

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket No. 50-322

Report No. 50-322/93-04

License No. NPF-82 (Possession Only)

Licensee: Long Island Power Authority
P. O. Box 628, North Country Road
Wading River, New York 11792

Facility Name: Shoreham Nuclear Power Station

Inspection At: Wading River, New York

Inspection Period: October 9-December 30, 1993

Inspectors: RL Nimitz
R. L. Nimitz, CHP
Senior Radiation Specialist

2/4/94
date

RL Nimitz for
L. Eckert, Radiation Specialist, RI

2/4/94
date

J. S. Kottan
J. Kottan, Laboratory Specialist, RI

2-4-94
date

Approved by: R. J. Bores
R. J. Bores, Chief
Facilities Radiation Protection Section

2/4/94
date

Areas Inspected: The inspection consisted of on-site and in-office inspection by Region I staff, including facility tours, observation of work-in-progress, and review of various licensee procedures and reports. The areas reviewed included action on previous inspection findings; decommissioning status and activities; fuel shipping activities; termination surveys; organization, staffing, training, and qualifications; radiological controls; radioactive waste activities; maintenance and surveillance activities; sewage disposal; quality assurance; fire protection; and security and safeguards. The circumstances surrounding the fire that occurred in the drywell on December 28, 1993, and the short term corrective actions taken following the fire were reviewed, as were the circumstances and corrective actions associated with the dropping of fuel channels on November 6 and December 22, 1993. During the period November 8-11, 1993, members of the Oak Ridge Institute for Science and Education's (ORISE) Environmental Survey and Site Assessment Program (ESSAP) performed independent on-site confirmatory surveys of the licensee's Phase I Termination Survey Program.

Findings: The inspector's review indicated that, overall, decommissioning and termination survey activities were conducted in accordance with the approved Decommissioning and Termination Survey Plans. Four apparent violations were identified involving 1) failure to establish adequate procedures for inspection of fuel shipping casks, 2) release of potentially contaminated material (samples) from the radiological controlled area, 3) inadequate monitoring of sewage sludge prior to its disposal, and 4) use of out dated procedures. One unresolved item was identified and involved potential programmatic weaknesses associated with fire protection controls for burning and cutting and compliance with fire protection procedures. Reviews of the circumstances associated with the dropping of the fuel channels did not identify any immediate safety concerns. The on-site confirmatory measurements performed by ESSAP personnel did not identify any areas exceeding NRC decommissioning acceptance criteria. Preliminary results received by the inspector indicated surface activity levels were within guidelines and were generally consistent with the licensee's results.

DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

The inspector met with cognizant licensee personnel periodically throughout the inspection period. In addition the inspector periodically held telephone discussions with licensee personnel during the inspection period. Individuals contacted included:

- A. Bortz, Resident Manager
- L. Britt, Nuclear Operations Support Department Manager
- A. Downs, Security and Training Division Manager
- T. Garvey, Decommissioning Department Manager
- L. Henry, Quality Systems Manager
- L. Lewin, Maintenance Manager
- N. Nielsen, Operations and Maintenance Department Manager
- R. Patch, NQA Department Manager
- R. Pauly, Compliance Engineer
- F. Petschauer, Radiological Controls Division Manager
- S. Schoenwiesner, Licensing and Regulatory Compliance Department Manager
- J. Wynne, Operations Manager
- R. Youngeblood, Fuel Engineer

The inspector also contacted other licensee personnel during the inspection.

1.2 NRC

L. Pittiglio, Project Manager, Office of Nuclear Material Safety and Safeguards, NRC Headquarters

1.3 Others

During the period November 8-11, 1993, Dr. William Brown of Brookhaven National Lab performed on-site observation of the Oak Ridge Institute for Science and Education's (ORISE) Environmental Survey and Site Assessment Program (ESSAP) Team in support of an NRC contract with Brookhaven National Laboratory (human factors associated with decommissioning).

2.0 Scope of Areas Reviewed

During the inspection period, the inspector reviewed the following activities.

- previous findings
- status of decommissioning
- transfer of slightly irradiated fuel

- termination survey program
- organization, staffing (including maintenance of staff), training and qualifications
- fuel handling activities
- radiological controls
- security, safeguards, and fitness for duty
- maintenance and surveillance activities
- disposal of sewage sludge
- fire protection activities
- radioactive waste shipping activities
- employee concerns program
- quality assurance activities

3.0 Previous Findings

3.1 (Closed) Unresolved Item (50-322/93-01-01)

The inspector's review of procedures in selected licensee termination survey "kit bags" in the field identified that they contained out dated procedures. The licensee immediately suspended on-going surveys to evaluate the matter and concluded that surveys were being conducted in accordance with latest procedure requirements in that the revisions involved minor administrative changes and were not safety significant. The licensee replaced the procedures and provided refresher training to personnel. The licensee also indicated that personnel had been provided training on the correct revision, but that the older revision in the kit bags had not been replaced.

The licensee subsequently suspended the individual who had provided the incorrect procedures. The licensee reviewed the inspector's finding and concluded that the finding reflected programmatic weaknesses in the document control program. The licensee revised the document control program at Shoreham Station to preclude recurrence. The licensee eliminated routine maintenance of extra copies of procedures at document control locations and established methods to ensure personnel were made aware of new procedures and procedure changes. The methods included posting of notices of issuance on new procedures or revisions, discussing changes at morning meetings, and updating of a pre-recorded message regarding procedure changes.

