and 7) that the Bus Coordinator will coordinate bus operations. Procedure OPIP 3.6.5 contains provisions whereby the Bus Coordinator, the Public School Coordinator, and the Private School Coordinator will coordinate the use of buses should it be necessary to evacuate school children. No specific reference to the need for "multiple bus runs" to evacuate all school children could be located in the plan.

CONTENTION 72

Q.88. 72.A-Does the LILCO Transition Plan indicate how long it will take to evacuate the various special facilities in the EPZ?

A. Yes, the LILCO Transition Plan provides evacuation time estimates for special facilities within the plume exposure pathway in Table XV of Appendix A (see page V-8). These evacuation time estimates take into consideration the following circumstances:

- ° Normal conditions
- ° Adverse conditions - Summer
- ° Adverse conditions - Winter

Q.89. 72.C-Does the LILCO Transition Plan identify any relocation or reception centers for persons evacuated from special facilities other than those for United Cerebral Palsy of Greater Suffolk, Inc.?

A. An inventory of individuals in the special facilities who may require evacuation to relocation centers and the transportation resources which are available are shown in Procedure OPIP 3.6.5, Attachment 2. However, the relocation centers to which these persons would be evacuated had not been arranged at the time of the RAC review of the LILCO Transition Plan.

Q.90. 72.D-Does the LILCO Transition Plan indicate when, and under what circumstances John T. Mather Memorial, St. Charles Hospital, and Central Suffolk Hospital would be evacuated in the event of a radiological emergency at SNPS?

A. The plan does not intend that evacuation would be recommended for these hospitals. As stated in Procedure OPIP 3.6.5, page 1, sheltering will be the primary protective action recommendation for John T. Mather, St. Charles, and Central Suffolk Hospitals. The following section is taken from the above referenced page.

NOTE

SHELTERING WILL BE THE PRIMARY PROTECTIVE ACTION RECOMMENDATION FOR MATHER, ST. CHARLES, AND CENTRAL SUFFOLK HOSPITAL DUE TO THEIR DISTANCE FROM SNPS AND THE SHIELDING AFFORDED BY THEIR STRUCTURES. IF AN EVACUATION IS DESIRED BY THEIR ADMINISTRATORS FOR ALL OR PART OF THEIR PATIENT POPULATION, ARRANGEMENTS WILL BE MADE USING AVAILABLE RESOURCES.

Q.91. 72.E-Does the LILCO Transition Plan provide adequate means for protecting patients in hospitals in the event that evacuation of the plume exposure EPZ is recommended?

A. As stated in the answer to contention 72D, the primary protective action recommendation for the hospitals is in-place sheltering. Due to the fact that the hospitals in question are near the boundary of the EPZ, this decision was evaluated as being adequate (see PAC review at J.10.d). Since the evacuation of hospital patients is planned as a secondary protective action recommendation, the use of resources on an as-available basis is considered adequate.

CONVENTION 73

Q.92. 73.A.1-Is the preregistration system outlined in the LILCO Transition Plan to identify handicapped individuals residing at home sufficient to identify those individuals needing special assistance?

A. The plan has procedures for a directory of non-institutionalized mobility-impaired persons to be compiled based on completed survey cards of special needs of the handicapped that will be returned to LILCO. These cards are contained in the public information brochure. The plan is adequate in addressing this planning criteria, provided that the directory of non-institutionalized mobility-impaired individuals is completed.

Q.93. 73.A.2 and 3-Does the LILCO Transition Plan make provisions for verifying the list which will be compiled from the returned postcards used in the pre-registration system of the handicapped and for updating that information on a regular basis?

A. According to the plan, the public information brochure will be distributed annually. We are not aware of any provision for verifying the list and information needs for special assistance to be compiled from the mail-in cards.

Q.94. 73.B.1-Are there adequate provisions in the LILCO Transition Plan for notifying non-deaf handicapped individuals?

A. The provisions for notification of the non-deaf non-institutionalized handicapped is considered adequate. If special problems exist such that the handicapped are unable to communicate by telephone, these cases should be identified on the preregistration cards which are to be distributed with the public information brochure. Again, the plan is considered adequate provided that the directory of non-institutionalized mobility-impaired individuals is completed.

Q.95. 73.B-3-Does the LILCO Transition Plan identify sufficient personnel to assure that disabled individuals will be notified promptly to permit their timely evacuation to reception centers?

A. The plan does not specify the number of personnel to be assigned. However, until the listing of the needs has been compiled from the pre-registration cards, there is no way of ascertaining how many handicapped individuals will need assistance.

Q.96. 73.B.4-Does the LILCO Transition Plan identify the estimated evacuation times for non-institutionalized handicapped individuals?

A. Appendix A of the LILCO Transition Plan states that "the study to obtain evacuation time does not explicitly consider the provision of bus service, ambulances or other specialized vehicles" (see page V-2).

Q.97. 73.B-5-Does the LILCO Transition Plan indicate the number of route alert drivers that would be assigned to notify and evacuate the deaf?

A. The plan does not specify the number of drivers to be assigned to notify and evacuate the deaf. However, until a list of the handicapped and their needs has been compiled from the preregistration cards, there is no way of ascertaining how many deaf individuals will need assistance. Therefore, the number of drivers that may be needed cannot be determined at this time.

CONTENTION 74

Q.98. 74-Does the location of the relocation centers identified in the LILCO Transition Plan comply with the requirements of planning standard J.10.h of NUREG-0654?

A. The RAC evaluation of the plan found criteria element J.10.h to be inadequate. Of the three primary relocation centers identified, only the BOCES in Islip was found to be further than 5 miles beyond the EPZ boundary (see RAC review at J.10.h).

CONTENTION 75

Q.99 75-Does the LILCO Transition Plan contain information as to the number of individuals expected to utilize the relocation centers? Does the plan indicate that sufficient facilities (e.g, toilets, showers, food preparation facilities, drinking water, and sleeping accommodations) are available in the relocation centers?

A. Estimates of the number of transit-dependent evacuees expected to arrive at the relocation centers are contained on the evacuation route descriptions in Appendix A of the LILCO Transition Plan (see pages IV-75 through IV-163). However, relocation center assignments for the population expected to evacuate the plume exposure EPZ by their own means could not be located in the plan.

According to Appendix A of the LILCO Transition Plan, it has been estimated that 9% of the seasonal population will require housing at a relocation center (see pages III 38 and 39). Furthermore, the following criteria were used in selecting the relocation centers and linking evacuation zones to these facilities:

- ° Adequate distance from the EPZ boundary
- ° Reasonable highway access
- ° On-site power security
- ° On-site power generation capability

- ° Adequate parking
- ° Adequate sanitary facilities
- ° Adequate cafeteria facilities

An assessment of the number of individuals estimated to use the various relocation centers and an analysis of the accommodations and facilities at these centers was not undertaken as part of the RAC review. Criteria elements J.10.h and J.12 of NUREG-0654 consider only the distance of the relocation centers from the plume exposure EPZ and the adequacy of equipment, personnel and procedures for monitoring and registering evacuees. Based on these considerations, the relocation centers identified in the LILCO Transition Plan are considered inadequate to meet the requirements of NUREG-0654.

CONTENTION 77

Q.100. 77-Is the equipment used by LILCO, to measure thyroid contamination at relocation centers (RM 14 with HP270 probe) capable of differentiating actual readings from background readings?

A. Yes, the equipment used to measure thyroid contamination is adequate, if the actual reading is sufficiently above the background reading. The plan in Procedure OPIP 3.9.2 calls for maintaining background in the decontamination facility/relocation center at levels less than 50 CPM. The 50 CPM level is for "open window" readings (beta plus gamma), while the thyroid scan procedure action level trigger-point is 150 CPM above background "closed window" (gamma only). The gamma only background would be less than the 50 CPM if the beta plus gamma readings are 50 CPM or less. The instruments described are capable of detecting activity which would be greater than three times background. An exercise would be necessary to evaluate whether proper actions are taken if background exceeds the 50 CPM level.

CONTENTION 81

Q.101. 81.A-Does the LILCO Transition Plan provide adequate procedures for the disposition of contaminated lactating dairy animals or the treatment of uncontaminated lactating dairy animals? Do those procedures assure that the milk or meat products of these animals will be kept from public consumption?

A. The LILCO Transition Plan has adopted the U.S. Food and Drug Administration PAGs which contains both preventative and emergency PAGs. The plan in Procedure OPIP 3.6.6 contains instructions to be transmitted to the food chain establishments, if projected or measured contamination levels exceed the response levels equivalent to the preventative or emergency PAGs.

Q.102. 81.B-Does the LILCO Transition Plan contain adequate provisions for determining acceptable decay period(s) for short-lived radioisotopes and for dealing with long-lived isotopes which could pose a serious health consequence to the public through the contamination of food? Does the plan identify the procedures that would be used to determine how the withholding of contaminated milk would be achieved; how the prolonged storage and special pasteurization of milk would be achieved; how the diversion of production of fluid milk would be achieved; or how the introduction of milk supplies into commerce would be prevented?

A. The LILCO Transition Plan uses the methodology established by the U.S. Food and Drug Administration for dealing with contaminated food stuffs. The decay period for short-lived radioisotopes is handled by standard methods which involve the half life of the nuclide, the initial contamination level, and the response level for a particular protective action. Food stuffs contaminated by long-lived radioisotopes are dealt with solely by considering the response level for a particular protective action. The methods which allow for decay of short-lived radionuclides consists of prolonged storage after pasteurization of milk or diversion of fluid milk to other products which will not reach the public until after an appropriate decay period. These methods cannot be implemented if storage or product diversion capability do not currently exist. The Radiological Health Coordinator is responsible for contacting the food chain establishment and informing them of the protective action recommendations. The public is to be informed by the Coordinator of Public Information of protective action recommendations. In addition, the U.S. Food and Drug Administration has the authority to condemn contaminated food stuffs having the potential for or intended for interstate commerce.

Q.103. 81.C-Does the LILCO Transition Plan contain procedures for disposing of the wash water or milling residue removed from contaminated foods and does the plan contain procedures for identifying the source(s) of farm produce, including those informally sold at local farm stands?

A. Procedures for disposing of wash water or milling residues removed from contaminated foods could not be located in the plan. However, if sufficient contamination were to be released so that these protective actions would be warranted, there would be a large area of contamination

and any problem with these residues would be minor. Procedure OPIP 3.6.6 contains a listing of agricultural farms and processing plants within the EPZ. However, it cannot be ascertained if all local farm stands are included.

Q.104 81.D-Does the LILCO Transition Plan contain maps showing key land use data, watersheds, water supply intakes, and water treatment plants? Does the plan indicate how potentially contaminated water supply wells would be identified and isolated? Does the plan indicate from where alternative water supplies would be acquired?

A. As stated above in the answer to contention 81C, the plan contains lists of farms and food processing plants within the ingestion pathway EPZ. There are, however, no maps referenced for recording survey and monitoring data, key land use data, dairies, food processing plants, watersheds, etc. If LILCO has access to State maps, this should be referenced in the plan. There are also no lists of food processing facilities located outside the 50-mile EPZ which process food originating within the 50-mile EPZ. The plan states that potable water should not be consumed before the source has been checked and approved for use. According to the plan, water from closed tanks and covered wells, which is not contaminated, could be consumed. The Health Services Coordinator would make arrangements for alternate emergency water supplies.

Q.105. 81.E-Does the LILCO Transition Plan indicate how the diet of residents and transients is to be restricted, how contamination of food products would be implemented, and how exports of agricultural products and ducks from Suffolk County would be controlled from being distributed to other parts of the county?

A. According to the LILCO Transition Plan in Procedure OPIP 3.6.6, Section 5.C, once the decision would be made to curtail the consumption of food or water, the Director of Local Response would approve procurement of necessary supplies. The Logistics Support Coordinator will obtain these supplies through Material Purchasing and the Support Services Coordinator would arrange for local distribution. The plan states on page 1 of Procedure OPIP 3.6.6., that LILCO will compensate for food which is not salvageable. The plan also states (see Procedure OPIP 3.6.6, Sect. 5.1.3.6) that the Director of Local Response will contact the States of New York and Connecticut with the LERO ingestion pathway protective action recommendations. If the States are willing to implement their own plans for the ingestion pathway, no further LERO actions are necessary. However, if the States are unwilling to implement their plans, LERO has procedures to contact the affected facilities (OPIP 3.6.6 Sect. 5.4).

Q.106. 81.F-Does the LILCO Transition Plan indicate the resources (i.e., personnel, facilities and equipment, including communications equipment) that would be made available to implement protective actions within the ingestion pathway EPZ?

A. The implementation of ingestion pathway protective actions is to be primarily carried out by food chain establishments. Therefore, specific resources for the implementation of these protective actions are not shown in the plan. The procedures to notify these establishments of what protective actions to take are given in Section 5.4 of Procedure OPIP 3.6.6

CONTENTION 85

Q.107. 85-Does the LILCO Transition Plan contain acceptable plans for recovery and reentry?

A. The RAC review of the plan found NUREG-0654 element M.3 to be adequate, but elements M.1 and M.4 to be inadequate. Criteria element M.1 was found inadequate because the procedure referenced (Procedure OPIP 3.10.1) is based upon incomplete considerations. For example, a partial or total evacuation of the plume exposure EPZ would have to be implemented prior to convening the Recovery Action Committee. This provision is considered inadequate since recovery actions may be required if only sheltering had been recommended. With regard to criteria element M.4, the plan does not contain a method for periodically estimating total population exposure. The plan does provide, however, that an organization will be established for this purpose (see page 3.10.2 of the plan).

CONTENTION 88

Q.108. 88-Does the LILCO Transition Plan contain a method for converting acceptable surface contamination levels from units of disintegrations per minute to radiation doses (e.g., persons-rem) so that re-entry decisions can be made, and does the plan indicate how the cost benefit analysis for temporary reentry (\$1 000/person-rem) will be applied?

