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REGION I

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Licensee: Long Island Lighting Company
P. O. Box 618
Shoreham Nuclear Power Station
Wading River, New York 11792

Facility Name: Shoreham Nuclear Power Station

Inspection At: Wading River, New York

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Reporting

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AREAS INSPECTED: A special team inspection was conducted to document and assess resource reductions at Shoreham since approval of the settlement agreement with New York State. The areas inspected include systems, staffing, licensing and emergency preparedness.

RESULTS: Pending further NRC review for completeness and consistency with other facilities, the licensee's position on the Technical Specifications for the defueled condition is unresolved. The discrepancy between the licensee's current organization and the Technical Specification description was previously identified and was under NRC staff review (see section 4.6). Plant systems are being maintained in a reasonable state of readiness although not necessarily operable. Plant organization and program functions remain intact except in very few circumstances. Staffing levels are adequate given current plant status although significant staffing reductions have been implemented. Licensing functions remain intact. Onsite and offsite emergency preparedness staffing and resources are in compliance with the NRC approved plan and with license conditions.

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1.0 EXECUTIVE SUMMARY

1.1 Purpose and Scope

A special team inspection was conducted to document and assess resource reductions at Shoreham since licensee approval of the settlement agreement with New York State. Within each area, the inspectors documented changes made or anticipated. These changes were compared with available standards to assess safety and regulatory impacts.

1.2 Areas Examined

The areas inspected include systems, staffing, licensing and emergency preparedness.

1.3 Summary of Findings

Two issues were identified concerning compliance with licensee requirements. The first involves an unresolved issue on the licensee's position on Technical Specifications for the defueled condition. This issue is unresolved pending NRC review for completeness and consistency with other facilities. The second issue is a discrepancy between the licensee's current organization and the Technical Specification description which was previously identified and is under NRC staff review.

Plant systems are being maintained in a reasonable state of readiness although not necessarily operable. The licensee's program to place the facility in long term lay-up condition is still being developed. The team found this program to be advancing in a reasonable manner.

Plant organization and program functions remain intact except in very few circumstances. Adequate safety evaluations justify deviations from the facility description. Staffing levels are adequate given current plant status although significant staffing reductions have been implemented. Licensing functions remain intact. Plans to scale back this function appear reasonable although the staff is reviewing the licensee's proposal to defer regulatory items. Plans to defer deficiency dispositions appear adequate. Onsite and offsite emergency preparedness staffing and resources are in compliance with the NRC approved plan and with license conditions. Where applicable, safety evaluations of changes made to the facility (as described in the USAR) were properly completed by the licensee and were found acceptable by the team.

2.0 BACKGROUND

On June 28, 1989, LILCo shareholders approved an agreement with New York State which LILCO, among other things, would not operate the Shoreham Nuclear Power Station (SNPS). During a meeting held at Region I on June 30, 1989, LILCo stated its intention to comply with the contractual

obligations of the agreement and outlined its plan for SNPS. This plan included, defueling of the reactor, reductions in maintenance and surveillance activities consistent with a defueled condition and, reductions in staff consistent with the reduced maintenance, surveillance, and operational requirements at SNPS. LILCo also assured the NRC that it intended to abide in all respects by the terms of its operating license for SNPS. These intentions were confirmed in a letter from LILCo (A. F. Early, Jr.) to NRC (W. Russell), dated July 5, 1989.

A management meeting was held between the NRC and LILCo on July 28, 1989 at NRC Headquarters in Bethesda, Maryland. At that meeting, LILCo reiterated the above in somewhat greater detail and the NRC requested LILCo to provide a written description of its program to define the operational status of equipment in the defueled condition and to reduce staffing at the facility. This was provided in a LILCo (W. E. Steiger Jr.) letter SNRC-1626 to NRC (W. T. Russell), dated August 31, 1989; subject: "Staffing Report." SNRC-1626 stated that staffing levels were based on a Technical Specification review to determine the minimum levels of activity necessary to comply with license requirements with all fuel in the spent fuel pool. The initial review "conservatively considered" that Limiting Conditions for Operation (LCO's) applicable in OPERATIONAL CONDITIONS 4, 5, * (fuel movement in secondary containment), "whenever" and "at all times" would apply when all fuel was in the spent fuel pool. The letter further noted that a subsequent "more detailed" evaluation was conducted to include commitments made in licensing documents other than Technical Specifications. Although it was not explicitly stated in SNRC-1626, this subsequent review was modified in that it assumed LCO's for OPERATIONAL CONDITIONS 4 and 5 would not apply with all fuel in the spent fuel pool.

From this review, plant systems were classified as either OPERABLE or not. Those not OPERABLE were further classified as FUNCTIONAL, SECURED, or PRESERVED. An analysis was then conducted to determine the minimum staffing levels necessary to maintain the systems in accordance with the classifications.

In a letter from the NRC (T. Murley) to LILCo (A. F. Early, Jr.) dated August 30, 1989, the licensee was requested to provide written assurance that:

- 1) All systems required for safety in the defueled mode would be maintained in fully operable status.
- 2) All systems required for full-power operation of the facility would be preserved from degradation, with such maintenance and custodial services and appropriate documentation as may be necessary to ensure such preservation.

- 3) An adequate number of properly trained staff to ensure plant safety in the defueled state, including the ability to cope with malfunctions, accidents, and unforeseen events would be maintained.

The licensee was also requested to prepare the submittal prior to a management meeting with the NRC scheduled for late September 1989 and to be prepared to discuss status of Shoreham's approved Emergency Plan at that meeting.