The inspector indicated that failure to use the latest revision of procedures was inconsistent with the requirements of Station Procedure SP 12X006.01; Station Procedures-Preparation, Review, Approval, Change, Revision, and Cancellation; Revision 4, which requires that only the latest revision of procedures be used. The inspector indicated that failure to adhere to procedure SPX006.01 was an apparent violation of Technical Specification 6.7.1 which requires procedures outlined in Revision 2 of Regulatory Guide 1.33 be established, implemented, and maintained. Regulatory Guide 1.33 requires procedures for procedure adherence, review, approval and temporary change.

The inspector reviewed this matter with respect to 10 CFR Part 2, Appendix C, "General Statement and Policy and Procedure for NRC Enforcement Actions." The inspector concluded that the apparent violation meet the criteria for non-issuance of a Notice of Violation specified therein (Section VII.B.1). The violation had minor safety consequence, was promptly corrected, was not willful, and would not have been prevented by corrective action for a previous violation. The licensee's corrective actions were acceptable.

This item is closed.

3.2 (Closed) Unresolved Item (50-322/93-01-02)

During the initial surveys of the high pressure turbine shroud on February 10, 1993, an apparent low activity (@ 20,000 disintegrations per minute (dpm)) hot particle was detected. A second survey team confirmed the survey results using a different survey meter. However, a third survey team, using a third meter, was unable to locate the apparent hot particle. A fourth meter was used to scan the area but did not indicate the presence of hot particles. The licensee was not able to re-identify the apparent hot particle during extensive surveys of the area. The inspector's review indicated the licensee issued Radiological Incident Report 93-04 for this matter and initiated extensive surveys of turbine dunnage prior to handling. Radiological controls personnel maintained positive control of the area. No personnel contaminations were identified. No additional hot particles were identified during extensive surveys of the main steam system. The inspector concluded that the observation appeared to be an isolated occurrence and no wide spread hot particle problems existed in the main steam system. NRC confirmatory surveys also did not identify hot particles. This item is closed.

3.3 (Closed) Unresolved Item (50-322/93-01-05)

The licensee did not appear to use the proper lower limits of detection (LLD) when analyzing potentially contaminated soil near the radwaste truck bay. The inspector's review during the current inspection (50-322/93-04) indicated that the inspector was inadvertently misinformed that a procedure for release of bulk material contained the applicable survey criteria. Subsequent inspector review indicated the licensee evaluated the soil relative to termination survey plan criteria (the appropriate criteria) and found it be non-contaminated. The licensee also subsequently collected and analyzed soil samples to radiological environmental monitoring program LLDs and found the soil to be non-contaminated. This item is closed.

3.4 (Closed) Unresolved Item (50-322/93-03-01)

During inspector walkdown on September 24, 1993, of the initial shipment of slightly irradiated fuel to be shipped from the Shoreham Nuclear Power Station to the Philadelphia Electric Company's Limerick Nuclear Generating Station, as the shipment was being prepared in the reactor building, the inspector identified that four of four bolts securing a bracket (one of two) of a neutron shield expansion tank on the cask were loose. The licensee immediately initiated a non-conformance report and performed

verification tightening of all other cask bolting. No other loose bolts were found. The licensee initiated procedure checklist enhancements to provide for enhanced verification. The inspector concluded weaknesses in development of checklists and coordination of oversight activities between the licensee and its contractor contributed to this matter.

During the current inspection (50-322/93-04), the inspector reviewed the status of the licensee follow-up on this inspector-identified matter and noted that the identification of loose bolts on shipment no. 1 was an apparent violation of 10 CFR Part 71.111, which requires that the licensee prescribe activities affecting quality by documented instructions drawing, procedures, or drawings of a type appropriate to the circumstances and shall require that these be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished. The inspector concluded that the licensee's procedures and checklists for this activity were not adequate to ensure loose bolts were identified and tightened as appropriate. As a result, this unresolved item is converted to a violation. (VIO 50-322/93-03-01)

The inspector determined that the licensee took prompt action to resolve this matter, including enhancement of procedures and development of specific checklists for use in reviewing both incoming and outgoing shipments. The licensee took appropriate short term and long term corrective actions prior to the first shipment leaving the site. As a result, this violation is closed.

3.5 (Closed) Unresolved Item (50-322/93-03-02)

The inspector identified several areas for clarification or enhancement in the licensee's planning and preparation for the first shipment of slightly irradiated fuel. The areas for clarification and enhancement were as follows.

- The inspector informed the licensee that when shipping radioactive material, the maximum total beta, gamma, and neutron radiation levels at any one point (e.g., cask surface) should be used for ensuring compliance with Department of Transportation (DOT) shipping regulations.

The licensee acknowledged the information and modified procedures to ensure personnel use total radiation dose rate values when determining the maximum dose rates for complying with DOT radiation limits for shipment of radioactive materials.

- The inspector informed the licensee that shipping placards must be visible when transporting the fuel by barge. Coverage of the placards by sea tarps, used to protect the cask, was not permitted.

The licensee acknowledged the information and took actions to ensure shipping placards were visible and not covered by sea tarps. The licensee provided

attachments (for placards) to the cask support structure.

The following items for improvement were also noted.

- It was not apparent that radiation protection personnel were cognizant that shipping casks could be returned from a station with contamination associated with failed fuel and thus additional attention to enhanced incoming surveys may be necessary.

The licensee initiated action to evaluate the potential radionuclides that could be present and ensure the incoming survey program would detect such radionuclides, as appropriate.

- The technician assigned to escort the fuel shipment had only one radiation survey meter (ion chamber) for survey purposes. The inspector noted that a malfunction of the meter could result in the technician accompanying the shipment being unable to perform surveys and implement procedure guidance. The inspector noted that the licensee took actions to provide a spare survey meter.