A. The conversions for disintegrations per minute to radiation doses are not needed. The plan uses the criteria in Regulatory Guide 1.86, which the NRC uses to return licensed facilities to unrestricted use. The Health Services Coordinator will consider requests for temporary reentry based on the known exposure rates from surveys and the cost-benefit analysis (see Procedure OPIP 3.10.1, Section 5.5.1).

CONTENTION 92

Q.109. 92-Does the New York State Radiological Emergency Preparedness Plan discuss the SNPS site in sufficient detail to assure coordination between the LERO and LILCO emergency response and a potential response by the State of New York or Suffolk County?

A. The lack of assurance of coordination between LERO and a potential response by New York State or Suffolk County has been identified as an area of concern by the RAC in its review of the LILCO Transition Plan. The plan does, however, contain provisions (see page 3.1-1) for the LERO Director of Local Response to work with Suffolk County representatives if they should choose to participate. The States of New York and Connecticut are also included in the plan (OPIP 3.6.6) in connection with implementation of protective action recommendations in the ingestion pathway EP2.

CONTENTION 93

Q.110. 93.A-Does the LILCO Transition Plan indicate whether the EOC has a back-up power supply or alternative facility that would enable the EOC functions to be continued if offsite power is lost?

A. A gas generator is included in the list of major equipment at the local EOC in Brentwood, Long Island, New York (see page 4.1-4 of the plan).

Q.111. 93.B-Does the LILCO Transition Plan indicate whether back-up power is available at staging areas, bus transfer points, receiving hospitals, or relocation centers? Does the Plan indicate whether these facilities would be able to function if there was a loss of offsite power?

A. The availability of back-up power at staging areas, bus transfer points, hospitals, or relocation centers could not be located in the plan. However, the plan states that on-site power generation capability was one of the criteria used in the selection of relocation centers (see answer to contention 75).

CONTENTION 94

Q.112. 94.A-Does the plan indicate whether back-up power is available at the LILCO Customer Service Office to assure the notification of LERO in the event of an offsite power failure?

A. The availability of back-up power at the LILCO Customer Service Office (in Hicksville, Long Island, New York) could not be located in the LILCO Transition Plan. According to provisions in the plan, the RECS line in the LILCO Customer Service Office is monitored 24 hours-per-day. The LERO officer at the Customer Service Office is responsible for activating the paging system which notifies key emergency response personnel that an actual incident has occurred. Page 3.4-5 of the plan states that the paging systems can be accessed by any telephone, including telephones at the following locations:

- ° LILCO Customer Service Office, Hicksville
- ° Local EOC, Brentwood

Q.113. 94.B-Does the LILCO Transition Plan indicate whether the EOC has back-up power to assure that LERO would be able to notify emergency personnel in the field if offsite power is lost?

A. As stated in the answer to contention 93A, the EOC has a back-up generator and would be able to continue notification of personnel in the field in the event of an offsite power failure.

CONTENTION 95

Q.114. 95.A-Does the LILCO Transition Plan indicate whether the siren system has a source of back-up power that would enable them to be operated in the event of an offsite power failure?

A. LILCO has contracted with Marketing Evaluations, Inc. to verify that each siren has activated. Information regarding whether the siren system has back-up power could not be located in the plan. The plan makes adequate provision for route alerting, in the event of partial or total siren failure (see page 3.3-4 of the plan).

Q.115. 95D-Does the LILCO Transition Plan indicate whether the tone-alert radios will have back-up power (including batteries) that would enable them to operate in the event of an offite power failure?

A. The plan provides for weekly testing of the tone-alert radio system. This testing program should be sufficient to insure reliable operation of each radio assuming that these units are not solely dependent upon electrical power. Specific reference as to whether the tone-alert radios will be battery operated or have backup electrical power could not be located in the plan.

Q.116. 95E-Does the LILCO Transition Plan indicate whether the Emergency News Center has a back-up power supply or alternate facility that would enable it to continue functioning, if there is a loss of offsite power?

A. The availability of back-up power or an alternate facility for the Emergency News Center could not be located in the plan. It should be noted that NUREG-0654 does not specifically require a back-up power supply for the Emergency News Center.

CONTENTION 96

Q.117. 96.A-Does the LILCO Transition Plan indicate whether the private ambulance services and bus companies listed in the Plan have the capability for supplying their services to LERO in the event of a loss of offsite power?

A. The capability for ambulance services and bus companies to supply their services if there is a loss of offsite power could not be located in the plan. However, since ambulances and buses are mobile, the primary concern is for the capability of LERO to be able to communicate the need for vehicles. According to the plan, this communication is handled by two-way radio which should have the capability of operating without offsite power. Furthermore, this capability would be evaluated during an exercise.

Q.118. 96.B-Does the LILCO Transition Plan indicate whether the hospitals, nursing homes and facilities for the handicapped located within the EPZ have the capability of implementing protective actions that may be recommended if there is a loss of offsite power?

A. No specific discussion as to the implementability of protective action recommendations at special facilities in the event of loss of a offsite power could be found in the plan.

Q.119. What impact would a power failure have during an evacuation of the plume exposure pathway as it relates to residential lighting, street lights, traffic signals and service stations?

A. The plan does not address back-up power for any offsite facility except the local EOC (see answer to Contention 93.B). A power failure during an evacuation would have significant initial effects brought about by traffic-signals and gas pumps not functioning.

CONVENTION 97

Q.120. 97.B-Does the LILCO Transition Plan take into account a range of possible weather conditions (including unfavorable weather) in order to adequately consider the mobilization, deployment and emergency response of LERO personnel?

A. The plan considers weather conditions in connection with the evacuation time estimates. The question of mobilization and deployment of response personnel during adverse weather conditions could not be located in the plan.

Thomas E. Baldwin

Senior Demographer/Economist

Professional Skills:

Dr. Baldwin is a Demographic/Economic specialist experienced in economic and socioeconomic analyses for industrial and energy development projects. He has over ten years experience with strong technical capabilities in demographic and economic forecasting, cost-benefit and financial feasibility analyses, and market studies.

Professional Experience

1983 - present Environmental Systems Engineer
Energy and Environmental Systems Division
Argonne National Laboratory
Garden City, New York

Dr. Baldwin is Regional Coordinator for support services provided by Argonne National Laboratory under contract to the Federal Emergency Management Agency. He is responsible for the scheduling and management of services furnished to the FEMA, Region II office in New York City. Dr. Baldwin is experienced in reviewing state and local radiological emergency response plans and evaluating their capabilities to protect populations living in the emergency planning zones surrounding commercial nuclear power plants. He frequently serves as a federal observer and team leader at off-site radiological emergency preparedness exercises and is responsible for the preparation of post exercise assessment reports detailing the results of these exercises.

1982 - 1983 Senior Demographer/Economist
Energy and Environmental Analysts, Inc.
Environmental Consultants
Garden City, New York

Responsible for analyzing the demographic, economic and social aspects of energy and industrial projects. Served as a consultant to the Port Authority of New York and New Jersey, New York Public Development Corporation and Merrill Lynch Pierce Fenner and Smith, Inc., in assessing the economic feasibility of a satellite telecommunications facility for New York. As a consultant to Argonne National Laboratory, reviewed state and local off-site radiological emergency response plans for commercial nuclear power plants in New England, New York and New Jersey. Also responsible for expanding Energy and Environmental Analysts' base of clients who require assessments of economic return and the socioeconomic impacts associated with metropolitan development projects.

Professional Experience Continued:

1981 - 1982

Manager of Economics
Dravo Van Houten, Inc.
Consulting Engineers
New York, New York

Energy Economics - Managed marketing and project evaluation analyses of the oil and gas industry leading to corporate investment decisions. These studies were prepared both for internal use by Dravo Corporation and for clients of Dravo Van Houten.

Industrial Development Economics - Reviewed and evaluated the cargo forecasts and projections of regional economic growth used to obtain World Bank financing for container and bulk handling facilities proposed for the Port of Montevideo, Uruguay. Analyzed forecasts of projected fish production and fishing fleet development which were used to estimate the economic return from agro-industrial facilities proposed for the Port of Conakry, Guinea. Developed proposals for the financial/economic feasibility of marine engineering projects that ranged in size from limited, privately financed projects to large foreign regional development programs.

1979 - 1980

Senior Economist
PRC Harris, Inc.
Consulting Engineers
Lake Success, New York

Energy and Environmental Studies - Projected the demand for low pressure gas reserves in a rural upstate New York county based on demographic trends and economic forecasts of future residential, commercial and industrial growth. Conducted the cost-benefit analysis of erosion protection measures for the U.S. Corps of Engineers project to protect commercial and residential developments along the Indian River Inlet in Delaware. Evaluated existing socioeconomic impact models for use by the Corps of Engineers Passaic River Basin Study Group. Analyzed the economic benefits of improving the channel to accommodate larger fishing vessels in the Woodcleft Canal at Freeport, Long Island.

Industrial Development Economics - Project Manager for Terminal Construction Corporation's site/financial feasibility study for the development of a wholesale food distribution center in the Hackensack Meadowlands, New Jersey. Directed regional planning and socioeconomic analysis of growth related to the proposed development of a large agro-industrial port planned for Damietta, Egypt. Technical responsibilities to these studies included the determination of optimal phasing and evaluating the economic return on investment from the proposed projects.

Professional Experience Continued:

1972 - 1979

Social Economist
Energy and Environmental Systems Division
Argonne National Laboratory
Chicago, Illinois

Socioeconomic Impact Assessments - Responsible for demographic, economic and sociological analyses undertaken as part of a variety of research projects sponsored by the U.S. Department of Energy. These studies examined the socioeconomic impacts of changes in employment, population size and demographic composition that are associated with the construction and operation of large-scale energy projects. Responsibilities to this research required in-depth experience with regional economic and demographic project techniques, including export-base, input-output, and cohort survival methods. The construction of social surveys, use of population sampling methods, multivariate regression techniques and statistical analysis of population composition were also an integral part of this work.

LDC Energy Assessments - Responsible for defining the socioeconomic component of Argonne National Laboratory's role in the International Energy Development Program sponsored by the U.S. Department of Energy. Detailed, country-specific energy assessments were prepared for a number of countries. Specific responsibilities to this program included the identification of socioeconomic issues and problems, policy analysis, the development of research methodologies and interaction with foreign representatives. Familiarity with planned and subsidized economies and experience with the application of econometric models to these situations was gained in the course of this project. Knowledge of specific econometric methods for estimating fuel-specific energy demand as a function of price elasticities was also used in this research.

Environmental Pollution Damages - Participated in a joint Argonne National Laboratory/University of Chicago, Department of Economics project sponsored by the National Science Foundation (NSF) to analyze relationships between environmental pollution and the regional economy. Several studies were completed. These included: a survey of Chicago coal users to determine the costs of conversion to other fuels, an inventory of building materials to estimate the costs of soiling due to air pollution, and a multivariate regression residuals analysis that displays the geographic distribution of relationships between socioeconomic characteristics of the population and air quality in the Chicago SMSA. Experience developed in the course of these studies included survey construction and sampling, economic cost-benefit analysis, and the use of air quality display models.

Education:

B.S., Sociology and Biology, Missouri Valley College, 1967.
M.A., Sociology and Human Ecology, University of Cincinnati, 1969.
Ph.D., Human Ecology and Demography, University of Cincinnati, 1973.

Publications

- Baldwin, T.E., Outlook for Engineering Services in the Oil and Gas Market; Dravo Van Houten, Consulting Engineers (June 1981).
- Baldwin, T.E., A Qualitative Assessment of Economic Change in Queens County, New York; Citibank, N.A. (March 1981).
- Baldwin, T.E., and R. Poetsch, An Approach to Assessing Local Sociocultural Impacts Using Projections of Population Growth and Composition, Argonne National Laboratory Report ANL/EES-TM-24 (August 1977).
- Baldwin, T.E., et al., Economic and Demographic Issues Related to Deployment of the Satellite Power System: A White Paper published by the U.S. Department of Energy.
- Baldwin, T.E., et al., A Framework for Detailed Site-Specific Studies of Local Socioeconomic Impacts from Energy Development (December 1976).
- Baldwin, T.E., et al., A Socioeconomic Assessment of Energy Development in a Small Rural County: Coal Gasification in Mercer County, North Dakota, Volumes I and II (August 1976).
- Baldwin, T.E., J.C. Bosch, Jr., and R.R. Cirillo, Projecting Regional Air Pollution Using Traditional Planning Variables, Proceedings of the APCA Specialty Conference; "Long-Term Maintenance of Clean Air Standards." (February 3, 1975).
- Objectives and Decisions: How Do We Draw the Lines? Paper presented at the Regional Seminar on Land Use Issues sponsored by the Bi-State Metropolitan Commission, Geneseo, Illinois (January 15, 1975).
- Baldwin, T.E., R.R. Cirillo, S.J. LaBelle, and A.S. Kennedy, Guidelines for Air Quality Maintenance Planning and Analysis; Vol. 13, Allocating Projected Emissions to Subcounty Areas (November 1974).
- Community Structure and the Adaptation of Municipal Finance, paper presented at VIII World Congress of the International Sociological Association, Toronto, Ontario (August 26, 1974).
- Baldwin, T.E., and A.S. Kennedy, The Feasibility of Predicting Point Source Emissions Using Industrial Land Use Variables: A Path Analysis, paper presented at annual meetings of APCA, Denver, Colorado (June 10, 1974).
- Kennedy, A.A., et al., Air Pollution/Land Use Planning Project Phase II Final Report: Vol. I-II, prepared for the Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency.

Kennedy, A.S., and T.E. Baldwin, Clean Air Through Urban and Regional Planning, proceedings of the Third International Clean Air Congress, Dusseldorf, Germany (October 1973).