LILCo responded to these requests in a letter (A. F. Earley, Jr.) to NRC (T. E. Murley) dated September 19, 1989. That letter restated substantive portions of SNRC-1626 to outline the program to classify systems; however, the SECURED classification was eliminated. This letter also did not explicitly recognize that LCO's applicable in OPERATIONAL CONDITIONS 4 and 5 would not apply in the defueled condition. A description of the programs to preserve non-operable systems and the assurances requested were also provided.

Defueling of the Shoreham reactor commenced on July 5, 1989 and was completed in early August 1989. All irradiated reactor fuel was removed from the vessel and transferred to the spent fuel pool. The refueling cavity was drained, the reactor vessel internals reassembled, and the reactor vessel head restored to position. The reactor vessel head studs were not re-tensioned. The drywell head and shield plugs were reassembled.

Staffing levels have been reduced from a level 1275 on May 31, 1989 (593 LILCo, 118 LILCo Corporate Support, and 564 Contractors) to a post defueling level of 769 (433 LILCo, 97 LILCo Corporate Support, and 239 Contractors).

3.0 SYSTEMS

3.1 Technical Specifications

The licensee has adopted a position that none of the operational conditions defined in table 1.2 of the Technical Specifications accurately describe Shoreham's current configuration (no fuel in the reactor vessel). Accordingly, the licensee has applied specifications 3/4.0.1 to disregard Limiting Conditions for Operation (LCO's) and surveillance requirements applicable in one or more of the operational conditions described in table 1.2 (absent further qualification). The licensee continues to comply with specifications applicable "at all times" or "whenever." Additionally, the licensee intends to maintain operable those systems required to handle irradiated reactor fuel in the secondary containment. This latter requirement is most often designated by footnote to applicability statements. Attachment A is a compilation of Technical Specifications the licensee considers applicable in the defueled condition.

The inspector did not identify any safety concerns with the licensee's position on the Technical Specifications for the defueled condition. The inspector concluded that those requirements necessary for safe storage of fuel in the spent fuel pool would be met by the above application of Technical Specifications. Notwithstanding, the defueled mode/operational condition is not specifically defined in the Technical Specifications and the adequacy of the licensee's position is unresolved pending further NRC program office review for completeness of applicable requirements and consistency with other facilities considering decommissioning (UNR 50-322/89-91-01).

3.2 System Operability

The licensee does not plan to operate the facility at power. This fact, coupled with the applicability of Technical Specifications described above, was applied to develop the "minimum posture" system configuration. The minimum posture configuration was then used as an assumption to determine staffing and resource reductions.

Plant systems under minimum posture are classified as OPERABLE, FUNCTIONAL, and PROTECTED. These classifications were developed by the Operations Department and Systems Engineering personnel. The classifications were reviewed and approved by the Review of Operations Committee (ROC) and ultimately by the Plant Manager. The classification process represents the first of three phases to place the facility in long term lay-up. Phase II and III involve development and implementation of specific lay-up instructions for PROTECTED systems and is described in paragraph 3.3 below. A complete listing of plant systems according to their classification is displayed in Attachment B to this report.

OPERABLE systems were classified by considering requirements of Technical Specifications, commitments made in the Updated Safety Analysis Report (USAR) and Fire Hazards Analysis Report (FHAR). The term OPERABLE is defined according to the Technical Specification definition. This requires compliance with Limiting Condition for Operations (LCOs) without reliance on action statements for systems required in OPERATIONAL CONDITIONS *, "at all times," and "whenever." A number of the systems classified as OPERABLE may not be operable in all functions or all system trains. For example, the B2i-Nuclear Boiler system is classified as OPERABLE; however, only the vessel level instrumentation will remain operable. Similarly, only two of

the three diesel generators will be maintained operable although the R-43 Diesel Emergency Power system is classified as OPERABLE. These circumstances are allowed by Technical Specifications. The LCO for the particular system must be referred to in determining the minimum system operability requirements for the defueled condition.

Certain systems classified as OPERABLE are not specifically required in the defueled condition or are not addressed in technical specifications. These systems are included in the OPERABLE category because the particular system performs one or more functions necessary to comply with an associated LCO. For example, the Reactor Water Cleanup system is not specifically addressed in the Technical Specifications; however, its sampling function is necessary to comply with specification 3/4.4.4 (Chemistry) which is applicable "at all times." For these systems "operability" means it can perform the required function(s). This is distinguished from the "FUNCTIONAL" classification described below because there, the system's function does not impact Technical Specifications in the defueled condition.

FUNCTIONAL systems are those not required to be OPERABLE by Technical Specifications but necessary for other reasons such as industrial safety or habitability. These systems will remain functional for their intended purposes.

PROTECTED systems are those systems not required by Technical Specifications which do not provide any other function necessary for safe or routine operation of the facility in the defueled condition. These systems will be layed up in accordance with the System Lay-up Implementation Packages (SLIP) described in paragraph 3.3 below.

Pending resolution of the unresolved issue discussed in Section 3.1, the inspector found the licensee's program to classify systems consistent with Technical Specifications when no fuel assemblies are in the reactor vessel.

3.3 System Lay-up

The licensee established a Lay-up Task Force comprised of a Systems Engineer, Compliance Engineer, Nuclear Engineer and Radiochemistry Engineer. The task force was to develop and implement lay-up instructions for plant systems that will be PROTECTED. As noted above, this activity represents phases II and III of the lay-up program. To date, the task force has met on 13 occasions. The task force will continue to meet on a regular and frequent basis throughout the development and implementation phases.

Phase II of the program involves development of System Lay-up Implementation Packages (SLIPs) for each system. These packages will specifically define a system's configuration for long term lay-up. The packages will include valve and breaker alignments, tagging orders, system boundary definitions, and a safety evaluation which considers impact of the lay-up on plant operation in the defueled condition. The packages will also include specific instructions to achieve the desired configuration and to monitor or perform preservation activities where applicable. The packages will not address maintenance or surveillance requirements in the lay-up configuration.