This item is closed.

3.6 (Closed) Unresolved Item (50-322/93-03-03)

The inspector noted that the turbine building salt water drain tank release point was apparently not recognized in the license and Off-site Dose Calculation Manual (ODCM) and it was not readily apparent that the tank contents were appropriately sampled and analyzed prior to discharge.

During the current inspection (50-322/93-04), the inspector reviewed the status of the turbine building salt water drain tank and determined that the tank was a potential radioactive liquid effluent release point during normal plant operations. As such, the tank was sampled on a shiftly basis from 1984 to early 1990. This indicated that the licensee was responsive to NRC Bulletin 80-10. In April of 1990, the turbine building salt water drain tank system was declared non-contaminated (a clean system) following termination surveys of the tank. As a result, the licensee discontinued routine sampling of the tank. Subsequently, in October 1992, and March 1993, the licensee re-instituted sampling of the salt water drain tank because the tank was utilized for flushing of certain plant systems. No radioactive material was present in the samples taken in October 1992 and March 1993.

The inspector noted that the licensee's turbine building salt water drain tank sampling and analysis practices appeared to be appropriate. The inspector had no further questions in this area. No safety concerns or violations were identified.

3.7 (Closed) Unresolved Item (50-322/93-03-04)

The individual recently named to the position of Radiochemistry Engineer did not appear to meet the qualifications of ANSI-N18.1, 1971, Section 4.4.3, but was indicated as meeting this standard. The standard requires four years of experience in the area of chemistry. The licensee's Administrative Manual Procedure 12X003.01, Revision 1, dated August 5, 1993, indicated that the radiochemistry engineer should meet the requirements of ANSI-N18.1-1971, Section 4.4.3. The inspector's discussions indicated that graduate level schooling was incorrectly credited to the individual's length of experience to satisfy the four year requirement.

The inspector discussed this matter with the licensee and stated that, although the individual did not possess the four years of applicable experience, there were significant differences between the chemistry requirements of an operating nuclear power plant and one that was decommissioning, and that the ANSI standard addressed the requirements necessary for an operating nuclear power plant. Current chemistry activities at Shoreham appeared to center around radioactivity measurements as part of site decommissioning activities. The individual named to the Radiochemistry Engineer position was knowledgeable in the area of radioactivity measurements.

The licensee subsequently revised the position description to delete the requirement that the individual filling the position meet ANSI-N18.1 qualification requirements. The licensee reviewed all position changes over the past 6 months and determined that all individuals were qualified. Corrective actions were taken station-wide in that a deficiency report was written to ensure personnel were selected in accordance with qualification requirements. The inspector noted that Technical Specification 6.3 specifies that each member of the unit staff will meet or exceed the minimum qualifications outlined in Section 13 of the Defueled Safety Analysis Report. Section 13 did not specifically require qualification of the Chemistry Engineer to ANSI-N18.1, 1971 qualification requirements. This item is closed.

4.0 Decommissioning Status

The Shoreham Nuclear Power Station (Shoreham) was shut down in 1989. The maximum power attained was 5% reactor power, with a total core history of 2 megawatt (MW) days. In June 1991, a Possession Only License (POL) (effective July 19, 1991) was issued to Long Island Lighting Company (LILCo). On February 29, 1992, the NRC approved the transfer of the license to the Long Island Power Authority (LIPA). On June 11, 1992, the NRC issued an Order authorizing the decommissioning of Shoreham.

Since issuance of the Order, the licensee has been aggressively decommissioning the facility to ultimately release it as an unrestricted area. To this end, the licensee was decontaminating the facility in accordance with the Decommissioning Plan and was aggressively removing and disposing of hardware that could not be readily decontaminated by shipping it to an authorized radioactive waste disposal facility. Since

the facility operated at a maximum of 5% reactor power, radiation and contamination levels were relatively low. As a result, large portions of the facility exhibit minimal or non-detectable radiation or contamination levels.

A major step in the decommissioning process is the removal of the fuel from Shoreham. On February 25, 1993, LIPA reached an agreement with the Philadelphia Electric Company (PECO) to transfer the slightly irradiated fuel from Shoreham to PECO for use at PECO's Limerick Nuclear Generating Station (Limerick). The agreement provided for transport of Shoreham's fuel (560 fuel elements representing the reactor's initial core load) to Limerick in special shipping casks. The transfer would require about 33 separate shipments in an NRC-approved transport cask. The licensee elected to transfer the fuel via an inter-modal route. The route involves shipment of the fuel by barge to Eddystone, Pennsylvania, then transport of the fuel by rail to Limerick. As of December 31, 1993, the licensee completed 19 of the 33 shipments in the NRC approved IF-300 fuel transportation cask. The fuel remaining at Shoreham continues to be stored in the spent fuel storage pool and is maintained in accordance with license requirements. The licensee expects to suspend fuel shipments to the Limerick Station during Limerick's refueling outage and resume shipments in March 1994.

The main portions of the reactor vessel were segmented and the segments have been disposed. The reactor vessel bottom head was left intact and the licensee was decontaminating it in order to leave it in place.

Contaminated systems continued to be removed and segmented and shipped off site for burial. Essentially all contaminated systems were removed and disposed, with the exception of the liquid radwaste system and the fuel pool clean-up system, which were needed to support decommissioning activities and maintain fuel pool water quality. A temporary fuel pool filter demineralizer was subsequently installed to allow for removal of portions of the spent fuel pool clean-up system. The licensee was in the process of removing portions of these remaining systems during the inspection period. All waste water is collected and analyzed, as appropriate, for potential contamination.