Norco, J.E., R.R. Cirillo, T.E. Baldwin, and J.W. Gudenas, An Air Pollution Impact Methodology for Airports and Attendant Land Use, a report prepared for the Office of Air and Water Programs, U.S. Environmental Protection Agency (January 1973).

Croke, K.C., A.S. Kennedy, and T.E. Baldwin, Research Problems and Issues in the Application of Land Use Controls to Environmental Protection, proceedings of the Interagency Conference on the Environment, Livermore, California (October 1972).

JOSEPH H. KELLER
PROFESSIONAL QUALIFICATIONS

Education:

Bachelor of Science in Chemistry, Washington College,
Chestertown, MD, 1956.

Master of Science in Inorganic Chemistry, Pennsylvania State
University, University Park, PA, 1958.

Graduate Assistant in Chemistry, Pennsylvania State University,
University Park, PA, 1958-61.

Professional Positions: 1961-1966

Assistant Professor of Chemistry at Idaho State University,
Pocatello, ID. Responsibilities included teaching courses in
freshman chemistry, quantitative analysis, instrumental analysis,
advanced inorganic chemistry and laboratory radiochemistry.

8/66 - 10/73

Employed at the Idaho National Engineering Laboratory in Idaho
Falls, ID (then called the National Reactor Testing Station).
The site is government owned and administered by the Department
of Energy Research and Development Agency). I was employed by
one of the operating contractors, initially Idaho Nuclear Corp.
followed by Allied Chemical Corp. My position was a technical
one in the research and development area of fission product
behavior and properties.

10/73 - 6/74

Employed as research scientist by Nuclear Environmental Services
division of SAI, Inc., Idaho Falls, ID. Responsibilities included
contract support on performance gaseous rad waste processing equip-
ment in a BWR and analysis of sources of inplant radiation exposure
to workers.

6/74 - 12/78

Employed as scientific and engineering supervisor by Allied Chemical
Corporation at the Idaho National Engineering Laboratory. Responsi-
bilities included supervision of a research laboratory involved with
analysis of fission product levels in irradiated nuclear fuel speci-
mens and analysis of the fission product content of samples of the
world's 1st known natural fission reactor and the supervision of an
analysis laboratory for environmental samples. Conducted contract
research in support of NRC.

12/78 - present

Employed as scientist by Allied Chemical Corp., Exxon Nuclear Idaho Co., Inc., (After 7/3/79), and Westinghouse Idaho Nuclear Company, Inc. (after 3/1/84), at the Idaho National Engineering Laboratory. Responsibilities include research and development contract support to NRC and FEMA.

Attended FEMA orientation training course on Radiological Emergency Preparedness Planning for DOE Contract Personnel.

Experience:

Proved existence of previously unrecognized airborne radioiodine species to be hypoiodous acid.

Developed sampling device to differentiate various chemical forms of airborne radioiodine.

Developed inorganic adsorbent to retain airborne radioiodine.

Measured fission product behavior in simulated loss of coolant accident.

Made highly accurate and precise measurement of natural abundance of krypton in the atmosphere.

Measured gaseous fission products in effluents and process streams in 5 BWR's stations.

Performed effluent and environmental measurements to assess iodine-grass-cow-milk dose pathway at BWR's.

Made effluent and environmental measurements of radioiodine at a pharmaceutical plant to assess environmental impact.

Analyzed fuel specimens to determine accurately the fission yields in the fast flux region of the neutron spectrum.

Analyzed fuel specimens to establish breeding or conversion ratio in Th-U fuels from the light water breeder program.

Developed a sampling device of airborne ^{14}C and ^3H in nuclear plant effluents and process streams.

Participated in environmental program for iodine-milk dose pathway using radioxenon to measure dispersion empirically at BWR site.

Directed gaseous portion of a program to measure movement of radio-nuclides through process equipment in PWR's so that the predictive models can be evaluated.

Responsible for technical evaluation of commercial BWR off-gas systems.

Evaluated applicability of off-site, real-time instrumentation to determine the magnitude of unmonitored releases in accident situations.

Evaluated soil to vegetation transfer of stable cesium and strontium.

Reviewed current state of knowledge or scavenging of the environment airborne radioiodine by rain or snow.

Testified as FEMA witness at Indian Point ASLB hearing.

Adjunct faculty member at FEMA Emergency Management Institute.

Publications:

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Roger B. Kowieski
PROFESSIONAL QUALIFICATIONS

Roger B. Kowieski is employed at FEMA, Region II, New York. Mr. Kowieski is currently serving as the Chairman of the Regional Assistance Committee, Natural and Technological Hazards Division, Region II, Federal Emergency Management Agency.

Mr. Kowieski holds an MS in Environmental Engineering from Wroclaw Polytechnic Institute, Poland and a Professional Engineer License from the State of New Jersey.

The witness began to acquire skills in management, planning, and design while working for the private sector. From 1971 to 1973, Mr. Kowieski worked for Louis Berger Associates where he was involved in design of interstate highways and water resources projects. In 1973, Mr. Kowieski joined URS Corporation as a Project Manager. In this capacity he was responsible for planning, design, and management of various projects in water resources and environmental fields including flood hazard identification studies, flood control, sewage treatment plants for hazardous waste, instrumentation, and Environmental Impact Statements.

The witness began his Federal services in 1977 with the Federal Insurance Administration (FIA) in the U.S. Department of Housing and Urban Development. As an Assistant Director for Engineering with FIA (1977-1980), the witness was primarily responsible for the management, administration and implementation of all Flood Insurance Studies, dam safety program activities and other floodplain related activities in the Region. In this capacity, the witness monitored, supervised, and coordinated the work of approximately 25-30 private engineering consultants and federal agencies conducting work in New Jersey, New York, Puerto Rico, and the Virgin Islands. He also provided technical assistance to State and local officials on various flood damage mitigation techniques and flood warning methods designed to increase the public awareness and to reduce future flood losses.

Appointed by the FIA Administrator to the Task Force comprised of national experts in hazard mitigation, he assisted the Administrator in analysis evaluation and re-direction of external and internal operations of FIA Programs. (1978).

In 1978, Mr. Kowieski was also named as Regional Dam Safety Coordinator responsible for the management and successful implementation of the Dam Safety Program within the Region. In this position, he was involved in emergency action planning for dams and reservoirs. This involved the evaluation of emergency planning in the event of dam failure, delineating the inundation areas, and preparing notification and evacuation plans.

In 1981, Mr. Kowieski also served as Acting Director of the Insurance and Mitigation Division responsible for the management and planning of all activities related to the NFIP and hazard mitigation.

With the realignment of the Regional Office in November 1981, Mr. Kowieski was named Acting Chief, Technological Hazards and Engineering Support Group and the Chairman of Regional Assistance Committee. In this capacity, the witness was responsible for managing and administering all of engineering activities pertaining to the NFIP, Radiological Emergency Preparedness Programs, Dam Safety Program, and hazardous materials program.

Roger B. Kowieski (Continuation)

As Chairman of the Regional Assistance Committee, the witness dealt with those representatives of the Governor responsible for the REP program, the Department of Health, the legislature, and emergency services agencies. In this capacity, he provided a high level of technical assistance to State and local governments in preparation of plans required to meet federal regulations. Under his direction and supervision as RAC Chairman, Region II successfully completed a large amount of work with very limited staff, including reviews and exercises for Nine Mile Point, Ginna, Indian Point, Oyster Creek, and Salem. In December 1982, Mr. Kowieski was promoted to Project Officer, Natural and Technological Hazards Division. In this capacity the witness assists the chief of the division in managing the activities of the division, including Radiological Emergency Planning Programs, National Flood Insurance Program, and the Dam Safety Program. He also served as the agency's expert witness for the Indian Point Atomic Safety and Licensing Board.

Philip McIntire

In August of 1982, Philip McIntire was named Chief of the Natural and Technological Hazards Division of the Federal Emergency Management Agency. In this capacity, he directs the agency's program of evaluating emergency preparedness around nuclear power plants and administers the National Flood Insurance Program in New Jersey, New York, Puerto Rico and the Virgin Islands. He also manages the agency's earthquake preparedness, hurricane loss reduction and dam safety programs.

Since his appointment, Mr. McIntire has directed FEMA's evaluation of the status of off-site safety around Indian Point and other commercial nuclear reactors in New York and New Jersey. In this regard, he has been the agency's lead expert witness before the Indian Point Atomic Licensing and Safety Board and has directed the preparation of several reports to the Nuclear Regulatory Commission regarding off-site safety in the Region.

His Federal service began in 1966 as a Management Intern for the Office of Emergency Planning, Washington, D. C. Assignments in the nation's capital included serving as Staff Assistant to the Director of the Office of Emergency Preparedness for the NATO Committee on the Challenges of Modern Society in the planning and holding of meetings of international disaster experts in Brussels, Rome, Venice and San Francisco. He transferred to the New York Regional Office of the Federal Disaster Assistance Administration in 1972.

Mr. McIntire has an MBA degree, with a major in Management, from the City University of New York. He also received a BA degree from Bowdoin College, Brunswick, Maine, with a Government major. He also completed the Civil Service Commission's "Seminar for Advancing Managers", and was a principal author of "Disaster Preparedness Report to Congress". Throughout his Federal career, Mr. McIntire has received numerous awards and citations.

LILCO Transition Plan for Shoreham - Revision 3

Key to Consolidated RAC Review

Dated February 10, 1984

The Regional Assistance Committee (RAC) review of the LILCO Transition Plan for Shoreham (Attachment I) is based upon planning criteria specified in NUREG-0654, FEMA-REP-1, Rev. 1; Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, November, 1980. The plan has been evaluated against each planning element specified in NUREG-0654 applicable to State and/or Local jurisdictions. These evaluations are keyed to the following rating system:

ADEQUATE RATING

A (Adequate)

A* (Adequate - concerns pertaining to LERO's legal authority identified during this review)

The element is adequately addressed in the plan. Recommendations for improvement shown in **bold type** are not mandatory, but their consideration would further improve the LERO plan. These recommendations include revisions to the NUREG-0654 cross-reference, and other minor improvements.

In some cases, however, particular elements have been rated adequate provided the necessary revisions are made to maintain the adequate rating. These recommended modifications are explained for each such element in the RAC review.

The element is adequately addressed in the plan provided concerns pertaining to LERO's legal authority are resolved. The issues of legal authority affecting these elements are more fully described in Attachment 2.

Recommendations for improvement (not related to legal concerns) shown in **bold type** are not mandatory, but their consideration would further improve the LERO plan. These recommendations include revisions to the NUREG-0654 cross-reference, and other minor improvements.

In some cases, however, particular elements have been rated adequate provided the necessary revisions (not related to legal concerns) are made to maintain the adequate rating.

INADEQUATE RATING

I (Inadequate)

I* (Inadequate - Concerns pertaining to LERO's legal authority identified during this review)

The element is inadequately addressed in the plan for the reason(s) stated in **bold type**. The plan and/or procedures must be revised before the element can be considered adequate.

The element is inadequately addressed in the plan for the reason(s) (not related to legal concerns) stated in **bold type**. The plan and/or procedures must be revised before the element can be considered adequate.

In addition, concerns pertaining to LERO's legal authority were identified by the RAC, and are more fully described in Attachment 2.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 1 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.	<u>Assignment of Responsibility (Organization Control)</u>	
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A.1.a	The lead role for response activities belongs to the utility, LILCO. The plan establishes the Local Emergency Response Organization (LERO) developed by the utility and comprised of federal, utility and private organizations.	I*
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Suffolk County is not participating in offsite emergency planning for Shoreham (see Chapter 1, Section 1.1, page 1.1-1 of the plan which references Resolution 1196-83, adopted February 17, 1983 by Suffolk County Legislature), and New York State has not implemented actions (see Chapter 1, Section 1.4, page 1.4-1. of the plan) relative to their authority.

The New York State Response, should it decide to respond, is not discussed in the 1981 plan as stated (see page 1.4-2, lines 28-29). Therefore, the plan does not address what support New York State will provide in a radiological emergency in Suffolk County when LILCO's resources are exhausted. If New York State is likely to respond, provision for interface with the LERO decision process should be included.

*See footnote at the end of comments for element A.1.a which are continued on page 2.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 2 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.1.a Cont.	The plan should also address federal agencies (other than DOE, FAA and USCG) in terms of their role in response. The U.S. Department of Agriculture, FDA, EPA and NRC may be involved in an accident. The NRC will assign a liaison to the local EOC as well, and will require at least two commercial telephone lines and at least two telephone instruments.
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*This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

A.1.b.	The operational role of LERO is defined in sections 1.4, 2.1 and 3.0. However, the concept of operations and relationship of each organization to the total emergency response effort is vague. Specifically, the relationship of all organizations/positions (e.g., hospitals, ambulance personnel, facilities to be used as relocation centers, outside consultants and federal agencies such as FAA, EPA and USDA) to LERO and the implied lines of responsibilities should be described in the concept of operations (sections 2 and/or 3).
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Local Law Enforcement and Fire Departments are listed as Support Organizations with primary responsibility, yet on page 2.2-4 there is no clear statement that these organizations will participate. The role of Suffolk County, should it elect to respond, should be specifically detailed as in Procedure OPIP 3.6.3 (Traffic Control) page 8.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 3 of 60

NUREG-0654

Element

Review Comment(s)

Rating

A.1.c

The organizational components of LERO are illustrated in Figure 2.2.1. The block diagram assumes that New York State and Suffolk County will communicate with LERO.

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Figure 2.1.2 shows the LERO Radiation Health Coordinator as having primary responsibility for accident assessment, while Figure 2.1.1, page 2 shows this position as being filled by "other personnel." The discussion on page 2.1-3 line 36 implies that this position is a LERO function. Attachment 2.2.1, page 2, lines 24-25 states that DOE will perform accident assessment. From the language on page 2.1-1, it appears that the Radiation Health Coordinator is provided by DOE/BHO, but this is not confirmed by the LERO chart (Figure 2.1.2) under Health Services Coordinator. Clarification should be provided in the plan as to the role of the "outside consultant(s)" in performing the accident assessment function.