The licensee maximized use of existing programs and procedures which govern plant activities to control the SLIP process. A System Engineer Guideline (SEG) 3.9, "Lay-up of Secured Systems" was issued to provide direction and a consistent method for the preparation of SLIP packages. In addition, SEG 3.10, "Dry Lay-up of Wet Systems" was in draft form during this inspection. This guideline was established to provide special instructions for the dry lay-up process of wet systems. All SLIPs will be reviewed and approved by the Review of Operations Committee (ROC). Following ROC approval, the SLIP package is ready for implementation.

The individual SLIPs for each PROTECTED system will contain the following documents:

- Marked-up system boundary drawings (P&ID's)
- Valve lineup checklist
- Secured annunciator list
- Lifted lead and jumper permit request (as required)
- Component power supply checklist
- Station Equipment Clearance Permit Request with tagging order
- Safety evaluation
- Implementing Maintenance Work Request
- Approval cover sheet
- Special lay-up/draining instructions (as required)
- Other special instructions (as required)

The specific lay-up configurations and instructions for the various PROTECTED systems are being developed. The licensee has consulted several outside sources on lay-up requirements including: EPRI NP-5106S, "Plant Lay-up and Equipment Preservation Sourcebook," contractor surveys (ie. Impell and Multiple Dynamics Corp), and utility surveys (ie. TVA, WPPSS, Philadelphia Electric Company, and Cleveland Electric Illuminating Company).

Lay-up of water systems that will be PROTECTED is also in the development stage. The licensee is evaluating both a wet and dry lay-up process and has contacted outside expertise in these areas.

As of this inspection, two SLIPs had been ROC approved. Neither of these had been implemented. Thus, no plant systems have been "laid up." The two SLIPs which are ROC approved are N36-Extraction Steam System and N23-Miscellaneous Drains Secondary Plant System. These were considered "easy" systems and were expedited through the system partly to test the process. The licensee continues to evaluate and adjust the development process as necessary. A total of 10 SLIPs are in the preparation stage and as noted, all protected systems will eventually have an associated SLIP package.

Phase III will involve implementation of the SLIP packages. The SLIP packages will utilize the licensee's existing maintenance work request program, tagout process and system operating procedures (where possible) to configure the system. Thus, special procedures or unique administrative controls will be minimized. The securing of systems will be performed by both maintenance and operations personnel. A controlled working copy of the SLIP package will be maintained in the control room valve lineup file. In addition, a copy of the SLIP package will be filed with the System Engineering group and a record copy filed in the Shoreham records retrieval system.

The inspector found the licensee's approach to system lay-up of PROTECTED systems to be reasonable. The process to develop SLIP packages appears to consider all relevant factors of safety and preservation. The process also appears to be compatible with the existing procedural framework at the facility. The licensee is, however, just beginning application of the process.

3.4 Surveillance and Maintenance of Systems

The surveillance program necessary for compliance with Technical Specifications will remain essentially as-is. The scope of surveillance actually conducted has been significantly reduced to encompass only those systems classified OPERABLE in the defueled condition. The computerized surveillance tracking program remains active and continues to issue Station Activity Worksheets (SAWS) for systems required operable in conditions 4, 5, *, "At all times," and "Whenever." Surveillance activities for 4 and 5 have typically been deferred by the cognizant departments.

Prior to the settlement, the licensee typically performed surveillance necessary to maintain the facility in a position where an entry to OPERATIONAL CONDITION 2 could be made within a short period (target of 30 days). This required performance of surveillance activities which otherwise could have been deferred. This policy has been abandoned and the result has been a significant reduction in surveillance actually performed.

Status of Maintenance and Instrument & Control (I&C) PMs since July 1989 is as follows:

- Overdue Priority 1 and 2 PMs 22 - mechanical
 18 - electrical
 1 - I&C
- Completed PMs - 431 - mechanical & electrical
 160 - I&C
- Deferred PMs - 177 - mechanical & electrical
 251 - I&C

Many of the mechanical/electrical PMs were deferred because they could not be performed, or there was a manpower shortage, due to defueling activities. Most of these were monthly PMs and as such have been subsequently performed since completion of defueling. Most of the I&C PMs deferrals were related to calibration checks scheduled on the plant systems to be put in lay-up.

PM activities are being maintained for the defueled condition of the plant. The licensee's existing PM program will continue to track the operational life of components and Environmental Qualification of components. However, the actual component replacements for systems other than OPERABLE are being deferred.

Corrective maintenance activities have been reduced primarily for three reasons. First, a number of systems have been shutdown and therefore present fewer opportunities to fail. Second, reduced surveillance activity has realized a proportional effect in the number of failures requiring corrective maintenance. Third, some identified corrective maintenance has been deferred based on operability requirements. The backlog of maintenance work requests (MWRs) is presently 1380. The MWR backlog has only increased by 242 since the Operational Readiness Assessment Team inspection conducted during March 1989.

The licensee is still in the process of developing the long term monitoring and maintenance requirements associated with the plant systems that are to be PROTECTED and put into either a dry lay-up or wet lay-up condition. These requirements will be developed following completion of phase II of the SLIP Program. In this way, the lay-up configuration and monitoring requirements will be known. The inspector noted that the license has yet to develop criteria for evaluating whether a particular maintenance activity should be continued. In the interim, as noted above, the majority of preventive maintenance activity continues to be performed.

In addition to program reviews, the inspector toured the facility to assess physical condition. No gross indications of system disrepair or parts scavenging were noted during the tours. Housekeeping was adequate.

The inspector concluded that plant systems are being reasonably maintained (pending resolution of the unresolved issue discussed in Section 3.1) while the licensee develops the custodial surveillance and maintenance activities for the plant systems scheduled for lay-up. Corrective maintenance and surveillance activities have been reduced.