Planning and preparation for segmentation and disposal of the reactor vessel biological shield was underway. The shield became slightly radioactive due to exposure to neutron radiation. The licensee will segment the shield using a diamond wire cutting technique. The licensee's plans for cutting of the biological shield wall were provided in an October 8, 1993, Decommissioning Plan Change Notice.

On December 28, 1993, a fire occurred in the reactor drywell temporarily halting biological shield cutting preparations. At the end of the inspection period, the licensee was reviewing the causes of the fire and developing long term corrective action plans. NRC Region I staff was reviewing the licensee's efforts. This matter is further discussed in Section 13.

Overall, review of the on-going decommissioning process indicated the licensee was complying with the approved Decommissioning Plan and seeking approval of changes to the plan, as appropriate.

Attachment 1 to this report provides the licensee's contaminated system removal status associated with the decommissioning efforts.

5.0 Transfer of Slightly Irradiated Fuel To Limerick

The inspector reviewed, on an on-going basis, the shipment of slightly irradiated fuel from Shoreham to Limerick. The licensee's program was reviewed with respect to 10 CFR Parts 20, 71, and 73; and 49 CFR 171 - 178. Special emphasis was placed on review relative to 49 CFR Part 174, Carriage by Rail, and 49 CFR Part 176, Carriage by Vessel.

The inspector reviewed, on a selected basis, the current organizational structure, training and qualifications, procedures, audits and surveillances, and documents. Shipping records for all fuel shipments during the inspection period were reviewed.

The inspector made independent observations of on-going activities in the following areas.

- fuel handling operations
- cask handling activities
- radiological surveys of shipping casks
- QA oversight.

The inspector reviewed and observed the loading and preparation for transport of fuel shipment No. 11. The inspector noted that the licensee did self-identify an incorrect transport index for the shipment and corrected applicable paperwork prior to shipment.

The inspector inter-compared radiation and contamination level measurements made by the licensee at Shoreham for shipment no. 14 with those measurements made by Philadelphia Electric Company (PECO) personnel upon receipt of shipment no. 14 at Limerick. No concerns were identified.

The inspector did note that the licensee encountered occasional delays in making the shipments due to inclement weather.

The inspector concluded that, overall, the licensee implemented an effective program for transfer of the slightly irradiated fuel.

No safety concerns or violations were identified.

6.0 Termination Survey Reviews

6.1 General

The inspector reviewed on-going termination survey activities as outlined in the licensee's Shoreham Decommissioning Project Termination Survey Plan (Survey Plan). The inspector directly observed technicians performing surveys, reviewed selected instrument calibration records and quality control charts, and verified adherence to the Survey Plan.

During the inspection, the inspector performed a system-by-system review, using controlled process and instrument diagrams, of systems within the Turbine Building and independently confirmed that the licensee had performed characterization and termination surveys, as appropriate, of the systems.

On November 8-11, 1993, members of the Oak Ridge Institute for Science and Education's (ORISE) Environmental Survey and Site Assessment Program (ESSAP) performed independent on-site confirmatory surveys of the licensee's Phase I Termination Survey Program. The purpose of the surveys was to provide independent document reviews and comparative radiological data for use by the NRC in evaluating the adequacy and accuracy of the licensee's termination survey report relative to NRC established criteria. The ESSAP members were observed by licensee personnel and the inspector during performance of the measurements. The ESSAP members made surface scans, direct surface activity measurements, and removable surface activity sampling. In addition, soil sampling was conducted of outside areas. The confirmatory measurements were conducted consistent with the November 4, 1993, Survey Plan approved by the NRC.

The survey team performed confirmatory measurements in the Turbine Building and selected outside areas. The areas surveyed included floor drains, steam lines (including inside lines), tanks, condenser hotwell, ventilation systems, office areas, chemistry labs, and floors and walls. The areas selected for measurement included about 50% affected areas (i.e., known to have a potential to be contaminated with radioactivity), 30% unaffected areas, and 20% biased sampling (i.e., areas selected for sampling based on potential for contamination). Attachment 2 to this report identifies the locations surveyed and or sampled.

Attachment 3 to this report provides the licensee's Termination Survey "Backout" Plan. The plan identifies major termination survey milestones as the facility is decommissioned and fuel is removed from the site. Attachment 4 to this report provides the licensee's current status of the termination survey program at the site.

6.2 NRC Findings and Conclusions

No discrepancies were noted with existing station procedures or the Termination Survey Plan. The licensee appropriately implemented the Termination Survey Plan.

The on-site confirmatory measurements performed by ESSAP personnel did not identify any areas exceeding NRC decommissioning acceptance criteria. Preliminary results received by the inspector indicated surface activity levels were within guidelines and were generally consistent with the licensee's results.

No safety concerns or violations were identified.

7.0 Organization, Staffing, Training and Qualifications

The inspector reviewed the on-site organization, staffing, and the training and qualifications of personnel. The review was with respect to the following Possession Only Licensee Technical Specifications.

- Technical Specification 6.2, Organization
- Technical Specification 6.3, Unit Staff Qualifications

The inspector reviewed matters such as staffing, use of overtime, and training and qualification of radiological controls personnel. The maintenance of sufficient numbers of qualified personnel to oversee and perform on-going decommissioning activities was also reviewed.

The inspector's review indicated that the licensee continues to maintain appropriate staffing, with reductions consistent with the licensee's staffing reduction plan. No indications of unqualified staff (per NRC requirements) were identified during review of recent organization changes. The licensee properly controlled overtime. There were 18 approved waivers of overtime restrictions for 1993.