Figure 2.2.1 should be revised to depict missing agencies (e.g., EPA, USDA) in a clearer manner.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 4 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
A.1.d	<p>Specific individuals who shall be in charge of the emergency response are identified by title under Chapter 2, organization (pages 2.1-1 - 2.1-8). Again, LILCO personnel are the majority of LERO staff, along with DOE-RAP personnel from the Brookhaven Area Office (BHO).</p> <p>The plan is adequate in addressing this element provided that the specific individual(s) who will perform the responsibilities of the Radiation Health Coordinator is identified by title and affiliation.</p> <p><u>*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).</u></p>	A*
A.1.e	<p>The lead Communicator (see page 2.1-7) has responsibility for ensuring that all communicator positions in the local EOC are manned on a continuous basis once facility is activated. Also, Chapter 3, Section 3.4, pages 3.4-1 - 3.4-5 stipulates that the Radiological Emergency Communications (RECS) line between the Plant and LERO, and LILCO Notification Radio System are monitored 24 hours per day.</p>	A

NUREG-0654

Element

Review Comment(s)

Rating

A.2.a

The functions and responsibilities for major elements and key individuals by title, of emergency response, are specified in the plan for the following: Command and Control, Alerting and Notification, Communications, Public Information, Accident Assessment, Public Health and Sanitation, Social Services, Fire and Rescue, Traffic Control, Emergency Medical Services, Law Enforcement and Transportation. However, the responsibility for "Protective Response," required by NUREG-0654, has not been defined in the text, nor is it listed in Figure 2.1.2. The NUREG cross-reference should be revised to include as a citation for element A.2.a, Figure 3.5.2 which specifies "protective response" responsibilities.

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Section 2.1 does not distinguish between primary and support responsibilities for the response organizations. The distinction between primary and support responsibilities should be clearly stated in the text that describes the responsibilities for each of the various response organizations. In addition, some clarification should be made to Figure 2.1.2 to show a single primary responsibility for each function. Primary responsibilities are identified for more than one agency for the following functions in Figure 2.1.2:

- Public Information and Notification
- Accident Assessment
- Medical and Public Health
- Traffic Control

*See footnote at the end of comments for element A.2.a which are continued on page 6.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 6 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.2.a Cont.	Lead agency responsibilities should be specified for functions where more than one agency has primary responsibility.	
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Lead, primary and support responsibilities for each agency should be specified in the "position definitions" in Procedure OPIP 2.1.1. This cross-reference to Figure 2.1.2 could assist the emergency response coordinators in using the plan and procedures.

Figure 3.3.7 assigns primary responsibility for alerting the general public to the LERO-Director of Response. The LERO-Coordinator of Public Information is responsible for providing public information. These same LERO support functions (i.e., Alert General Public and Inform Public with EBS Broadcasts) refer to FEMA. This must be clarified, since FEMA has no responsibility for notifying the public during a radiological emergency.

*This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 7 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.2.b	Attachment 1.4.1 refers to legal authority under 10 CFR 50.47 (c)(1) which provides as follows:	I*
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Failure to meet the standards set forth in paragraph (b) of this subsection** may result in the Commission declining to issue an Operating License; however, the applicant will have an opportunity to demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question, that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operation.

The cited authorities (Section 1.4 of the LILCO Transition Plan relate to the authorities of the NRC to license a plant under various degrees of emergency preparedness and compensation, rather than the police-type actions.

The utility has developed LERO, comprised of utility, Federal, and private individuals. If New York State and Suffolk County implement an emergency plan, LERO would follow their lead (see Section 1.4, pages 1.4-1 - 1.4-2; also, Attachments 1.4.1 and 1.4.2).

* This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

** Standards A-P specified in criteria defined in NUREG-0654; FEMA-REP-1 Rev. 1. "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants - For Interim Use and Comment" January 1980.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 8 of 60

NUREG-0654

Element Review Comment(s) Rating

A.3 Appendix B contains letters of agreement for the I*
following support organizations identified
in section 2.2 of the plan.

	Signed	Dated
• DOE/Brookhaven National Lab	Yes	Yes
• WBLI radio	Yes	Yes
• WCTO radio	Yes	Yes
• WGSM radio	Yes	Yes
• U.S. Coast Guard	Yes	Yes
• New York Telephone	Yes	Yes
• Marketing Evaluations, Inc.	Yes	Yes
• WALK radio	No	Yes
• American Red Cross	No	No

The plan states that: "It is anticipated that all local law enforcement agencies and fire departments within the ten mile EPZ will continue to carry out their normal response functions during an emergency. Should the incident escalate to the point of requiring these agencies to evacuate from the local area, it is further anticipated that these agencies will take their own compensating measures, based upon the situation at hand, and continue to render the necessary services in response to the situation." The plan also states that: "It is anticipated that snow removal operations within the ten mile EPZ will be provided by local organizations in their normal fashion during an emergency." However, no letters with Suffolk County or local agencies responsible for law enforcement, fire response or snow removal could be located in the plan. No reference to public laws requiring local agencies and services to respond could be found using the NUREG cross-reference. The "Local Public Service Agencies" and "Local Emergency Medical Services Agencies" listed in Figure 2.1.2 should be specified.

*See footnote at the end of comments for element A.3 which are continued through page 10.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 9 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.3 Cont.	Letters of intent from bus and ambulance suppliers are included in Appendix B for the following resources:	
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- Bus companies - (1559/? vehicles#)
- Ambulance companies - (224/? vehicles ##)

However, these letters of intent do not commit the bus and ambulance companies to supply equipment to LERO in the event of a radiological emergency at the Shoreham site, because contracts have not as yet been finalized with the bus or ambulance suppliers. The contract revisions requested by several of the ambulance companies could limit the number of ambulances and ambuletts that will be available.

The LERO Transportation Support Coordinator is responsible for driver support. The LILCO plan states that the utility will provide trained licensed LILCO employees as a major source of bus drivers (Appendix A, III-36). The plan should specify the number of drivers that have been trained and licensed to respond to a radiological emergency at SNPS.

The letter of agreement from DOE on page APP-B-1 does not specify the degree of response to be provided. Shoreham's requirement is closer to that of a "compensating measure" rather than radiological assistance, as is stated in the letter. DOE's role, in this case, is that of the offsite response agency, providing independent dose assessment capabilities. This is not clearly stated in the generic letter from DOE which limits DOE's role to "... advice and emergency action essential for the control of the immediate hazards to health and safety."

Includes buses, vans, coaches, flexetts, etc.

Includes ambulances, ambuletts, etc.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 10 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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A.3 Cont.	Letters of agreement could not be located for the following support organizations/persons or Representative Outside Agencies (see Procedure OPIP 2.1.1, page 12) identified in the plan.	
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- Stony Brook Hospital
- Central Suffolk Hospital
- SUNY Stony Brook
- BOCES Central Islip
- SCCC Selden
- Local law enforcement agencies
- Local fire departments
- Local snow removal organizations
- Federal Aviation Administration
- Laboratories which provide environmental sample analysis
- Radiological Health Coordinator (outside consultant)
- Relocation center coordinator
- Nursing support
- Counselling coordinator

Letters of agreement with support organizations which provide laboratory and environmental sample analysis could not be located in the plan.

The resources LERO expects to use to support the federal responses which are identified in Attachment 3.11.1 should be supported by letters of agreement from those organizations.###

*This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

###Letter of intent with Coram Bus Service is included in Appendix B, pages APP-B-30 and 30A.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 11 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
A.4	<p>The LERO Director of Local Response is responsible for ensuring the continuity of emergency resources for 24-hour operations over a protracted period.</p> <p>The establishment and maintenance of LERO over a protracted period is described in Section 2.1, page 2.1-1, line 26-29; page 2.1.2, lines 36-39 and Procedure OPIP 2.1.1.</p> <p>The NUREG-0654 cross-reference should be revised to include Procedure OPIP 2.1.1 as a citation for element A.4.</p>	A
C.	<p><u>Emergency Response Support and Resources</u></p>	
C.1.a	<p>According to the plan, the LERO Director of Local Response requests the Governor to ask the President to declare an emergency or disaster. Section 3.11, page 3.11-1 of the plan provides that if this request is granted, federal assistance would be administered by the Federal Radiological Preparedness Coordination Committee (FRPCC).</p> <p>The above statement in Section 3.11, page 3.11-1 of the plan referring to the Federal Radiological Preparedness Coordination Committee is incorrect, and should be deleted. The plan should state that the federal response to a radiological emergency would be coordinated by the Federal Emergency Management Agency in accordance with the Federal Radiological Emergency Response Plan.</p> <p>The NUREG-0654 cross-reference should be revised to include Attachment 2.2.1 (page 2 of 17, line 27) which states that "BHO is notified by LILCO customer services."</p> <p>*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).</p>	A*

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 12 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
C.1.b	<p>The DOE-RAP is specified to provide radiological monitoring assistance and expected times for arrival are provided. The plan is adequate in addressing this element provided that specific resources and expected times of arrival are identified for the U.S. Coast Guard (see section 2.2, page 2.2-2). Any additional federal resources, including expected times of arrival to be furnished through the FRERP (see Section 3.11, page 3.11-1) or other arrangements, should also be specified (e.g., EPA, NRC, USDA).</p>	A
C.1.c	<p>The LILCO transition plan identifies resources that are available to support the federal response.</p> <p>LERO has not specified what resources have been identified by federal agencies to support their effort (e.g., air fields, command posts, telephone lines, radio frequencies and telecommunications centers). For example, the EPA response teams will also require:</p> <ul style="list-style-type: none">• airfield for landing military aircraft (C-130)• four independent stationary electrical outlets (110/120 volts @ 30 amperes AC)• source of liquid nitrogen• office, lab and storage space.	I

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 13 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
C.2.a	LERO representatives are already at the SNPS site and may be dispatched to the near-site Emergency Operations Facility (EOF).	A
C.3	Page 3.5-2 of the plan identifies two ORS teams from DOE-RAP for monitoring services and several other organizations for analyses.	A
C.4	Written letters of agreement are incomplete. Letters of Agreement were not found in Appendix B for all organizations listed in Sections 2.2, 3.5 and Attachment 3.11.1 of the plan (also see analysis comments for element A.3).	I*

*This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 14 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
D.	<u>Emergency Classification System</u>	
D.3	The Emergency Classification System, described in Chapter 3, Section 3.2, page 3.2-1 conforms with the system set forth in Appendix 1 of NUREG-0654; FEMA-REP-1, Rev. 1.	A
D.4	The emergency action procedures to be taken are adequately described in Chapter 3, Concept of Operations and the Implementing Procedures OPIP 1.1.1 through 5.4.1.	A
E.	<u>Notification Methods and Procedures</u>	
E.1	<p>The notification and mobilization of emergency response organizations including the verification of messages is outlined in Section 3.3, page 3.3-1 and Procedures OPIP 3.3.2, 3.3.3 and 3.3.4. The LILCO Customer Services Office in the Hicksville Operations Center is the primary LERO notification point.</p> <p>Figures 3.3.2 through 3.3.4 do not include a list of persons/groups/organizations to be notified for mobilization at general emergency. These notification procedures are the same as for Site Area Emergency. The plan is adequate in addressing this element provided that the notification list of persons/groups/organizations to be notified at general emergency is added to the plan.</p>	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 15 of 60

NUREG-0654

Element

Review Comment(s)

Rating

E.2

The necessary procedures for alerting, notifying, and mobilizing emergency response personnel are found in procedure OPIP 3.3.2.

A

Section 3.4, page 3.4-5 which describes the LILCO paging system, and Figure 3.4.1 should be added to the NUREG-0654 cross-reference.

E.5

The plan establishes a system for disseminating appropriate information contained in initial and follow-up messages received from the licensee, including the appropriate notification to the broadcast media.

A*

The notification system described throughout the plan is termed the Emergency Broadcast System (EBS). However, this system, which is a network of Long Island radio stations, with WALK as the entry station, is not the official Emergency Broadcast System (EBS) for Long Island. The official Emergency Broadcast System, is authorized by the Federal Communications Commission, for use by government officials to provide information to the general public. For clarity, the system developed by LERO should use different nomenclature to distinguish it from the FCC sanctioned EBS system. The plan is adequate in addressing this element provided that this issue is clarified in the plan.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 16 of 60

NUREG-0654

Element

Review Comment(s)

Rating

E.6

The prompt notification system consists of 89 fixed sirens, tone activated radios provided to special facilities, (i.e., schools, hospitals, medical support hospitals, handicapped facilities ambulance companies, nursing homes, and major employers, etc.), EBS, and a mobile public address system. Marketing Evaluations Incorporated will verify that each siren has activated (see page APP-B-53). The plan adequately covers the need to demonstrate, under NUREG criteria, that there are means to notify the public.

A*

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

E.7

The draft messages intended for the public found in Procedure OPIP 3.8.2 satisfy NUREG-0654 requirements.

A

Procedure OPIP 3.8.2 includes the following draft messages:

- EBS Activation Advisory
- Alert (release of radiation)
- De-escalation of Emergency
- Termination of Emergency
- Test Message for EBS
- Spurious Activation Message of Prompt Notification Sirens
- Description of Emergency Planning Zones for Suffolk County (to be included in EBS messages).

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 17 of 60

NUREG-0634

Element

Review Comment(s)

Rating

E.7
Cont.

The plan details how press conferences will be conducted. Based on FEMA's exercise experience, it is helpful to have emergency information bulletins available for use by decision-makers, the press, rumor control, and other PIOs.

Radio emergency information bulletins contained in the plan include dosage information. Such information should be presented in less technical language in order to maximize the general public's understanding of this information.

In addition, sample messages should include, as appropriate, information for farmers, food distributors, food processing facilities, etc.