3.5 Procedures

The licensee intends to deactivate surveillance procedures for activities it no longer will perform. "Deactivated" means the procedure will no longer be performed or maintained up-to-date. The procedure will not be deleted and it will still be possible to retrieve records of its performance from the SAWS data base.

Currently the licensee has not deactivated any plant operating procedures. A number of PM procedures were deactivated in the radio-chemistry department. These PMs were associated with calibrations of conductivity monitors in the condensate system, none of which are safety related. To date these procedures are the only procedures to be deactivated. The licensee will evaluate deactivating other procedures concurrent with lay-up implementation.

Since the system preservation/lay-up program started, the following procedures have been revised to assist in the actual lay-up implementation stage:

- ° SP 12.006.01, Revision 24, "Station Procedures - Preparation, Review, Approval, Change Review, and Cancellation"
- ° SP 12.011.01, Revision 23, "Environmental Qualification Program"
- ° SP 12.015.01, Revision 15, "Preventive Maintenance Program"

Also, two systems engineering guidelines, SEG 3.9 and SEG 3.10 were initiated to provide uniform guidance for preparation of SLIPs and dry lay-up instructions of wet systems.

The preventive maintenance procedure was revised to indicate that if Environmental Qualification (EQ) PMs are deferred the EQ engineer has to be notified so an operability assessment of the component can be made. If EQ PMs are deferred beyond the extension due date the operations department Watch Engineer will enter the item into the control room Limiting Condition for Operations log book. Thus, deferred EQ items will be tracked and will require resolution prior to declaring the component operable.

The inspector found the new or revised procedures accurately reflect the licensee's system lay-up program and that existing procedures will be adequately integrated into the lay-up process.

3.6 Conclusions

The adequacy of the licensee's interpretation of Technical Specifications for the defueled condition is unresolved pending NRC review for completeness and consistency with other facilities considering decommissioning. The licensee's classification of systems and applicable maintenance and surveillance requirements are dependent upon resolution of this issue.

Notwithstanding, it appears that the licensee is taking reasonable steps to preserve plant systems. No indications of gross deterioration or scavenging of parts were noted. Progress has been made in defining the long term lay-up configuration but a great deal of work remains in this area. Long term maintenance and procedure status remains to be defined.

4.0 STAFFING

4.1 Program Staff Reductions

4.1.1 Plant Staff

The inspector reviewed the plant staff established for the current status of the Shoreham Nuclear Power Station (SNPS). Staffing levels and positions were determined from organization charts dated September 15, 1989 and through discussions with plant staff department managers. The total number of currently authorized plant staff is 268. This number is broken down by division to: Operations Staff Division - 44, Operations Division - 58, Maintenance Division - 101, Radiological Controls Division - 46, Outage/Modifications Division - 19, and the Plant Manager - 1. During the period of inspection, some divisions were staffed over the authorized numbers.

The SNPS Updated Safety Analysis Report (USAR) describes minimum staffing levels for Operations Division as 41, Maintenance Division 46, and the Radiological Controls Division 31. The USAR does not contain staffing numbers for the Operations Staff Division or the Outage/Modifications Division.

The SNPS Technical Specifications, Section 6, does not specify plant staffing levels except for shift manning and the fire brigade. The shift staffing levels specified in the Technical Specifications for cold shutdown condition are one Senior Reactor Operator (SRO), one Reactor Operator (RO), and one Equipment Operator (EO). LILCo plans to staff each shift with two SRO's, one RO, and four EO's. The licensee may need to adjust these numbers and the 6 shift rotation due to the attrition of licensed operators.

At present there are 11 SRO's assigned as Watch Engineers or Watch Supervisors, and 11 RO's assigned as Nuclear Station Operators or Assistant Nuclear Station Operators (the Assistant Nuclear Operator category will be deleted but the individuals retained). There are 2 additional SRO's in the Operations Division and about 5 licensed operators staffed as Equipment Operators. Since the Technical Specifications require only 1 SRO and 1 RO on each shift with the plant in a shutdown condition, there does not appear to be a problem maintaining the required staffing levels in the near term.

The Technical Specification requires a fire brigade of five individuals. A fire brigade of five individuals is being maintained.

The Technical Specification require that a Shift Technical Advisor be on shift whenever the unit is in Condition 1, 2, or 3. Since the plant is in a defueled condition LILCo has deleted this position from the plant staff, and reassigned the individuals within LILCo.

4.1.2 Nuclear Operations Support Division (NOSD)

The inspector reviewed the staffing of NOSD. NOSD reports to the Assistant Vice President, Nuclear Operations and provides support in the areas of financial services, licensing, contracts and material controls, and security. At the time of full power licensing this division had about 154 individuals including 38 consultants (authorized - 164). The current planned staff is 88 individuals including 3 consultants. This reduction includes the transfer of Emergency Preparedness (32 individuals, 22 authorized) to Corporate Services.

The reduction in numbers in NOSD has been the result of reduced activities in the areas of contracts, modifications, procurement activities, new orders for materials, new requisitions, purchase orders reviewed, requests for materials information, reorders of parts and receiving reports processed. No functions have been deleted from this division except for transfer of Emergency Preparedness, noted above.

The staffing levels of NOSD are not described in the facility USAR. The inspector found the staff reductions to be reasonable given the reduced workload.

4.1.3 Nuclear Quality Assurance

The inspector reviewed the staffing of the Nuclear Quality Assurance Department (NQA). The staffing of this division has been reduced from an authorized number of 63 to 40. Of the 40, 10 are Non Destructive Examination (NDE) personnel who may report offsite, depending on workload at the site or other LILCo facilities. There has been no change in the requirements or description of the operational Quality Assurance Program. The inspection workload has been reduced consistent with the reduction in plant activities. Two pro-active activities, conduct of a safety system outage and modification inspection, and optional training for NQA personnel, were eliminated.