The licensee was very sensitive to the need to maintain adequate numbers of technically qualified personnel to oversee and perform on-going decommissioning activities. The inspector reviewed, as appropriate, the qualifications of selected personnel placed in new positions or personnel assuming new responsibilities during consolidation of organizational responsibilities. No deficiencies were identified.

No safety concerns or violations were identified.

8.0 Fuel Handling Activities

The inspector reviewed on-going fuel handling activities including, fuel inspection activities, channeling and de-channeling, and insertion of fuel cluster separators. The

inspector also reviewed the circumstances surrounding, and licensee corrective actions taken, following the dropping of fuel channels in the fuel storage pool on November 6, and December 22, 1993.

The evaluation of the licensee's performance was based on review of applicable documentation and discussions with cognizant personnel.

8.1 Drop of Irradiated Fuel Channel on November 6, 1993

On November 6, 1993, an 82 pound, 14', irradiated fuel channel, being handled in the fuel storage pool, fell vertically about 6" onto a fuel rack. The channel fell into a horizontal position across active fuel elements. No apparent fuel damage occurred. The licensee's root cause analysis indicated the channel release button of the channel grapple may have been inadvertently bumped by personnel involved with the movement of the channel. The licensee halted use of the channel grapple. The event was not reportable to the NRC but was reported in a timely fashion. The licensee developed a special procedure for the channel retrieval.

On November 15, 1993, NRC Region I personnel from the Division of Reactor Safety, the Division of Reactor Projects, and the Division of Radiation Safety and Safeguards participated in a telephone call with the licensee to discuss the retrieval plans. No significant concerns were noted. The channel was successfully retrieved on November 17, 1993. The licensee installed a bump guard over the release button of the grapple to preclude recurrence.

No violations were identified.

8.2 Drop of Fuel Channel on December 22, 1993

On December 22, 1993, at 2:45 p.m. a dummy fuel channel fell from a hand-held lifting device in the fuel storage pool. The lifting device was manufactured at Shoreham and was specially designed to allow for horizontal placement of irradiated fuel channels in a specialty shipping container for ultimate disposal. Although not reportable, the licensee notified the NRC in a timely manner. The dummy fuel channel was being moved in the fuel pool as part of personnel training and qualification purposes prior to handling irradiated channels when the channel fell. The lifting device had been tested in the radwaste building during movement of dummy channels. Also, the dummy channel had been moved numerous times in the spent fuel storage pool, in a similar manner without incident. The device was used in the northwest quadrant of the fuel storage pool.

In preparation for the use of the new lifting device for moving fuel channels, the licensee moved all fuel to the south quadrants of the pool prior to use of the device. No fuel was involved and no movement of the dummy channels occurred over active fuel. The channel fell at a slight angle against a support beam on the pool liner and impacted the

liner, but caused no apparent damage to the liner.

The licensee suspended operations with the lifting device and evaluated the cause of the fall. The licensee attributed the fall to a need to enhance the positive lock-up of the channel to the licensee-designed lifting device. A recovery plan was developed after determination of the cause of the fall.

The inspector reviewed the planning and preparation for retrieval of the dropped dummy fuel channel and independently observed the retrieval of the dropped channel on December 30, 1993. The inspector's review indicated very good planning and preparation was performed. The inspector noted that procedure changes were made to enhance control of the channel by the lifting device.

No violations were identified.

8.3 Conclusions

The inspector's review of on-going fuel pool activities indicated that overall, activities were well controlled. The inspector did not identify any apparent commonality between the November 6 and December 22, 1993, fuel channel drops or any apparent procedural adherence concerns.

The inspector noted, however, that on April 29, 1993, a refueling jib crane fell onto the refueling floor while being transported by another crane. A special inspection was conducted during May 6-7, 1993, to review that matter. (See NRC Inspection Report No. 50-322/93-02).

In light of the three events involving lifting devices or cranes, the licensee that the two events, and the April 29, 1993, fall of a refueling jib crane would be studied to determine if there are any similarities in the root causes of the events. The inspector indicated the results of the study would be reviewed during a subsequent inspection.

No violations were identified.

9.0 Radiological Controls

9.1 General

The inspector reviewed the implementation and adequacy of radiological controls. The evaluation of the licensee's performance was based on discussions with cognizant personnel and independent inspector observations during tours. The following elements of the program were reviewed.

- posting, barricading and access control (as appropriate) to Radiation, High

Radiation, and Airborne Radioactivity Areas

- personnel adherence to radiation protection procedures, radiation work permits, and good radiological control practices
- maintaining occupational radiation exposure as low as reasonably achievable (ALARA)
- use of dosimetry devices
- airborne radioactivity sampling and controls, including installation and use of engineering controls to minimize airborne radioactivity
- adequacy of radiological surveys to support pre-planning of work and on-going work
- calibration and checking of radiological survey instrumentation, and
- contamination controls, including hot particle controls.

As part of the review effort, the inspector reviewed radiological controls associated with biological shield wall removal and associated tasks.

The inspector also reviewed the licensee's action on the revised 10 CFR Part 20, Standards for Protection Against Radiation. The revised 10 CFR Part 20 was required to be implemented on January 1, 1994.

9.2 NRC Findings

The inspector's review indicated that, overall, very good radiological controls were implemented for the work activities reviewed. Radiation, contamination, and airborne radioactivity surveys were appropriate for the conditions encountered. There were no unplanned exposures (external or internal) in 1993. There were four minor clothing contaminations and no skin contaminations.