F. Emergency Communications

F.1.a

Provision for 24-hour activation of the LERO emergency response network is accomplished via the RECS line in the LILCO Customer Service Office in the Hicksville Operations Center (see Section 2.1, page 2.1-7 and Section 3.4, pages 3.4-1 to 3.4-5). This RECS line is monitored on a 24-hour basis and the LERO officer at the Customer Service Office is responsible for activating the paging system which notifies key emergency response personnel that an actual incident has occurred.

A

The LILCO Notification Radio System serves as the backup communication system to the RECS for communications between the Shoreham Control Room and the LILCO Customer Service Office.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 18 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
F.1.b	<p>Section 3.4 E (page 3.4-4) provides for communications from LERO to Suffolk County, Nassau County, New York State, and Connecticut via commercial telephone and centrex.</p> <p>The plan should provide for communication with the State of Rhode Island which is affected by the 50-mile EPZ. The plan is adequate in addressing this element provided that arrangements are established for communications with Rhode Island.</p> <p>The NUREG cross-reference should be revised to include section 3.4 page 3.4-4 as a citation for element F.1.b.</p>	A
F.1.c	<p>The plan provides for notification of the following federal emergency response organizations:</p> <ul style="list-style-type: none">• FEMA• DOE response team• U.S. Coast Guard (USCG)• Federal Aviation Administration (FAA) <p>However, the plan does not provide for direct notification by LERO of other federal emergency response organizations in the event that direct support is to be requested from those organizations. In addition to DOE, USCG, and FAA, communications with other Federal support agencies should be arranged, i.e., NRC, FDA, EPA, etc.</p>	I
F.1.d	<p>Communication between the local EOC in Brentwood, New York and the licensees EOF (or TSC) is maintained via the following means (see Figure 3.4.1):</p> <ul style="list-style-type: none">• RECS line• commercial telephone• radio	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 19 of 60

NUREG-0654

Element

Review Comment(s)

Rating

F.1.d
Cont.

The RECS line will allow 24-hour per day notification between the plant and LERO. Communication with the radiological field monitoring teams is maintained via radio link.

F.1.e

The provisions for alerting and activating emergency response personnel in each response organization as described in Section 3.3, pages 3.3-1-4; Figures 3.3.2, 3.3.3 and 3.3.4 and Procedure OPIP 3.3.2 are adequate.

A

A list of persons/groups/organizations to be notified for mobilization at general emergency should also be included in the plan (see also comment for element E.1). The plan is adequate in addressing this element provided that the notification list for persons/groups/organizations to be mobilized at general emergency is added to the plan.

F.2

Communications with fixed and mobile medical support facilities are specified in the plan as follows:

A

Means

- Ambulance dispatch stations

commercial
telephone and
radio

- Ambulance drivers

radio link
via dispatch
station

- Hospitals

commercial
telephone and
radio links
via ambulance
dispatch sta-
tions and mobile
ambulance units.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 20 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
----------------	--------------------------	---------------

F.3	Communication drills will be conducted by LILCO (see Section 5.2, Part A, page 5.2-2a). Communications will be tested monthly; while communications between the plant, the local EOC, and field monitoring teams will be tested annually. Also, see page 3.4-7.	A*
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According to the cross-reference submitted with the plan, the frequency of siren tests as suggested in Appendix 3 of NUREG-0654; FEMA-REP-1, Rev. 1 is specified in the LILCO Nuclear Operations Support Department Procedures. Those procedures should be submitted to FEMA for review in order to assure that the required siren tests will be performed in accordance with NUREG-0654, Appendix 3, page 3-12, Section h (2), Siren Testing Guidance, Oversight.

This element is adequate provided that the LILCO Nuclear Operations Support Department Procedures contain the required frequency of siren tests.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 21 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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G.	<u>Public Education and Information</u>	
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G.1.a-d	Section 3.8, pages 3.8-1-3 of the plan provides for the dissemination of brochures to the public which include the information required by NUREG-0654. The information to be provided will include:	A
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- educational information on radiation
- contact for additional information
- protective measures
- survey card on special needs of the handicapped.

Educational brochures will be mailed to all households and commercial establishments. LILCO plans to use their billing lists for the mailing. In addition, inserts will be developed for the Suffolk telephone directory which will include the following:

- Map of 10 mile EPZ/emergency planning zone.
- List of EBS stations.
- Siren system description/purpose.
- Protective actions the public may be advised to take (sheltering, evacuation).
- Relocation center locations.
- Items to take along for an evacuation.

Local telephone directories will also contain the above items. In addition, these local directories will contain maps showing evacuation routes.

Brochures will be updated on an annual basis, and an annual orientation of news media will be reinforced during annual exercises.

The public education brochure refers to the Emergency Broadcast System (EBS). This nomenclature should be changed to differentiate the LERO system from the FCC sanctioned EBS system (see comment for element E.5).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 22 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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G.2	The public information program and provisions for its dissemination as described in Section 3.8 of the plan are adequate.	A
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G.3.a	The emergency news center (ENC) is to be established in the Quality Inn, Old Mill in Ronkonkoma, New York. This facility will be set up as the central clearing house for the release of information received from the utility and LERO representatives (see Section 3.8, page 3.8-4). The plan provides that "private and public agency/or organization representatives (i.e., American Red Cross, Suffolk County, FEMA, NRC, State officials, etc.) will be invited to participate as a panel in all news conferences."	A*
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The NUREG-0654 cross-reference should be revised to include page 3.8-1 as a citation for element G.3.a.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

G.4.a	The LERO Coordinator of Public Information (CPI) and LILCO's Emergency News Manager at the ENC is the designated spokesperson(s) for LERO.	A
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LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 23 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
G.4.b	LERO Public Information Personnel at the ENC are charged with the responsibility "to provide accurate information (to the media) on a timely basis."	A
G.4.c	<p>The ENC is designated as the central location for rumor control. The rumor control point is for the use of utility personnel at the LILCO Customer Relations District Offices and the LILCO Customer Call Boards, in answering questions asked by the public. The rumor control point will be staffed by representatives from LERO and the utility.</p> <p>The plan does not provide information about rumor control staffing, the number of rumor control telephone lines that will be available and staffed, and how current information will be provided to the rumor control staff. It is recommended that the rumor control staff be provided with press releases and radio emergency information bulletins to assure that they are apprised of the current emergency status.</p>	A
G.5	<p>LERO will coordinate an annual orientation program for the news media. This program will familiarize the media with the following:</p> <ul style="list-style-type: none">• Utility emergency plans,• Radiation information,• Points of contact for release of public information in the event of an emergency, and• The location and operation of the ENC.	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 24 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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H.	<u>Emergency Facilities and Equipment</u>	
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H.3	The local EOC to be operated and staffed by LERO personnel is located at the LILCO Operations Facility in Brentwood, Long Island, New York.	A
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H.4	The activation and staffing of the local EOC by LERO personnel is specified in Section 3.3, page 3.3-1; Section 4.1 page 4.1-1 and Procedure OPIP 4.1.1 of the plan.	A*
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The plan is adequate in addressing this element, provided that the modifications and clarifications outlined below are incorporated in the plan.

The Radiation Health Coordinator should be included on the emergency call checklists in Procedure OPIP 3.3.2.

Per analysis comment E.1 and F.1.e, Figure 3.3.4 does not include a list of persons/groups/organizations to be notified for mobilization at general emergency.

The plan and Procedure OPIP 4.1.1 appear to be contradictory. It is not necessary to delay notifications to the EOF and New York State until full activation of the local EOC is completed (as stated in Section 4.1.A of the plan). Procedure OPIP 4.1.1, Section 5.2 indicates that the Director of Local Response will make these notifications upon arrival at the local EOC, Section 4.1.A of the plan should be changed to agree with the implementing procedure.

The NUREG-0654 cross-reference should be revised to include Procedure OPIP 4.1.1 as a citation for element H.4.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 25 of 60

NUREG-0654

Element

Review Comment(s)

Rating

H.7

The two (2) Offsite Radiological Survey (ORS) teams, each consisting of two (2) individuals per team from DOE-RAP are provided in the plan. These teams will obtain their ORS kits at Brookhaven National Laboratory (BNL).

A

Equipment is shown for the two ORS teams on page 4.4-1, while the plan states on page 3.5-2, line 22 that additional teams from LILCO will be available, if needed.

It is unclear whether the LILCO ORS support teams will be using radiological survey kits from DOE, or whether this equipment is LILCO's property. If these kits belong to LILCO, the plan is adequate. If, however, these kits are not LILCO property (i.e., BNL/DOE property), the plan should specify: (1) where the ORS kits for the LILCO support teams are to be maintained, (2) how LILCO personnel are to be deployed, and (3) how LILCO instrumentation compares to DOE's. The plan is adequate in addressing this element provided that clarification of ownership and responsibility for maintenance of the ORS kits are specified.

The equipment lists on page 4.4-1 and Attachment 2.2.1 are different. The plan should specify who is responsible for supplying the equipment on page 4.4-1.

The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.5.1 (see Section 5.2.1) as a citation for element H.7.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 26 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
H.10	<p>Section 5.3 of the plan provides that LILCO will inspect, inventory and operationally check emergency response equipment at least once each calendar quarter. Calibration of instruments will be done at intervals recommended by manufacturers. The plan also makes provision for reserve equipment.</p> <p>Survey meters compatible with the GM1 probes should be included on the equipment list.</p> <p>The availability of backup equipment for the additional field monitoring teams from LILCO should also be specified in the plan.</p>	A
H.11	<p>A detailed list of equipment to be used in the emergency response by LERO is located in the portions of the plan listed in the NUREG cross-reference.</p> <p>The plan is adequate provided that the modifications outlined below are incorporated in the plan.</p> <p>The equipment list on page 4.4-1 includes only one air sampler. The plan should state whether back-up samplers are available at the staging area. It should be taken into consideration that radioiodine sampling capability is lost in the event of pump failure. How does the list on page 4.4-1 relate to the list in Procedure OPIP 5.3.1, which includes multiple air samplers? Also, are there radiation meters to go with the GM detectors listed in Procedure OPIP 5.3.1 as available at the local EOC?</p> <p>Communications equipment on page 4.1-4 should include radio links between the field teams and EOC.</p>	A

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 27 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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H.11 Cont.	The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.5.1 as a citation for element H.11.	
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H.12	Page 3.5-2 of the plan states that field data will be radioed back to the Environmental Survey Function and all samples will be returned to the local EOC, or as directed, for laboratory analysis by DOE-RAP or SNPS labs.	A
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I. Accident Assessment

I.7	The capability and resources for field monitoring within the plume exposure EPZ are to be provided through the DOE-RAP resources at the Brookhaven Area Office. The capabilities, mobilization, response time, and equipment for these resources are provided in the FRMAP plan for the support of local emergency response plans.	A
-----	--	---

Procedure OPIP 3.5.1 and the equipment list in Attachment 2.2.1 of the plan do not coincide. The plan is adequate in addressing this element provided that these two lists are reconciled. Procedure OPIP 3.5.1, page 7 should describe what provisions are available to return sample media for laboratory verification on an expedited basis, particularly, samples which yield positive results in the field.

NUREG-0654

Element	Review Comment(s)	Rating
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I.8	The capabilities, equipment and expertise for accident and dose capabilities are found in Procedure OPIP 3.5.2. Field team composition, communication, monitoring equipment and estimated deployment times are found in Section 3.5 and Procedure OPIP 3.5.1. Page 3.5-2 of the plan gives field team composition.	I
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Pages 3.1-2 and 4.1-2 of the plan specify that the LERO Director of Local Response, with the Radiation Health Coordinator, is responsible for formulating the protective action decisions. The plan does not specify whether LERO has accident assessment personnel who can weigh the plant's status from an operational view in developing protective action recommendations. The choice of protective actions is apparently keyed almost entirely to radiation dose or projected dose. Consideration should be given to the plant's status including; prognosis for stabilizing, improving or worsening situations, or timing of releases so that preventive evacuation prior to a release is not overlooked when such releases may be imminent. The plan does not specify how protective action decisions would be made in the absence of an actual release. The plan should specify that protective actions such as sheltering, and especially evacuation, could be implemented prior to initiation of significant releases, if possible.

The NUREG-0654 cross-reference should be revised to include the following citations for element I.8:

- Section 2.1, Figure 2.1.1, page 2 of 4
- Section 2.2, Attachment 2.2.1
- Section 4.4, page 4.4-3 (means of transportation for field teams).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 29 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
I.9	<p>Section 2.2, Attachment 2.2.1 states that the DOE Brookhaven Area Office can provide support to LILCO for airborne radioiodine sampling and analysis to concentrations as low as 5×10^{-8}. While the equipment listed is potentially capable of making the required measurements, the methodology shown in Procedure OPIP 3.5.1 (see Section 5.3.7b) would not give accurate results for most accident conditions. Even without core damage, radioiodine may be collected on the particulate filter if the iodine is in elemental form. Therefore, one cannot rule out activity on the particulate filter as not being iodine. Also, the nomogram which relates iodine to total fission products for the calculation of thyroid dose (OPIP 3.5.2, Att. 11) may not be realistic in this aspect. Furthermore, the amount of fission products collected from a core damage accident are highly dependent on a number of parameters, such as moisture in containment, filtration of release, distance from the site, etc., and are not easily amenable to the nomogram assumptions.</p> <p>The heading of attachments 5 and 6 Procedure OPIP 3.5.2 should be changed to read "Multiply results by 10^{-6}."</p>	I

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 30 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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I.10	The procedures for estimating integrated dose from the projected and actual dose rates (plume exposure) were found in Procedure OPIP 3.5.2. Ingestion pathway dose estimations were found in Procedure OPIP 3.5.3. Procedure OPIP 3.6.1 contains protective action recommendations.	I
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Procedure OPIP 3.5.2 is lacking several nomograms which are required for the calculations.