The NQA staffing levels are not described in the facility USAR nor the NQA program descriptions. The inspector found the NQA staffing reductions reasonable given the reduced workload.

4.1.4 Nuclear Engineering Department

The inspector reviewed the staffing of the Nuclear Engineering Department (NED). The NED has been restructured from the six divisions described in the USAR to four divisions. The Engineering Assurance Division and the Radiation Protection Division have been dissolved. The engineering assurance function, not required by the Technical Specifications, was deleted and the functions of the Radiation Protection Division, with a reduced level of activity because of the status of SNPS, were transferred to the Nuclear Analysis Division.

The activities of scheduled plant modifications, long-term engineering studies/evaluation, program updates for equipment qualifications, spare parts classification/dedication, and some licensing initiatives with current schedules have been put in a deferred category. The NED staff has been reduced from 78 LILCo and 17 consultants (114 had been authorized) to 48 LILCo employees with plans to go to 45 individuals and about 11 consultants. Neither the USAR nor the Technical Specifications specify or describe staffing levels for the NED.

In addition to NED, the LILCo Office of Engineering provides technical support for SNPS. The authorized support was 53 individuals but was at a level of 43 individuals and 19 consultants prior to the settlement with the State of New York. This support has been reduced to a level

of 24 LILCo employees, 3 contractors, and 5 consultants. For the most part, the individuals supporting SNPS on a full time basis are still within the Office of Engineering. LILCo will continue to maintain engineering service contracts with organizations such as Stone & Webster and General Electric and continue to have access to personnel in other LILCo engineering departments.

The inspector found the reduced staffing levels in this area reasonable given the reduced workloads.

4.2 Maintenance of Minimum Staffing Levels

LILCo has stated that for the near future, they will maintain a staff of about 268 individuals at SNPS. This is being supported by a budget commitment of about \$50 million. The licensee should be capable of maintaining a stable number of total staff at Shoreham given this amount of financial commitment.

The inspector noted that although the total figure appears reasonable, NRC reliance on it alone could mask staffing shortages concentrated in one area or in key supervisory positions. Also this figure is a "snapshot" number representing the staff in September 1989. With the exception of Technical Specifications, there are few obstacles to preclude the licensee from making further significant staffing reductions without NRC involvement.

These concerns were addressed to Station Management. The licensee committed to promptly notifying Region I of any significant staffing changes which occur in the future. "Significant" is to include personnel changes in first line supervisory positions and above.

The inspector noted that although staffing at SNPS has been reduced, a large percentage of individuals that were released from Shoreham remain in the LILCo organization (no longer assigned to SNPS) and would be available if needed.

4.3 Safety Evaluations of Staff Reductions

The inspector reviewed safety evaluations addressing the reductions in staffing and technical support for SNPS. Safety evaluations were performed in accordance with 10CFR50.59.

The safety evaluations reviewed were:

1. SNRC-1615 - Organization/Personnel Changes Shoreham Nuclear Power Station, dated 7/19/89.
2. Radiological Controls Division Staff Reduction, dated 9/6/89.

3. SNPS - OPS Staff Division, dated 9/13/89.
4. Operations Division Staff Reductions, revised, dated 9/12/89.
5. Termination of Shift Technical Advisor Services, dated 9/6/89.
6. Delete the Requirement to Staff Shift Technical Advisors and Nuclear Engineers under the Conditions of the LILCo and New York State Settlement Agreement, dated 9/1/89.
7. Change Emergency Plan Section 5.2 to Read: The Onsite Fire Brigade will be Manned by the Shift Watch Supervisor, one Fire/Safety Technician and Three Equipment Operators, dated 8/23/89.
8. Reduction of Staff in the Maintenance Division of SNPS, dated 9/6/89
9. Special Safety Evaluation - Reduction of Outage/Modification Division Staffing, dated 9/6/89 and Rev. 1 dated 9/20/89.
10. Nuclear Engineering Department - Safety Evaluation 89-057, dated 9/8/89.
11. NOSD Safety Evaluation on SNRC-1626 (NOSD staffing reduction), dated 9/8/89
12. Nuclear Quality Safety Evaluation, SEQA-89-007, dated 9/12/89.

The inspector found all the safety evaluations reviewed to be adequate.

4.4 Continued Training of Minimum Staff

LILCo plans to keep their training organization and training programs in place. In particular, LILCo is continuing their requalification program for licensed operators. However, no classes for newly licensed operators are planned. With respect to unlicensed plant staff the utility has 10 programs accredited by INPO and are planning to continue with this program. However, they have dropped their membership in INPO and requested associated membership based on their part ownership of Nine Mile Point 2. It is not clear at this time whether INPO will continue to accredit the programs at SNPS.

4.5 Qualifications of Minimum Staff

The inspector reviewed the qualifications of key personnel relative to the qualifications stated in the facility USAR and the Technical Specifications. These qualifications were based on ANSI N18.1-1971

which SNPS has committed to in Section 6.3 of the Technical Specifications. An exception to this standard was noted in the qualifications of the Health Physics Engineer. This person shall meet or exceed the qualifications described in Regulatory Guide 1.8, 1975.

The inspector found the qualifications of key personnel comply with USAR commitments and Technical Specification requirements except for the Radiological Controls Division manager. This person is required to have a certain level of experience at power levels above 20%. The present manager lacks this experience but is otherwise a highly experienced and technically competent manager. LILCo, by letter dated August 8, 1989, notified the NRC of this discrepancy and committed to obtaining the necessary experience should the plant operate. Also, the licensee adequately performed a safety evaluation per 10 CFR 50.59 to address this deviation from the USAR commitment. The inspector found this discrepancy and the licensee's commitment to obtain the necessary experience if the plant operates to be adequately documented.