The inspector also reviewed the licensee's action on contamination control concerns raised via the quality assurance hot line. Specifically, the inspector reviewed the licensee's response to concerns raised regarding contamination surveys of bagged asbestos in April 1993 and release of material from the turbine building elevation 15', also in April 1993. The inspector's review indicated the licensee appropriately evaluated the concerns. The licensee determined that the surveys of the asbestos material were acceptable and consistent with procedures. The licensee also evaluated release of material from the turbine building 15' elevation and found it acceptable. The inspector's review did not identify any inadequacies.

Regarding ALARA controls, the inspector considered decommissioning project ALARA controls to be commendable. The inspector noted that an aggregate exposure of 2.245 person-rem was sustained in 1992, as compared to an exposure goal of 3.7 person-rem. Also, an aggregate radiation exposure of 0.497 milli-person rem was sustained in 1993, as compared to a 1993 exposure goal of 0.730 milli-person-rem. The licensee's 1994 exposure goal is 0.695 milli-person-rem. The inspector noted that the licensee's

implementation of the 1994 goal would allow the licensee to complete the Shoreham Decommissioning Project within the 3.5 person-rem decommissioning project exposure goal.

Regarding the revised 10 CFR Part 20, the inspector noted that the licensee submitted a request to the NRC on July 6, 1993, for exemption, pursuant to the provisions in 10 CFR 20.2301, from the requirements in 10 CFR 20.1001 through 20.2401. The licensee indicated that the basis for the request was that the majority of the facility will be decommissioned and that the current 10 CFR Part 20 will be more than adequate to protect worker and public health and safety. On November 5, 1993, the NRC issued an environmental assessment and finding of no significant impact of a scheduler exemption from the revised requirements of 10 CFR Part 20 for Shoreham. The exemption is through 1995 and in the event that activities related to decommissioning extend beyond 1995, the licensee will be required to implement the revised 10 CFR Part 20. The inspector's review of on-going decommissioning activities did not identify any apparent concerns regarding non-implementation of the revised 10 CFR Part 20.

The following matter was identified:

- On December 14, 1993, the licensee informed the inspector that on December 14, 1993, three samples of contents of the waste sample tank were inadvertently released to a Suffolk County representative without required gamma spectroscopy analysis. The samples were split samples to be analyzed by the state for chemicals (e.g., chlorides, phosphates, etc.). The licensee informed the inspector that the state periodically collects the samples to verify compliance with the state discharge permit issued to LIPA. It was determined after the samples were released that they had not been counted for radioactivity, as required by procedures (Sp No. 61X020.07, Tools, Equipment, and Dry Active Waste (DAW) Contamination Guides and Controls, Revision 1; and SP No. 78X713.02, Analysis of Volumetric Material for Free Release, Revision 1).

The bottles had been smear checked for removable contamination and surveyed and found free of external contamination and radiation. The licensee performed gamma spectroscopy of the split sample. The subsequent sample activity results (of the split sample retained by the licensee) did not indicate the presence of any radioactivity in excess of the environmental lower limit of detection (LLD) of 1.5 E-8 uCi/ml . The sample bottles were recovered on December 17, 1993, and had not been opened.

The inspector noted that Technical Specification (TS) 6.10, Radiation Protection Program, requires that procedures for personnel radiation protection be established and adhered to for all operations involving personnel radiation exposure. The inspector noted that failure to adhere to procedures for surveys of potentially contaminated material to be released from the radiological

controlled area was an apparent violation of TS 6.10.

Subsequent to the identification of this matter, the licensee took the following corrective actions.

- The samples were retrieved, analyzed, and found not to contain any significant contamination.
- An investigation was conducted and a radiological incident report was issued for the event.
- The licensee's management met with chemistry and radiation protection staff to discuss the incident and reiterate procedure requirements.
- Night orders regarding the event were issued to applicable personnel.

The inspector reviewed this matter with respect to 10 CFR Part 2, Appendix C, "General Statement and Policy and Procedure for NRC Enforcement Actions." The inspector concluded that the apparent violation met the criteria for non-issuance of a Notice of Violation specified therein (Section VII.B.2). The violation was identified by the licensee, had minor safety consequence, was promptly corrected, was not willful, and would not have been prevented by corrective action for a previous violation. The licensee's corrective actions were acceptable.

10.0 Security, Safeguards, and Fitness for Duty

The inspector toured the protected area during the inspection period and observed security controls. The inspector also reviewed security compensatory measures (as appropriate) and discussed the measures with appropriate security personnel. The inspector observed implementation of proper security controls for entry into controlled locations. The licensee continued to implement the fitness-for-duty program.

During the inspection period, the inspector verified completion of Nuclear Material Transaction Reports (Form NRC-741) for transfer of fuel to the Limerick Nuclear Generating Station.

No safety concerns or violations were identified.

11.0 Surveillance and Maintenance

The inspector reviewed on-going work activities, reviewed procedures, and discussed on-going activities with cognizant personnel. The inspector reviewed personnel adherence to procedures, industrial safety matters, and housekeeping. The inspector verified

implementation of Technical Specification surveillance requirements for spent fuel pool water quality. The inspector also reviewed use of cranes relative to guidance contained in NUREG 0612, Control of Heavy Loads at Nuclear Power Stations.

The inspector noted that the licensee submitted a letter dated October 15, 1993 (LSNRC-2096) which provided a basis for use of the auxiliary hoist of the reactor building polar crane in the vicinity of the fuel storage pool. The licensee's letter was reviewed by the NRC and approval was granted to use the hoist in the vicinity of the fuel pool in an NRC letter dated December 29, 1993.