The plan should include provisions for the consideration of plant parameters regarding types of releases. Reliance on the stated 0.05 m/sec. deposition velocity is applicable under a limited set of atmospheric conditions, and should not be relied upon as LERO's only means of ingestion pathway zone protective action decisions. Field surveys with HP210 detectors can quickly determine ground deposition.

The NUREG-0654 cross-reference should be revised to also include Procedure OPIP 3.6.1 as a citation for element I.10.

I.11	Capabilities to locate and track the plume (field monitoring) are to be provided through the DOE-RAP resources at the Brookhaven Area Office. The capabilities, mobilization, response time, and equipment for these resources are provided in the FRMAP plan for the support of local emergency response plans (see Attachment 2.2.1 of the plan).	A
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Procedure OPIP 3.5.1 Section 5.3 should be included in the NUREG-0654 cross-reference submitted with the plan since it discusses the plume tracking method to be used by the ORS teams.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 31 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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J. Protective Response

J.2	The provisions for evacuation of SNPS non-essential site personnel in Section 3.6 (page 3.6-8) describe only the route to be taken if a public evacuation is in progress (i.e., high traffic density). There is no discussion of alternative routes that are to be used for inclement weather and specific radiological conditions. The plan should include a discussion of transportation to be used by SNPS site personnel.	I
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J.9.	EPA's plume exposure and FDA's ingestion pathway PAG's are listed in Section 3.6.	I
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There is no discussion of how protective actions would be implemented based on plant conditions prior to actual releases (see comment for element I.8). Also, Tables 3.6.2 and 3 6.3 are taken from the FDA draft report, and are not the final values.

The NUREG-0654 cross-reference should be revised to include Table 3.6.1 as a citation for element J.9.

J.10.a	The Evacuation Plan (Appendix A Section I - Preface pages I-1 to I-2) is made up of two plans -- a study performed by Suffolk County as part of an agreement with LILCO (9/21/81), and a study performed by KLD Associates under an agreement with LILCO to develop an evacuation plan (12/30/81), LILCO has integrated the two studies into Appendix A.	A*
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*See footnote at the end of comments for element J.10.a which are continued on page 32.

NUREG-0654

Element

Review Comment(s)

Rating

J.10.a
Cont.

The maps showing evacuation routes, evacuation areas, preselected offsite radiological monitoring locations (including Table 3.5.1 and Procedure OPIP 3.5.1 listing designators for these locations) and shelter areas are included in the plan.

Although the relocation centers are indicated on Figure 9, Zone A, they are not specifically identified as relocation centers. The legend should be revised to include symbols designating relocation centers on this map, since it is indexed on the NUREG cross-reference.

The NUREG-0654 cross-reference should be revised to include Attachment 11 of Procedure OPIP 3.5.1 as a citation for element J.10.a.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

J.10.b

The map in Figure 3 of Appendix A does not show subarea boundaries for evacuation areas F (F1-F5) or K (K1-K5). If it is planned that evacuation can be effected by subarea, then these subareas should be delineated in accord with the seasonal population data for 1980 and 1985 in Table III of Appendix A.

I

Table III, Page III-2 of Appendix A, reflects population distribution by ERPA. Population numbers should be stated for each ERPA. A map(s) showing population distribution has not been included in the plan.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 33 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
J.10.c	<p>The means for notifying the transient and resident population consists of fixed sirens (89 units) and EBS.</p> <p>The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.3.4, Section 5.4 (notification of the deaf) as a citation for element J.10.c.</p> <p><u>*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).</u></p>	A*
J.10.d	<p>The procedure and inventory of requirements for protecting institutionalized mobility-impaired persons has been completed. However, the procedures and resources to deal with non-institutionalized mobility impaired persons still require completion (i.e., the directory of non-institutionalized mobility-impaired persons needs to be completed).</p> <p>The directory to be compiled for noninstitutional mobility impaired individuals should include the number of such persons at a given address and a designator indicating each person's impairment (e.g., ambulatory, non-ambulatory, sight impaired, hearing impaired, wheel chair, etc.). This information is needed to insure that the means of notification is appropriate and to facilitate the coordination of equipment to be used in relocating these persons, if necessary. It is understood that this directory is being updated based on completed survey cards on special needs of the handicapped that are being returned to LILCO. The plan is adequate in addressing this element provided that the directory of noninstitutionalized mobility impaired individuals has been completed.</p>	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 34 of 60

NUREG-0654

Element

Review Comment(s)

Rating

J.10.e	The provisions for use of KI for emergency workers are discussed. However, there is concern with the method by which KI will be distributed. Procedure OPIP 3.6.2 states that distribution will be accomplished by directing emergency workers to a distribution location. This may require recalling emergency workers from the field and a time delay in administering KI to them. The offsite field monitoring teams have KI in their kits. Another concern relates to expiration dates on the KI. Procedure OPIP 3.6.2 states that no KI should be issued if it is beyond its indicated shelf life. At the present time, there is no KI available which is not beyond the labeled expiration date, however, FDA has granted extensions for its use. The procedures should reflect FDA extensions.	I
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LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 35 of 60

NUREG-0654

Element

Review Comment(s)

Rating

J.10.f Page 3.6-3, lines 22-24 of the plan state that the PAG for use of KI as a thyroid blocking agent is a projected dose of 10 rem to an emergency worker's thyroid. No provision is made for the general population which is consistent with New York State policy (see letter from J.L. Smith to Harold R. Denton, N.R.C. S.N.R.C-539 Attachment 1, page 4-J-10c clarification). The 10 rem PAG is considerably lower than the FDA Final Recommendation of 25 rem or greater projected thyroid dose. It would appear that LILCO has taken the more conservative lower limit of NCRP Report No. 55 (10-30 rem) or the original FDA draft recommendation (10-20 rem). The EPA PAG for emergency workers is 25 rem thyroid (see Chapter 3, Section 3.6, C., page 3.6-5, lines 6-7).

A*

The plan states that only those emergency workers who have been previously screened for its use will be given KI (see page 3.6-5, lines 5-8). A discussion of how this screening will be accomplished could not be located in the plan. The plan is adequate in addressing this element provided that the procedures for screening emergency workers who would be given KI are included in the plan.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

NUREG-0654

ElementReview Comment(s)Rating

J.10.g

The plan does reflect resources for school or general evacuation including the number of buses to be used.

A

The letters of intent arranging for bus resources have been included in the plan. However, these letters of intent indicate that contracts establishing the terms under which bus companies will provide their equipment in the event of a radiological emergency at SNPS have not been finalized. Therefore, the actual commitment of these resources is uncertain.

The notification call up list for transportation personnel has not been completed (Procedure OPIP 3.3.2 - 163 pages).

The plan is adequate in addressing this element provided that contracts are successfully negotiated with the bus companies providing their vehicles, and the notification call up list for transportation personnel has been completed.

The NUREG-0654 cross-reference should also be revised to include Procedures OPIP 3.6.4 and 3.6.5 as citations for element J.10.g.

NUREG-0654

ElementReview Comment(s)Rating

J.10.h

Suffolk County Community College, BOCES in Islip, and SUNY in Stony Brook are the primary relocation centers. Two back-up centers (SUNY - Farmingdale, St. Joseph's College - Patchogue) have been identified. All of these centers would be set up and run by the American Red Cross.

I

There is no legend on Figure 9, Zone A (page IV-76, Appendix A) defining the designators for SUNY, SCCC and BOCES as relocation centers. However, it has been estimated that only the BOCES relocation center is at least five miles beyond the 10-mile EPZ. The following table of estimated distances of relocation centers beyond the boundaries of the plume exposure EPZ has been derived from the map and scale on Figure 9 of Appendix A.

	<u>> 5 mi beyond 10 mile EPZ</u>	<u>> 10 mi beyond 10 mile EPZ</u>
• SUNY in Stony Brook	Not able to be determined	No
• Suffolk Community College	No	No
• BOCES	yes	Not able to be determined

The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.7.1 as a citation for element J.10.h.

J.10.i

The projected traffic capacities of evacuation routes under emergency conditions are shown in Appendix A, Section III, Table IV, pages III-17-33. The necessary studies have been completed, and adequately satisfy NUREG-0654 requirements.

A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 38 of 60

NUREG-0654

Element

Review Comment(s)

Rating

J.10.j The plan and procedures call for contact-
ing the Coast Guard and FAA and requesting
cooperation of these agencies for assistance
(i.e., clearance of boats from Long Island Sound,
clearance of aircraft, etc.). The LERO Traf-
fic Control Coordinator is responsible for
coordinating the road logistic aspects
for an evacuation and coordinating the
maintenance of traffic control points for an
evacuation. The locations of approximately
147 traffic control posts are
specified in Appendix A, Section IV,
Figure 8, pages IV-52-81.

A*

Provisions for access control, to limit
access to evacuated areas, is contained
in Appendix A, Section IV, Evacuation
Procedures.

*This element is adequately addressed
in the plan. However, concerns per-
taining to LERO's legal authority to
implement the plan were identified by
the RAC during this review (see Attach-
ment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 39 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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J.10.k	The means for dealing with potential impediments to evacuation are addressed in Section 3.6, page 3.6-6 of the plan and Appendix A, page IV-5. Provisions for the removal of cars by tow trucks is adequate.	I*
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According to page 2.2-4 of the plan, it is anticipated that snow removal will be provided by local organizations in their normal fashion during an emergency. During severe snow or an ice storm, the plan recommends selective or general sheltering until the hazard is mitigated. It is suggested that pre-emergency planning for snow removal on the evacuation routes be further developed to include administrative procedures, SOPs, etc. These procedures are recommended to insure that the snow removal strategy would coincide with any evacuation scheme that might be chosen.

The NUREG cross-reference should list Procedure OPIP 3.6.3 as a citation for element J.10.k.

*This element is inadequately addressed in the plan. In addition, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

NUREG-0654

ElementReview Comment(s)Rating

J.10.1 The presentation of time estimates for evacuation of various sectors in Appendix A, Table XV, page V-8 conforms with the preferred format for presenting the data and results for the following types of evacuation:

A

	<u>Conditions</u>	
	<u>Normal</u>	<u>Adverse</u>
Permanent population	x	x
Transient population	x	x
General population	x	x
Special population	x	x

The table as presented is adequate.

As recommended in Appendix 4 of NUREG-0654, the time for confirmation of evacuation should be estimated and included in Table XV of Appendix A.

J.10.m According to page 3.1-2 and page 4.1-2, the LERO Director of Local Response, in conjunction with the Radiation Health Coordinator, formulate the protective action decisions. The plan does not specify whether LERO has accident assessment personnel who can weigh the plant's status from an operational view in developing protective action recommendations (see comment I.8). Nor are the off-site conditions (non-radiological) specifically addressed, in that the Evacuation Coordinator, who should have information regarding any off-site constraints to protective actions, is not involved in the decisions.

I

The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.6.1 as a citation for element J.10.m.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 41 of 60

NUREG-0654

Element

Review Comment(s)

Rating

J.11

Section 3.6, page 3.6-8 of the plan states that control of the ingestion exposure pathway EPZ will be directed by the LERO Health Services Coordinator.

I

Procedure OPIP 3.6.6 contains ingestion pathway procedures, PAGs, and agricultural resource information such as listings of dairy farms, processing plants, duck growers, hog farms, vegetable and fruit growers, potato processing plants in New York and processing plants, dairy farms in Connecticut. The inclusion of Rhode Island within the 50-mile EPZ should be reevaluated, since Rhode Island was included in a previous revision (see comment for criteria element F.1.b).

The plan is not specific for imposing protective procedures such as impoundment decontamination, processing, decay, product diversion, and preservation. There are no maps referenced for recording survey and monitoring data, key land use data, dairies, food processing plants, water sheds, etc. If LILCO has access to the State maps, this should be referenced in the plan. There are also no lists of food processing facilities located outside the 50 mile EPZ, which process food originating within the 50 mile EPZ.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 42 of 60

NUREG-0654

Element

Review Comment(s)

Rating

J.12

Using the cross-referenced sections for this element, the number of decontamination kits available, and their place of storage at each location could not be located in the plan.

I

Based on a review of the equipment inventory listed in the plan, it is questionable whether the number of potential relocatees could be monitored within 12 hours.

Neither Section 5.5 of Procedure OPIP 4.2.1, page 3 of 14, nor Section 5.0 of Procedure OPIP 3.9.2 describe the means for evacuee registration prior to monitoring. The procedures should describe clearly understood measures which, to the greatest extent practicable, minimize the likelihood for potentially contaminated persons to gain access to a relocation center where evacuees are to be housed, fed and cared for.

Although Procedure OPIP 3.9.2 adequately covers the monitoring and decontamination of evacuees, more information is needed on the Red Cross responsibilities and procedures at the centers. There are no registration forms (other than exposure) supplied with the plan. There should be procedures for completing registration forms for non-contaminated individuals. The procedures should also specify where evacuee monitoring records will ultimately be maintained. Also, the available equipment shown for monitoring evacuees may not be sufficient to meet the 12-hour time limit within which all evacuees arriving at relocation centers must be monitored.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 43 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
J.12 Cont.	The NUREG-0654 cross-reference should be revised to include Procedure 4.2.1 as a citation for element J.12.	

K. Radiological Exposure Control

K.3.a	Page 3.9-2 of the plan states that all emergency response personnel will be issued self-reading pocket dosimeters and TLD's. The LERO Dosimetry Coordinator is responsible for maintaining exposure control records on a 24-hour per day basis.	I
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The plan states (page 3.9-2, line 8) that all emergency response personnel will be issued dosimeter chargers, yet the inventory lists in OPIP 5.3.1 show that insufficient numbers of chargers are available. Also, page 4.4-1, line 39, states that dosimeter chargers will be kept at each emergency worker staging area and wherever emergency workers receive dosimetry equipment. This is inconsistent with the statement that all emergency response personnel will be issued dosimeter chargers. The plan should clarify whether dosimeter chargers will be issued to each emergency worker, or whether dosimeters will be zeroed and distributed at the emergency worker staging areas. It is recommended that emergency workers should not be issued dosimeter chargers because it is possible that they could recharge their dosimeters in the field, thereby obviating the purpose of these instruments in recording cumulative exposure.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 44 of 60

NUREG-0654

Element

Review Comment(s)

Rating

K.3.b

Page 3.9-2 of the plan states that emergency workers inside affected areas are instructed to take dosimeter readings at 15 minute intervals. Emergency Worker Daily Dose and Permanent Dose Record forms are contained in Section 3.9 and also in Procedure OPIP 3.9.1. Section 3.9.A, page 3.9-3 of the plan states that emergency worker dose records will be maintained at the local EOC.