4.6 Organization

The inspector found the SNPS organization to be consistent with that described in the USAR. Excepting elimination of certain program functions in the NED (see paragraph 4.1.4), all program functions have remained intact despite staffing cuts.

The inspector noted the licensee's current organization is not in compliance with the Technical Specification description. This is due to a reorganization made on January 1, 1988. That reorganization was the subject of a LILCo (J. D. Leonard, Jr.) letter SNRC-1403 to the NRC (Document Control Desk), dated December 8, 1987 (see also, NRC Inspection Report 50-322/87-20). The licensee also submitted license amendment application #14 to delete the organization chart from Technical Specifications consistent with the guidance of NRC Generic Letter 88-06. The inspector noted that this discrepancy was not related to the recent reductions in plant staff. The inspector determined that resolution of this discrepancy was the subject of other NRC review/action.

The inspector noted the absence of a Vice President Nuclear for SNPS. This was due to a personnel reassignment which left that position vacant. The reassignment was the subject of a LILCo (J. D. Leonard, Jr.) letter, SNRC-1615 to the NRC (Document Control Desk) dated July 20, 1989. That letter stated that the Assistant Vice President would assume the duties, responsibilities and authority of the Vice President effective August 1, 1989. The Vice President was reassigned within the company and is available to be recalled if necessary. The Vice President's new responsibilities include the Office of Training, the

corporate QA department, the emergency planning group, the non-destructive testing group, and the Nine Mile Point Unit 2 oversight group.

4.7 Conclusions

The inspector concluded that the staffing, technical support, and program functions for SNPS meet requirements as described in the SNPS USAR and as required by the SNPS Technical Specifications, except where noted above. Variations in staffing levels from those described in the USAR were properly evaluated in accordance with 10 CFR 50.59. The inspector found staffing levels reasonable for the current plant status. The inspector found the current staffing level significantly below the levels immediately prior to full power licensing. Variations from the organization found in the Technical Specifications are unrelated to the scope of this inspection and are being resolved through other NRC action.

5.0 LICENSING

5.1 NRC Compliance Memoranda (Bulletins, Generic Letters, etc.)

The inspector reviewed the Nuclear Operations Support Department (NOSD) procedures, NOSD staffing, LILCo's position on deferral of regulatory activities, and LILCo's tracking systems.

LILCo, in its letter of September 27, 1989 submitted its position on deferral of regulatory activities. LILCo is proposing to defer certain current and future generic request information and related implementation activities based on its review of applicability to the Shoreham defueled condition. LILCo also plans to defer commitments made in anticipation of full power operation. LILCo will record and track these deferred items on the Shoreham Administrative Tracking System (SATS) which is covered by NOSD procedure 23.

The inspector found that an adequate framework for tracking deferred items exists. The NOSD staffing and resource levels are adequate to accomplish the tracking program. However, the acceptability of LILCo's proposal in the letter dated September 17, 1989, to defer such activities is currently under staff review.

5.2 Licensing Conditions Compliance

The inspector reviewed documentation to verify compliance with the license conditions listed in section 2.c and attachments to license NPF-82. Based on that review and the plant status it was determined that the licensee is currently in full compliance with those conditions.

5.3 Deficiency Tracking Programs

The inspector reviewed the procedures governing LILCo Deficiency Reports (LDR) and Maintenance Work Requests (MWR). The LDR and MWR procedures were being revised to address long term deferral. The inspector reviewed the proposed revisions and found they would provide reasonable direction for tracking deferred items.

Procedure QA-15.1, Control of Nonconformance is being revised to include instructions for deferral of LDR's. There are currently 33 deferred LDR's and they are being tracked on a QC internal tracking system. The QC Managers intend to enter and maintain tracking data in SATS. The details and procedures to accomplish data transfer remain to be developed.

5.4 Conclusion

The system to track deferred regulatory activities appears adequate. The acceptability of deferring these activities, as proposed by LILCo in a letter dated September 17, 1989, is currently under staff review. The staff's findings on this matter will be provided later in a separate document.

The licensee has complied with all license conditions of NPF-82.

The procedures for tracking deferred LDRs and MWRs are being revised. The early revisions appear to be acceptable. The tracking systems are mature, functional, and capable of tracking the new data entries.

6.0 EMERGENCY PREPAREDNESS

6.1 Program Reductions

The licensee's onsite emergency preparedness organization consists of six staff members which is a reduction of three since obtaining their full power license. The reduction is reasonable due to a reduction in licensing activities. The licensee is maintaining its emergency preparedness program with the current staff.

There have been a few changes in the onsite program. One change is the frequency of drills from approximately three per quarter to one per quarter. A change in the normal organization, implemented on August 1, and a change in personnel who constitute the fire brigade, implemented on August 29, required an emergency plan revision. Although LILCo notified the NRC of the organization change on July 20, 1989, they had not revised the emergency plan. Based on the inspector questioning and prior to the end of this inspection, LILCo was preparing a revision to the plan regarding the organizational change and change to the fire brigade composition for submittal to the NRC in accordance with 10 CFR 50.54(q).

The licensee's offsite emergency preparedness organization consists of fourteen staff members which is a reduction of nine since obtaining their full power license. The reduction is primarily due to the termination of litigation activities. The licensee is maintaining its offsite emergency preparedness program with the current staff.