No safety concerns or violations were identified.

12.0 Disposal of Sewage Sludge

The inspector reviewed the licensee's practices for the disposal of sewage sludge from the on-site sewage disposal system (septic system). The review was prompted by inspector review of effluent release points initiated during NRC Inspection No. 50-322/93-03 and notification by the licensee on September 3, 1993, that the licensee had detected very low concentrations of radioactivity in on-site sewage sludge. The septic system consists of a septic tank and leaching field piping system with distribution tanks. In 1983, in response to NRC Bulletin 80-10, the licensee instituted a program to sample the septic tank on a monthly basis. The samples taken by the licensee, as a result of this program, were analyzed to lower limits of detection (LLD) contained in the licensee's Off-site Dose Calculation Manual (ODCM) (i.e., those applicable to the licensee's liquid radioactive effluent release program).

Inspector review indicated that in October of 1992 the septic tank was pumped out by a commercial vendor for disposal. Prior to the disposal, the licensee sampled and analyzed the septic tank contents to ODCM LLDs (i.e., 500 picocuries per liter (pCi/l)). No radioactivity was detected in the septic tank sample at that time. Subsequent to that disposal, in January 1993, the licensee sampled the septic tank and measured that sample to the LLD specified in the Radiological Environmental Monitoring Program (REMP) (i.e., 15 pCi/l). The January 1993 sample was collected for the decommissioning program which was underway at Shoreham. This measurement indicated the presence of cobalt-60 (Co-60) at a concentration of 60 pCi/l in sewage sludge.

The inspector discussed sample results with the licensee relative to previous sewage sludge disposals. The inspector indicated that NRC Information Notice No. 88-22, dated May 12, 1988, addressed the disposal of sewage sludge and indicated that the appropriate LLD to be used for analyses of sewage sludge was the environmental LLD (i.e., REMF LLD).

The inspector stated that the failure to analyze the sample of the October 1992 septic tank sewage sludge, prior to its disposal, to the REMF LLD was a violation of NRC

requirements. Specifically 10 CFR 20.201(b) specifies that each licensee shall make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in this part and (2) are reasonable under the circumstances to evaluate the extent of the radiation hazards that may be present. Also, 10 CFR 20.301 specifies, in part, that no licensee shall dispose of licensed material except: (a) by transfer to an authorized recipient as provided in the regulations, or (b) as authorized pursuant to 20.302 or Part 61 of this chapter, or (c) as provided in 20.303, 20.306 or 20.106.

The inspector noted that the licensee disposed of potentially contaminated sewage sludge in October 1992 without adequately surveying the material to ensure that it did not contain licensed material greater than applicable environmental LLDs. The inspector notified representatives of the State of New York of this matter on September 3, 1993. New York State radiation protection representatives subsequently contacted the licensee regarding this matter on September 3, 1993. The inspector subsequently determined that the sewage had been taken to the Bergen Point Waste Disposal Facility in Suffolk County. The licensee indicated that a pathway analysis of the sewage and potential off-site doses (using conservative potential radioactivity concentrations) would be performed by the licensee. The inspector did not identify any apparent safety concerns. Licensee personnel indicated that the state personnel did not identify any safety concern and indicated that they (state personnel) be keep informed on this matter. The inspector indicated the pathway analysis would be reviewed during a subsequent inspection.

The licensee's corrective actions consisted of counting septic system samples to the environmental LLD and prohibiting the removal of any material from the site septic system. The radioactive material which is present in the septic tank sludge will be addressed as part of the licensee's overall site decommissioning process. The inspector had no further questions in this area.

The inspector reviewed this matter with respect to 10 CFR Part 2, Appendix C, "General Statement and Policy and Procedure for NRC Enforcement Actions." The inspector concluded that the apparent violation met the criteria for non-issuance of a Notice of Violation specified therein (Section VII.B.1). The violation had minor safety consequence, was promptly corrected, was not willful, and would not have been prevented by corrective action for a previous violation. The licensee's corrective actions were acceptable.

13.0 Fire Protection Activities

The inspector made periodic reviews of station housekeeping and fire protection activities during the inspection. The inspector also meet with cognizant operations personnel to ascertain the status of fire protection systems. Extinguishers were checked during station tours to determine charge levels and completion of surveillances. The inspector also reviewed burning and cutting to evaluate fire protection controls.

The inspector's reviews identified generally good housekeeping and fire protection activities throughout the station. The inspector identified an accumulation of protective clothing in the radwaste storage building on December 30, 1993. The licensee initiated a review of this matter.

The following event was reviewed.

- At about 10:47 p.m. on December 28, 1993, personnel performing decommissioning work involving burning and cutting in the drywell observed smoke emanating from an area between the remaining lower portion of the reactor vessel and the biological shield at about the 78' elevation. The drywell and refueling floor were evacuated and all personnel were accounted for. The control room was notified and the fire brigade was activated. The fire brigade responded in self-contained breathing apparatus. Due to heavy black smoke, a decision was made to call the local off-site fire department (Wading River Fire Department). The fire department was called at 11:04 p.m. and arrived at 11:11 p.m. The fire was declared out at about 11:37 p.m. that evening. The licensee made a 10 CFR 50.72 report at 11:42 p.m. The smoldering material was not in a contaminated area, no airborne radioactivity was detected, and no personnel contaminations occurred. Inspector discussions with cognizant personnel indicated some individuals apparently suffered some respiratory distress.