A

K.4

The LILCO Transition Plan (Rev. 3) provides for emergency workers to be trained to inform their immediate supervisor if the reading on their low range dosimeter goes beyond the 200 mR that it will register. Pages 3.9-2 and 3 of the plan state that the Director of Local Response, as advised by the Radiation Health Coordinator, is responsible for authorizing exposures in excess of the EPA General Public PAGs.

A

Page 3.9-3 lines 18-19 give an exposure guideline for hands and forearms of 200 R for lifesaving activities. This should be omitted, since such exposures apply to on-site rather than offsite environmental exposures.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 45 of 60

NUREG-0654

Element

Review Comment(s)

Rating

K.5.a

Tables 3.9.1 and 3.9.2 specify action levels for determining the need for decontamination.

I

While Table 3.9.1 gives maximum acceptable contamination levels, there are several concerns with this table. "Probe shield open" readings in mr/hr have no value due to differences in beta energy and the efficiency of the probe. For all open window readings, CPM should be used, rather than mr/hr. The listings in Table 3.9.1 for skin, hair, clothing and vehicles are reasonable. However, the data in Procedure OPIP 3.9.2 do not correspond to these values.

The threshold for decontamination in Table 3.9.1, and the values for release shown in Table 3.9.2 do not agree. Table 3.9.2 gives the NRC surface contamination levels for decommissioning nuclear power plants, which are too low for practical application under emergency conditions.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 46 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
K.5.b	<p>Page 3.9-4, line 45 and page 4.3-2, line 5 of the plan and Procedure OPIP 3.9.2 (Section 5.8.1-C) state that any emergency worker with thyroid contamination resulting in readings in excess of .13 mR or 150 CPM, will be sent to a designated hospital for further medical treatment. Page 4.3-2 uses .13 mR/hr. as the lower limit. Procedure OPIP 3.9.2 has been changed to 120 CPM in Revision 3. The correct number should be identified and used consistently. The HP 270 probe identified in Procedure OPIP 3.9.2, Section 5.5.1a is unable to detect alpha activity.</p> <p>The decontamination techniques described in Procedure OPIP 3.9.2 are adequate. However, radiological decontamination equipment, supplies, and storage and disposal capability for contaminated waste associated with the decontamination process could not be located in the plan or procedures. Monitoring equipment including lists of supplies used for decontamination at the decontamination centers should be itemized, as well as quantities available.</p> <p>No indication of first aid administration or available kits could be found in the plan or procedures.</p>	I

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 47 of 60

NUREG-0654

Element

Review Comment(s)

Rating

L. Medical and Public Health Support

- L.1 The plan (pages 2.2-2 and 3.7-2) identifies University Hospital in Stony Brook, New York and Central Suffolk Hospital in West Islip, New York as having the capability for handling injured, contaminated patients. I

The capability/expertise of medical facilities and personnel at Stony Brook Hospital and Central Suffolk Hospital that will be used to evaluate radiation uptakes and exposures should be described. No indication that personnel from these hospitals are prepared to handle contaminated individuals could be found in the plan.

- L.3 Procedure OPIP 4.2.2 contains a list of hospitals capable of treating contaminated injured individuals; however, the listing does not include their capacity and any special radiological capabilities. I

Procedure OPIP 4.2.2, although referenced in the NUREG cross-reference, is not referenced in section 3.7, Medical and Public Health Support of the plan. Procedure OPIP 4.2.2 should be referred to in Section 3.7, to ensure that the LERO Health Services Coordinator and staff are aware of these additional resources in the event they are needed.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 48 of 60

NUREG-0654

Element

Review Comment(s)

Rating

L.4

Page 3.7-1 of the plan states that the LERO Ambulance Coordinator will coordinate the services of trained emergency medical technicians, ambulances and rescue vehicles.

A

The plan is adequate in addressing this element provided that the list of ambulance companies with which LERO has letters of intent supported by finalized contracts will be contained in Procedure OPIP 4.2.2.

The NUREG-0654 cross-reference should be revised to include Procedure OPIP 4.2.2 as a citation for element L.4.

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 49 of 60

NUREG-0654

Element

Review Comment(s)

Rating

M.

Recovery and Reentry Planning and
Postaccident Operations

M.1

Section 3.10, pages 3.10-1 and 2
and Section 3.11, pages 3.11-1 and 2
of the plan and Procedure OPIP 3.10.1
discuss Re-entry and Recovery. Procedure
OPIP 3.10.1 provides for participation of
the following agencies/organizations on the
Recovery Action Committee if they are
available:

I

- FEMA representative
- DOE representative
- State representative
- County representative

Attachment 3.10.1 and Section 3.10
(Recovery/Re-entry) give no consideration
to plant conditions, such as the probability
of additional significant releases, con-
tinuing or intermittent low level releases,
etc. Attachment 3.10.1 refers to acceptable
levels for unrestricted release of property
during a decommissioning of a facility (per
Reg-Guide 1.86) and are not related to
recovery from an emergency. Procedure
OPIP 3.10.1 notes that the plant must
be stable, no significant releases occurring,
etc. as precautions for entering Recovery.
However, there is no indication of who de-
termines whether these conditions have been
satisfied. Consequently, Recovery/Re-entry
Procedures 3.10.1 are based upon incomplete
considerations. An evacuation is not
necessarily a prerequisite for recovery.
Due to time constraints, sheltering may
have to be implemented rather than
evacuation.

It should be indicated in Section 3.11
that post-emergency phase activities are
a responsibility of EPA as per the FRMAP.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 50 of 60

NUREG-0654

Element

Review Comment(s)

Rating

M.3

The LERO Director of Local Response is responsible for instructing all Recovery Action Committee coordinators to notify members of the response organization when recovery operations have been initiated (see Procedure OPIP 3.10.1, Sections 5.3.4 and 5.3.6).

A

M.4

The referenced section of the plan provides for the completion of radiation field surveys to determine whether contamination levels in an evacuated area are within acceptable limits for reentry of the public into formerly contaminated areas.

I

No "method" for estimating total population exposure could be found on page 3.10-2 of the plan which is cross-referenced for this element. The plan should establish a method for estimating total population exposure, not merely state that an organization will be established for this purpose.

NUREG-0654

ElementReview Comment(s)Rating

N.

Exercises and Drills

N.1.a

The referenced section of the plan describes the purpose, scope, frequency and procedures for exercises. The plan states that an exercise shall simulate an emergency that results in offsite radiological releases which would require the overall emergency response capabilities of SNPS, FEMA and LERO.

A*

The following revisions should also be made to portions of the plan dealing with exercises:

- Accident Assessment and Evaluation, and Emergency Response Facilities, should be added to the list on page 5.2-3, B, lines 22-36, of capabilities to be tested in exercises.
- FEMA should be deleted from line 15 on page 5.2-3 since FEMA does not test its response capability in every exercise.

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

N.1.b

The plan contains no provision for the mobilization of State and local personnel and resources in order to verify responses during exercises. However, the plan does establish the means for mobilizing LERO personnel and resources that would be adequate to verify the capability to respond to an accident scenario requiring response.

A*

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 52 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
N.2.a	<p>The plan adequately addresses the testing of communications systems with the following:</p> <ul style="list-style-type: none">• Federal emergency response organizations and states within the ingestion pathway - quarterly,• The nuclear facility (SNPS) - annually,• The State and local (LERO) EOCs - annually• Local (LERO) radiological monitoring team - annually <p>The plan provides for drills of communication with the state and local EOCs.</p> <p>The NUREG-0654 cross-reference should be revised to include Procedure OPIP 3.4.1 as a citation for element N.2.a.</p>	A
N.2.c	<p>Page 5.2-2a of the plan and Procedure 5.1.1, Section 5.2.2.1.c adequately provide for a Medical Drill to be conducted annually in conjunction with the annual exercise.</p>	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 53 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
N.2.d	<p>The referenced section of the plan provides for radiological monitoring drills.</p> <p>The plan is adequate in addressing this element provided that it is clarified in the plan whether DOE-RAP personnel will participate in the radiological monitoring exercises. This clarification is requested since the letter of agreement between DOE and LILCO limits DOE radiological assistance to "advice and emergency action essential for the control of immediate hazards to health and safety" (i.e., in an actual emergency) - see Appendix B, page APP-B-1.</p>	A
N.2.e.(1)	<p>Page 5.2-2 of the plan and Procedure OPIP 5.1.1, Section 5.2.2.1.d. adequately provide for health physics drills to be conducted semi-annually.</p>	A
N.3.a-f	<p>The referenced section of the plan adequately provides for exercise scenarios to include the following:</p> <ul style="list-style-type: none">• The basic objectives;• The date(s), time period, place(s) and participating organizations;• The simulated events;• A time schedule for real and simulated initiating events;• A narrative summary describing the conduct of exercises or drills;• Arrangements for scenario material to be provided to official observers. <p>Provisions for, and the use of, protective clothing should be added to Section 5.2 page 5.2-1, line 12.</p>	A

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 54 of 60

NUREG-0654

Element

Review Comment(s)

Rating

N.4

Section 5.2, pages 5.2-1 and 5.2-4, lines 4-6, 14 and 15 of the plan establishes that the LILCO Emergency Planning Coordinator (EPC) is responsible for conducting exercises that will be critiqued by observers from Federal, State and local governments.

A

N.5

Procedure OPIP 5.1.1, Sections 5.2.6 and 5.2.7 adequately provide for LERO to evaluate observer and participant comments and implement corrective actions. The LILCO Emergency Planning Coordinator is responsible for incorporating plan changes indicated as a result of the drills and annual exercise critiques.

A

Procedure OPIP 5.1.1, Section 5.2.6.5 makes the following provision:

"The EPC (Emergency Planning Coordinator) shall collect and evaluate all exercise/drill records including checklists, logs, LERO Observation Sheets, survey reports, etc. from LERO, federal, state, and local observers and keep them on file." (Emphasis added)

This provision is beyond the scope of FEMA's policy on the Availability of Records under the Freedom of Information Act Relating to State and Local Radiological Emergency Plans and Preparedness Program per the June 30, 1983 memorandum for Regional Directors from James L. Holton, Director, Office of Public Affairs, and George Jett, General Counsel which states:

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 55 of 60

NUREG-0654

Element

Review Comment(s)

Rating

N.5
Cont.

The critiques of individual members of the Regional Assistance Committee (RAC) evaluating the effectiveness of a Radiological Emergency Preparedness exercise qualify for withholding under the Freedom of Information Act pursuant to 5 U.S.C. 552(b)(5).

According to policy guidance from the Department of Justice, the purpose of the (b)(5) exemption is to assure:

presidents, agency heads, and other decisionmakers that they can safely welcome a full spectrum of candid expressions from their staffs and/or peers, because they will be free to accept or reject all such input on its apparent intrinsic merit, not on whether a particular staff memorandum may make the official's action look better or worse, especially if the action is controversial or later proves unsuccessful....

Federal Observers should be deleted from Section 5.2.6.5 of Procedure OPIP 5.1.1. However, the statement should be added to Procedure OPIP 5.1.1 to read that Federal comments for the exercise are provided by FEMA in the post-exercise assessment which summarizes the evaluation of the Federal Observers.

LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 56 of 60

NUREG-0654

Element

Review Comment(s)

Rating

- O. Radiological Emergency Response Training
- O.1 Section 5.1, pages 5.1-3 through 5.1-5 of the plan and the LERO Training Matrix (Figure 5.1.1) provide emergency response training for LERO personnel through a training program consisting of 21 modules. Radiological emergency response training is included. Also, tapping the Federal sector, LILCO would avail itself of approximately 12 courses, some given by FEMA, some by NRC, and some by EPA. The Red Cross would also be utilized, providing six training courses.
- Procedure OPIP 5.1.1, Section 5.1.5 provides that the records maintained by LILCO will show the names and emergency position of individuals trained, the instructor's name, and the dates on which they received training.
- O.1.b Procedure OPIP 5.1.1, Section 5.1.3 states that Emergency Response Training will be offered to all members of LERO support organizations, such as the U.S. Coast Guard and ambulance personnel. Since there are no mutual aid agreements with local police and fire organizations, the procedure does not offer training for these personnel. This training should be offered to "all local law enforcement agencies and fire departments within the 10-mile EPZ," which are anticipated to carry out their normal emergency response functions during a radiological emergency at SNPS.