The following changes have been made to the offsite program as a result of the minimum posture study:

- The drill frequency has changed from three per quarter to one per quarter as was changed for the onsite drill program.
- The annual reception center practical drill will be a tabletop discussion with some demonstration instead of a full hands-on performance.
- The school evacuation drill for new bus drivers scheduled for September was cancelled. Bus driver classroom training and retraining is continuing.
- The siren test frequency has been changed from monthly to quarterly.
- Outdoor lot improvements for some of the transportation transfer points have been deferred.
- Facility-specific plans and procedures are not being developed for newly identified special facilities. The licensee is providing generic plans and procedures depending on the type of facility, i.e., nursing home, preschool, etc. Transportation requirements, however, are being arranged for each facility's specific needs.
- Distribution of public information brochures for the 10-mile Emergency Planning Zone (EPZ), 50-mile EPZ and schools has been deferred. This is required only for operations above 5 percent rated power.
- A Brentwood facility staff person designated to begin the Emergency Operations Center (EOC) set-up has not been placed on-call 24 hours per day. This is required only for operations above five percent rated power.

None of these changes require local emergency response organization (LERO) plan revisions nor do they reduce the effectiveness of the LERO plan.

6.2 Onsite Staff Readiness

As a result of plant staff departures, the licensee changed the staffing of the onsite emergency response organization (ERO) from a three team complement for all ERO positions to a three team complement for key ERO staff positions on pagers (nineteen positions) and a two team complement for on-call positions that are not on pagers (seventy-nine positions). The plan description does not require a specific number of teams but rather requires each position be filled 24 hours per day.

With the new ERO staffing plan, the licensee identified ten personnel shortages (of the 98 positions noted above) and twenty-three personnel requiring training on August 14, 1989. On September 6, there were twelve personnel shortages and seven personnel requiring training. The licensee is continuously identifying qualified personnel to fill the vacancies and scheduling training for these personnel. Nevertheless, every ERO position can be filled 24 hours per day by available personnel.

The training coordinator reviews the emergency response organization about every two weeks to identify personnel whose training has expired. The personnel are deleted from the call-out computer and scheduled for training. The emergency preparedness organization is notified immediately when personnel with an assigned ERO position leave the company. The frequency of the training status review and the immediate notification of staff departures enables the emergency preparedness organization to assure that the ERO can be fully staffed at all times.

As a result of the departures of Shoreham staff, the EP organization has increased monitoring of the ERO staffing. Management is notified of status every two weeks. The increased effort to staff and maintain the ERO has been offset by the reduced drill preparation effort. The EP organization does not appear to be understaffed.

6.2 Site (LERO) Staff Readiness

Staffing of the local emergency response organization (LERO) has not changed since full-power licensing. LERO is staffed by non-Shoreham LILCo employees and contractors; consequently, it has not been impacted by the Shoreham situation. The LERO organization is reviewed approximately every two weeks to determine personnel shortages in the three-shift LERO complement. LERO has a shortage of eighteen persons, three of which hold key positions. However, all positions can be filled 24 hours per day. Staffing shortages are filled and training is scheduled as necessary.

As of September 12, training had expired for 209 personnel out of a total of approximately 3020 personnel required for a full 3-shift complement. This is a small percentage of the total LERO and is typical of the number of expired training at any one time. Training is scheduled monthly for personnel whose training has expired. All 209 personnel have been scheduled for training in October.

6.4 Resource Readiness

Both onsite and offsite equipment and facilities are being maintained. Onsite drill records, communications checks, and equipment inventories are being maintained as required by plan and procedures. No discrepancies were identified.

All offsite lease agreements including transfer points and bus and ambulance companies are in place. Instrument calibration continues biannually. Facilities and equipment are being maintained including the decontamination trailers.

All LERO phone lists are updated quarterly. The frequency has remained the same for all offsite emergency preparedness surveillances since full-power licensing except the siren testing, as noted in Section 6.1.

The onsite training program has remained unchanged. Notices of required training are sent to ERO staff supervisors prior to expiration to allow time to schedule training. If personnel still miss retraining they are removed from the onsite ERO call-out list until they have attended retraining.

The inspector reviewed the training records of all recent personnel changes to ERO assignments to assure that no untrained personnel were on-call. One person had not completed training, but training was scheduled to be completed before the change is to become effective.

6.5 Conclusions

The licensee is maintaining the emergency preparedness program in compliance with applicable requirements. Emergency preparedness activities and resources, which were maintained in excess of requirements, have been curtailed since adoption of the settlement. These reductions did not require changes to the NRC approved emergency plan and the emergency preparedness activities, and resources are still above the minimum emergency planning requirements. The two changes to the emergency plan involving the organization were minor in nature and would not reduce the effectiveness of the emergency plan. The licensee was preparing submittals concerning these plan changes for NRC review.

7.0 MANAGEMENT MEETINGS

An exit meeting was held on September 22, 1989 to discuss the preliminary findings of the inspection team.

ATTACHMENT A

APPLICABLE TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS APPLICABLE "AT ALL TIMES"