A

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LILCO Transition Plan for Shoreham - Revision 3

Consolidated RAC Review

Dated February 10, 1984

Page 57 of 60

NUREG-0654

Element

Review Comment(s)

Rating

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|-------|--|---|
| O.4 | The referenced section of the plan establishes a training program for emergency response personnel which is keyed to specific emergency response training topics. The following subelements of this planning criteria have been reviewed as follows: | |
| 0.4.a | Directors or coordinators who are LILCO employees. However, clarification is needed between the plan and LERO Training Matrix on identification and content of Module 15. | A |
| 0.4.b | No provision has been included for training of Radiological Health Managers, nor for anyone in LERO, to evaluate the implication of plant conditions in protective action recommendations. | I |
| 0.4.c | Radiological monitoring teams and radiological analysis personnel | A |
| 0.4.d | Police, security and fire fighting personnel are to be filled by personnel with whom LILCO/LERO does not have a mutual aid agreement supported by a letter of agreement. | I |
| 0.4.f | First aid and rescue personnel | A |
| 0.4.g | Local support services personnel | A |
| 0.4.h | Medical support personnel | A |
| 0.4.j | Personnel responsible for transmission of emergency information and instructions. | A |
| O.5 | Except as noted above for specific functions, Chapter 5, Section 5.1 of the plan, Training, states that LILCO will provide for periodic retraining on at least an annual basis for personnel with emergency response responsibilities. | A |

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 58 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
P.	<u>Responsibility for the Planning Effort</u>	
P.1	The referenced section of the plan and implementing procedures provide for the training of LERO personnel who are responsible for the planning effort.	A*
P.2	The LILCO Emergency Planning Coordinator (EPC) is responsible for the administration of the LILCO Transition Plan (all revisions).	A*
P.3	The LILCO EPC is responsible for conducting an annual review and update of the LILCO Transition Plan including procedures and letters of agreement.	A*
P.4	The LILCO EPC is responsible for incorporating plan and procedure changes resulting from exercises and assigning the responsibility for implementing corrective actions.	A*
	As noted above, various agreements necessary to implement the LILCO Transition Plan are not included at this time. The plan is adequate in addressing this element provided that the agreements necessary to implement the LILCO Transition Plan are included in the plan and updated annually.	

*These elements are adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 59 of 60

NUREG-0654

<u>Element</u>	<u>Review Comment(s)</u>	<u>Rating</u>
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P.5	The LILCO EPC is responsible for distributing the LILCO Transition Plan and approved changes to the organizations and appropriate individuals responsible for their implementation. Pages for revisions 1, 2 and 3 do not carry revision dates. Effective revision dates should be added to all pages as they are changed.	A*
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P.6	Section 1.4, pages 1.4-1 and 1.4-2, and attachment 1.4.2, contain the required list of supporting documents.	A
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P.7	Appendix C to the plan lists by title, the procedures required to implement the plan.	A
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References to the following procedures could not be located in the narrative sections of the plan.

- 1.1.1 Offsite Preparedness Implementing Procedure Development
- 3.6.4 Bus Routes
- 3.6.5 Special Evacuations
- 3.7.1 Public Health Support
- 4.1.2 EOC Documentation and Record Keeping
- 4.2.1 Relocation Center Operations

*This element is adequately addressed in the plan. However, concerns pertaining to LERO's legal authority to implement the plan were identified by the RAC during this review (see Attachment 2, Legal Concerns for details).

LILCO Transition Plan for Shoreham - Revision 3
Consolidated RAC Review
Dated February 10, 1984

Page 60 of 60

NUREG-0654
Element

Review Comment(s)

Rating

P.8 The plan contains a specific Table of Contents, and is cross-referenced to NUREG-0654 criteria. However, the cross-reference should be revised to include the citations that are not indexed as noted in the above comments. Also, the applicability of the following references to the NUREG-0654 criteria elements listed below should be clarified, or these references should be deleted from the NUREG-0654 cross-reference submitted with the plan.

I

NUREG-0654
Element

Reference Cited in Plan

C.2.a
J.10.h
J.10.j

Section 3.11 - attachment 3.11.1
Appendix A - Fig. 9 Zone A
Procedure OPIP 3.3.2

P.10. Section 5.4, page 5.4-2 of the plan states that the telephone number lists will be updated on a quarterly basis, and more frequently, if necessary. Also, Procedure OPIP 5.4-1, Section 5.4.4 calls for telephone numbers in emergency procedures to be updated quarterly.

A

CONCERNS PERTAINING TO LERO'S LEGAL AUTHORITY IDENTIFIED DURING
RAC REVIEW OF LILCO TRANSITION PLAN FOR SHOREHAM - REVISION 3

February 10, 1984

Below, are the legal concerns identified during the RAC review of the LILCO Transition Plan for Shoreham - Revision 3. For easy reference, each NUREG-0654 element affected by the legal concern(s) is restated, followed by the RAC comments.

- A.1.a. Each plan shall identify the States, local, Federal and private sector organizations (including utilities), that are intended to be part of the overall response organization for Emergency Planning Zones. (See Appendix 5).

With neither State nor local support or participation in the emergency planning process, the following legal authority concerns have been identified:

- ° command and control responsibilities
- ° coordination with local and State authorities including law enforcement agencies and fire departments
- ° coordination with contiguous State and local governments
- ° LERO's ability to seek a declaration of a State of emergency and to request State and Federal assistance
- ° arrangements for agreements with emergency response organizations and/or individuals
- ° responsibility for alerting and notification of the public

- A.1.d. Each organization shall identify a specific individual by title who shall be in charge of the emergency response.

The plan assigns responsibility for "protecting the health and safety of residents and transients within the Emergency Planning Zones (EPZs) defined in this plan" (page 2.1-1, lines 37-41), to the LERO Director of Local Response. At this time, LERO Director of Local Response has the responsibility for "decision making and strategic controls", and responsibility to "decide upon the major responses to be made" (see page 3.1-1, lines 15-17). The concern is whether or not LERO has the authority to implement decisions that are made.

- A.2.a. Each organization shall specify the functions and responsibilities for major elements and key individuals by title, of emergency response, including the following: Command and Control, Alerting and Notification, Communications, Public Information, Accident Assessment, Public Health and Sanitation, Social Services, Fire and Rescue, Traffic Control, Emergency Medical Services, Law Enforcement, Transportation, Protective Response (including authority to request Federal assistance and to initiate other protective actions), and Radiological Exposure Control. The description of these functions shall include a clear and concise summary such as a table of primary and support responsibilities using the agency as one axis, and the function as the other. (See Section B for licensee).

For Comments, See A.1.a.

- A.2.b. Each plan shall contain (by reference to specific acts, codes or statutes) the legal basis for such authorities.

Attachment 1.4.1 in the Plan refers to legal authority under 10 CFR 50.47 (c)(1).

The utility has developed LERO, comprised of utility, Federal and private individuals. If New York State and Suffolk County implement an emergency plan, LERO would follow their lead (see Section 1.4, pages 1.4-1, 1.4.2; also, Attachments 1.4.1 and 1.4.2). The authority of LERO to implement this plan under NRC codes and regulations and New York State Executive Law, as well as the issue of LERO's police power authority, has not been resolved.

- A.3. Each plan shall include written agreements referring to the concept of operations developed between Federal, State, and local agencies and other support organizations having an emergency response role within the Emergency Planning Zones. The agreements shall identify the emergency measures to be provided and the mutually acceptable criteria for their implementation, and specify the arrangements for exchange of information. These agreements may be provided in an appendix to the plan or the plan itself may contain descriptions of these matters and a signature page in the plan may serve to verify the agreements. The signature page format is appropriate for organizations where response functions are covered by laws, regulations or executive orders where separate written agreements are not necessary.

During the RAC review, the following legal concerns were identified:

- ° LERO's authority to enter into agreements and/or contracts with emergency response organizations identified in the plan
- ° No signature page format nor reference(s) to laws, regulations or executive orders requesting response by local agencies specified in the plan could be found

- C.1. The Federal government maintains in-depth capability to assist licensees, States and local governments through the Federal Radiological Monitoring and Assessment Plan (formerly Radiological Assistance Plan (RAP) and Interagency Radiological Assistance Plan (IRAP). Each State and licensee shall make provisions for incorporating the Federal response capability into its operation plan, including the following:
- a. specific persons by title authorized to request Federal assistance, see A.1.d., A.2.a.

The plan provides for the LERO Director of local response to "Request the Governor to ask the President to declare an Emergency or Disaster". The legal basis for this procedure has not been identified in the plan.

- C.4. Each organization shall identify nuclear and other facilities, organizations or individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement. For Comments - See A.3.

- E.5 State and local government organizations shall establish a system for disseminating to the public appropriate information contained in initial and followup messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Broadcast System (EBS).

LERO has established a network of Long Island radio stations for disseminating emergency information to the public. LERO's authority to disseminate emergency information to the public without the involvement of State and/or local government officials remains a concern.

- E.6. Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. (See Appendix 3.) It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.

The official EBS system authorized by the Federal Communication Commission (FCC) is used by government officials to disseminate emergency information to the public. LERO's legal authority to activate the alert and notification system without State and/or local government participation remains a concern.

- F.3. Each organization shall conduct periodic testing of the entire emergency communications system (see evaluation criteria H.10, N.2.a and Appendix 3).

No statement that State and local governments will participate in communication drills with LERO could be located in the plan.

- G.3.a. Each principal organization shall designate the points of contact and physical locations for use by news media during an emergency.

The plan does not specify the level of involvement by State and local officials in the development and/or review of EBS and news releases (see comment E.5).

- H.4. Each organization shall provide for timely activation and staffing of the facilities and centers described in the plan.

Without a State Site Specific Plan for the SNPS, there are no procedures specified for the activation and staffing of the State EOC in the event of a radiological emergency at the Shoreham site. Therefore, provision for the notification and mobilization of personnel to coordinate the State's interface with the LERO response remains a concern.

J.10.a. Maps showing evacuation routes, evacuation areas, preselected radiological sampling and monitoring points, relocation centers in host areas, and shelter areas; (identification of radiological sampling and monitoring points shall include the designators in Table J-1 or an equivalent uniform system described in the plan);

The Evacuation Plan (Appendix A Section I - Preface pages I-1 to I-2) is made up of two plans -- a study performed by Suffolk County as part of an agreement with LILCO (9/21/81), and a study performed by KLD Associates under an agreement with LILCO to develop an evacuation plan (12/30/81). LILCO has integrated the two studies into Appendix A.

Since Suffolk County is not participating in the offsite emergency planning process, are the data developed by Suffolk County under contractual agreement on emergency response planning executed in 1981, still applicable.

J.10.c. Means for notifying all segments of the transient and resident population;

As noted in analysis comments E.5 and E.6, LERO's legal authority to activate the alert and notification system and to disseminate emergency information to the public without the involvement of the State and/or local government remains a concern.

J.10.f. State and local organizations' plans should include the method by which decisions by the State Health Department for administering radioprotective drugs to the general population are made during an emergency and the predetermined conditions under which such drugs may be used by offsite emergency workers;

The authority of the Health Services Coordinator to authorize the use of KI for other LERO emergency workers who are not LILCO employees is of concern, since the "State Health Department" would not be involved in the decision-making regarding use of KI by emergency workers.

J.10.j. The organization's plans to implement protective measures for the plume exposure pathway shall include:

Control of access to evacuated areas and organization responsibilities for such control;

Since the staff assigned to Traffic Control are LILCO employees, the ability to accomplish this effort under the authority of 10 CFR 50.47 remains a concern.

Assigning access control duties to LILCO employees including:

- ° setting-up and controlling roadblocks
- ° dealing with evacuation etc., remains a concern

J.10.k. Identification of and means for dealing with potential impediments (e.g., seasonal impassability of roads) to use of evacuation routes, and contingency measures;

According to page 2.2-4 of the plan, it is anticipated that snow removal will be provided by local organizations in their normal fashion during an emergency.

LERO's coordination with local agencies responsible for snow removal needs to be addressed to ensure that snow removal is in accordance with the evacuation scheme in case of a radiological emergency. In addition, LERO's authority to remove impediments to evacuation remains a concern.

N.1.a. An exercise is an event that tests the integrated capability and a major portion of the basic elements existing within emergency preparedness plans and organizations. The emergency preparedness exercise shall simulate an emergency that results in offsite radiological releases which would require response by offsite authorities. Exercises shall be conducted as set forth in NRC and FEMA rules.

Since New York State and Suffolk County are not participating in the planning process, the testing of integrated capability of the offsite authority(s) remains a concern.

N.1.b. An exercise shall include mobilization of State and local personnel and resources adequate to verify the capability to respond to an accident scenario requiring response. The organization shall provide a critique of the annual exercise by Federal and State observers/evaluators. The scenario should be varied from year to year such that all major elements of the plans and preparedness organizations are tested within a five-year period. Each organization should make provisions to start an exercise between 6:00 p.m. and midnight, and another between midnight and 6:00 a.m. once every six years. Exercises should be conducted under various weather conditions. Some exercises should be unannounced.

Since New York State and Suffolk County are not participating in the planning process, mobilization of their personnel and resources during an exercise remains a concern.

P.1. Each organization shall provide for the training of individuals responsible for the planning effort.

P.2. Each organization shall identify by title the individual with the overall authority and responsibility for radiological emergency response planning.

- P.3. Each organization shall designate an Emergency Planning Coordinator with responsibility for the development and updating of emergency plans and coordination of these plans with other response organizations.
- P.4. Each organization shall update its plan and agreements as needed, review and certify it to be current on an annual basis. The update shall take into account changes identified by drills and exercises.
- P.5. The emergency response plans and approved changes to the plans shall be forwarded to all organizations and appropriate individuals with responsibility for implementation of the plans. Revised pages shall be dated and marked to show where changes have been made.

NUREG-0654 mandates an integrated approach to the development of offsite radiological emergency plans by States, localities, and licensees.

Since New York State and Suffolk County are not participating in the development, updating of and training for a radiological emergency plan for Shoreham, the lack of an integrated approach to offsite radiological emergency preparedness remains a concern.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
) Docket No. 50-322-OL-3
LONG ISLAND LIGHTING COMPANY) (Emergency Planning)
)
(Shoreham Nuclear Power Station, Unit 1)

CERTIFICATE OF SERVICE

I hereby certify that copies of the Federal Emergency Management Agency's testimony relating to Group II Contentions on offsite preparedness at Shoreham Nuclear Power Station have been served on the following by deposit in the United States mail, first class, or as indicated by an asterisk, by express mail, this 18th day of April 1984:

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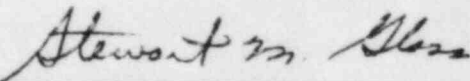
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