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ATTACHMENT B

SYSTEM CATEGORIZATION

OPERABLE SYSTEMS

SYSTEM NUMBER

SYSTEM TITLE

B21	NUCLEAR BOILER
C71	REACTOR PROTECTION
D11	PROCESS RADIATION MONITORING
D21	AREA RADIATION MONITORING
F12	SERVICING AIDS (FUEL)
F15	REFUELING
G11	RADWASTE
G33	REACTOR WATER CLEANUP
M43	FIRE PROTECTION
H50	REACTOR BUILDING STANDBY VENTILATION (RBSV) & CONTROL ROOM CHILLED WATER
P41	SERVICE WATER
P64	METEOROLOGICAL MONITORING
R11	STATION TRANSFORMER (NSS & RSS)
R21	NONSEGREGATED BUSES
R22	METAL CLAD SWITCHGEAR
R23	LOAD CENTERS AND UNIT SUBSTATIONS
R35	AC INSTRUMENT POWER
R36	AC UNINTERRUPTIBLE (VITAL) POWER
R42	BATTERY POWER (125VDC)
R43	DIESEL EMERGENCY POWER
R62	STATION PROTECTION AND METERING
R71	FIRE DETECT & STATION SECURITY
R81	HEAT TRACING
S23	138/69KV SWITCHYARD POT. TRANSF.
S24	138KV SWITCHYARD RELAY PANELS
T21	REACTOR BUILDING
T22	REACTOR BUILDING SUPERSTRUCTURE
T23	REACTOR PRIMARY CONTAINMENT
T31	REACTOR BUILDING (RB) CRANES, HOISTS AND ELEVATORS
T41	REACTOR BUILDING VENTILATION
T46	REACTOR BUILDING STANDBY VENT
U41	TURBINE BUILDING VENTILATION
V41	RADWASTE BUILDING VENTILATION
W12	SCREENWELL CANAL
X41	MISC HEATING, VENTILATION AND AIR CONDITIONING (HVAC)
X60	DIESEL GENERATOR VENTILATION
X61	CONTROL ROOM AIR CONDITIONING
Y25	BARGE DOCK AND WATERFRONT
Z94	SEISMIC MONITORING
Z96	POST ACCIDENT SAMPLING

FUNCTIONAL SYSTEMSYSTEM NUMBERSYSTEM TITLE

B11	REACTOR ASSY
B41	FUEL POOL COOL & CLEANUP
M41	HEATING & AUX BOILER
M42	DOMESTIC WATER
M44	SANITARY SEWAGE
N61	BUILDING SERVICE MISC.
N34	LUBRICATING OIL
N39	TURNING GEAR
N42	HYDROGEN SEAL
N43	GENERATOR STATOR COOLING
N45	GENERATOR HYDROGEN & CO2 PURGE
N71	CIRCULATING WATER
O61	PLANT SECURITY
P11	CONDENSATE TRANSFER & STORAGE
P21	DEMINERALIZER & MAKEUP WATER
P33	SAMPLE SYSTEM
P43	TURBINE BUILDING CLOSED LOOP COOLING WATER (TBCLCW)
P50	COMPRESSED AIR
P71	LOW CONDUCTIVITY & SERVICE WATER DRAINS
R24	MOTOR CONTROL CENTERS
R34	AUXILIARY GROUNDING
R41	DC INSTRUMENT POWER (48VDC)
R51	COMMUNICATION (IMIPA PLANT)
R52	COMM-TELEPHONE (LEASED LINE)
R53	COMM-SOUND (POWERED TELEPHONE)
R54	COMM-RADIO
R55	CLOSED CIRCUIT TV
R61	UNIT PROTECTION & METERING
S21	PLANT SUBSTATION
S25	69KV SWITCHYARD/GAS TURBINE
T51	REACTOR BUILDING LIGHTING
U31	TURBINE BUILDING (TB) CRANES, HOISTS, ELEVATORS
U51	TURBINE BUILDING LIGHTING
V31	RADWASTE (RW) CRANES, HOISTS AND ELEVATORS
V51	RADWASTE BUILDING LIGHTING
W23	CHLORINATION
X37	SECURITY BUILDING
X46	OFFICE BUILDING HVAC
X50	OFFICE BUILDING ANNEX
X70	SECONDARY ACCESS FACILITY
Y46	CATHODIC PROTECTION
Y51	YARD LIGHTING

PROTECTED SYSTEMS

<u>SYSTEM NUMBER</u>	<u>SYSTEM TITLE</u>
B31	REACTOR WATER RECIRCULATION
C11	CONTROL ROD DRIVE (CRD) HYDRAULIC CONTROL
C32	FEEDWATER CONTROL
C41	STANDBY LIQUID CONTROL
C51	NEUTRON INSTRUMENTATION
C61	REACTOR REMOTE SHUTDOWN
C91	PROCESS COMPUTER
E11	RESIDUAL HEAT REMOVAL
E21	CORE SPRAY
E32	MSIV LEAKAGE CONTROL
E41	HIGH PRESSURE COOLANT INJECTION
E51	REACTOR CORE ISOLATION COOLING
M60	MAIN CHILLED WATER
N11	MAIN STEAM
N21	CONDENSATE AND FEEDWATER
N22	HEATER RELIEF AND VENT LINES
N23	MISC DRAINS SECONDARY PLANT
N24	SEALING WATER
N25	FEEDPUMP TURBINE SUPERVISORY INSTRUMENTATION (TSI)
N31	TURBINE
N32	TURBINE CONTROL
N33	SEAL AND RADWASTE STEAM
N35	MOISTURE SEPARATOR REHTR & DRAINS
N36	EXTRACTION STEAM
N37	MAIN TURBINE SUPERVISORY INSTRUMENTATION
N41	GENERATOR
N44	VACUUM PRIMING & AIR REMOVAL
N51	EXCITATION
N52	CONDENSATE DEMINERALIZER
N62	RADWASTE OFFGAS
P42	REACTOR BUILDING CLOSED LOOP COOLING WATER (RBCLCW)
P63	RADWASTE SOLIDS HANDLING
P65	VIBRATION MONITORING
R13	ISOLATED PHASE BUS
S22	138KV TRANSFORMER BREAKER
T24	PRIMARY CONTAINMENT INERTING
T47	PRIMARY CONTAINMENT COOLING
T48	PRIMARY CONTAINMENT ATMOSPHERIC CONTROL
T49	PRIMARY CONTAINMENT INTEGRATED LEAK TEST PANEL
X62	CONTROL ROOM SELF CONTAINED AIR SUPPLY
Z92	EXCESS FLOW CHECK VALVES
Z93	POST ACCIDENT MONITORING