Subsequent licensee review indicated the apparent fire involved smoldering of fire retardant materials that were part of a slurry collection system installed in preparation for cutting of the concrete biological shield wall. Apparently, slag from cutting of a biological shield wall support member on the 137' elevation inside the drywell ignited a relatively small amount of hemp rope and paper towels at a biological shield wall penetration at the 102' elevation, which fell inside the biological shield in close proximity to the slurry collector at the 78' elevation. The licensee suspended burning work throughout the station pending review of the causes of the fire and development of corrective actions.

The inspector observed the area of the fire on December 29, 1993. The inspector's preliminary review indicated that it was not apparent that firewatch personnel performed an adequate review of potential combustibles within proximity, of the planned cutting location. The licensee's review indicated that a firewatch was positioned on the 78' elevation, but did not notice the hemp rope and paper towels at the biological shield penetration. The implementation and adequacy of the license's fire protection controls for this burning activity is an unresolved item. (50-322/93-04-01)

Subsequent to the identification of the fire, NRC Region I management and staff held telephone conference calls with the licensee representatives on December 29, 1993, and January 4, 1994, to discuss the event. The licensee indicated the

following actions were taken.

- All cutting and burning activities throughout the station were suspended. No burning and cutting work was to be resumed until the fire permit for the activity was reviewed.
- A site directive was issued by the Resident Manager which indicated that all fire permits were to be authorized by the Resident Manager until further notice.
- Two independent investigations were initiated. An Incident Review Team was established to review the event. Also, an investigation by a Quality Assurance Group Team was initiated. The purpose of the two teams was to provide two independent investigations of the event. Work was permitted in portions of the station after review of each fire permit and walkdown of the area where work was to be done.

The licensee plans to submit a licensee event report for the fire.

The inspector indicated the results of the licensee's investigations and long term corrective actions would be reviewed during a future inspection.

14.0 Radwaste Shipping Activities

The inspector reviewed the licensee's planning and preparation for disposal of 501 irradiated zirconium fuel channels. The inspector reviewed the planning and preparation relative to criteria contained in 10 CFR Part 71, "Packaging and Transportation of Radioactive Material." The following matters were reviewed.

- the type and quantity of radioactive material in each fuel channel
- shipping packages to be used
- method of packaging and transfer of the package out of the reactor building
- training of personnel.

The irradiated fuel channels will be transferred to an authorized recipient who will perform crushing/shearing/volume reduction of the channels prior to disposal. Radiation exposure rates on the channels range from about 10 mR/hr to about 800 mR/hr on contact. A specially constructed box is to be used to transfer the channels from the 175' elevation (refueling floor) to the 40' elevation of the reactor building. Maximum radiation dose rates on a box to be transferred to the 40' elevation is, according to the licensee, expected to be @ 400 mR/hr on contact. The licensee's plans for movement of the box included appropriate ALARA controls to minimize personnel exposure.

No safety concerns or violations were identified.

15.0 Employee Concerns Program

On July 29, 1993, the NRC issued Temporary Instruction 2500/028. The objective of the instruction was to determine the characteristics of employee concerns programs established by licensees. In particular, the intent of such programs is to provide employees, who wish to raise safety issues, an alternate path from their supervisor or normal line management to express their concerns, and to encourage people to come forward with their concerns without fear of retribution.

The temporary instruction contained a questionnaire that was to be filled out and included in the inspection report. The questionnaire was completed based on a telephone discussion with cognizant licensee personnel on October 21, 1993, and later discussed at the station during an on-site inspection. Attachment 5 to this report is the completed questionnaire.

16.0 Quality Assurance (QA) Oversight

16.1 General

The inspector reviewed the implementation and adequacy of the Quality Assurance Program audit and surveillance activities. The review was with respect to criteria contained in Technical Specifications (TS), the Defueled Safety Analysis Report (DSAR), and the Shoreham Decommissioning Plan.

The inspector reviewed completed audits, surveillance reports, deficiency reports and corrective action reports. The inspector also observed quality assurance oversight activities during station tours and discussed quality assurance activities with cognizant personnel.

16.2 NRC Findings

The inspector's review indicated the licensee continued to implement an overall effective QA program. The quality assurance organization was extensively involved in oversight of on-going activities. QA findings were appropriately dispositioned when identified. The inspector noted that the licensee performed a readiness assessment for cutting of the biological shield. This was considered a very good initiative.

The inspector noted that the QA organization closely monitored the frequency of recurrence of similar deficiencies. In particular, the organization provided a weekly status to management of identified deficiencies. The inspector noted that on November 15, 1993, the QA group issued a corrective action report (CAR 93X02) associated with an increase in human performance related deficiencies (e.g., procedure violations) noted during the period September 19 through October 28, 1993. The CAR also identified apparent root causes. The CAR appeared to indicate concerns similar to those identified

in CAR No. 92X01, issued in June 1992. In response, station management developed an extensive corrective action plan to respond to the CAR. Corrective actions taken included enhanced monitoring of on-going activities by station management, consolidation of meetings to improve communications, enhancement of pre-job meetings and briefings, and establishment of consistency in the approach to disciplinary actions.

The inspector's preliminary reviews indicated station management was properly responding to the CAR and implementing corrective actions to preclude recurrence of deficiencies. The inspector indicated the basis for the CAR and the short and long term corrective actions will be reviewed during a future inspection.

17.0 Exit Meeting

The inspector discussed the scope and purpose of the inspection activities periodically during the inspection period. On December 30, 1993, the inspector summarized the results of the inspection. The licensee acknowledged the inspection findings.

In addition, telephone calls were held with the licensee's representatives on December 29, 1993, and January 4, 1994, to discuss the cause of a fire in the reactor drywell on December 28, 1993, and the corrective actions taken.



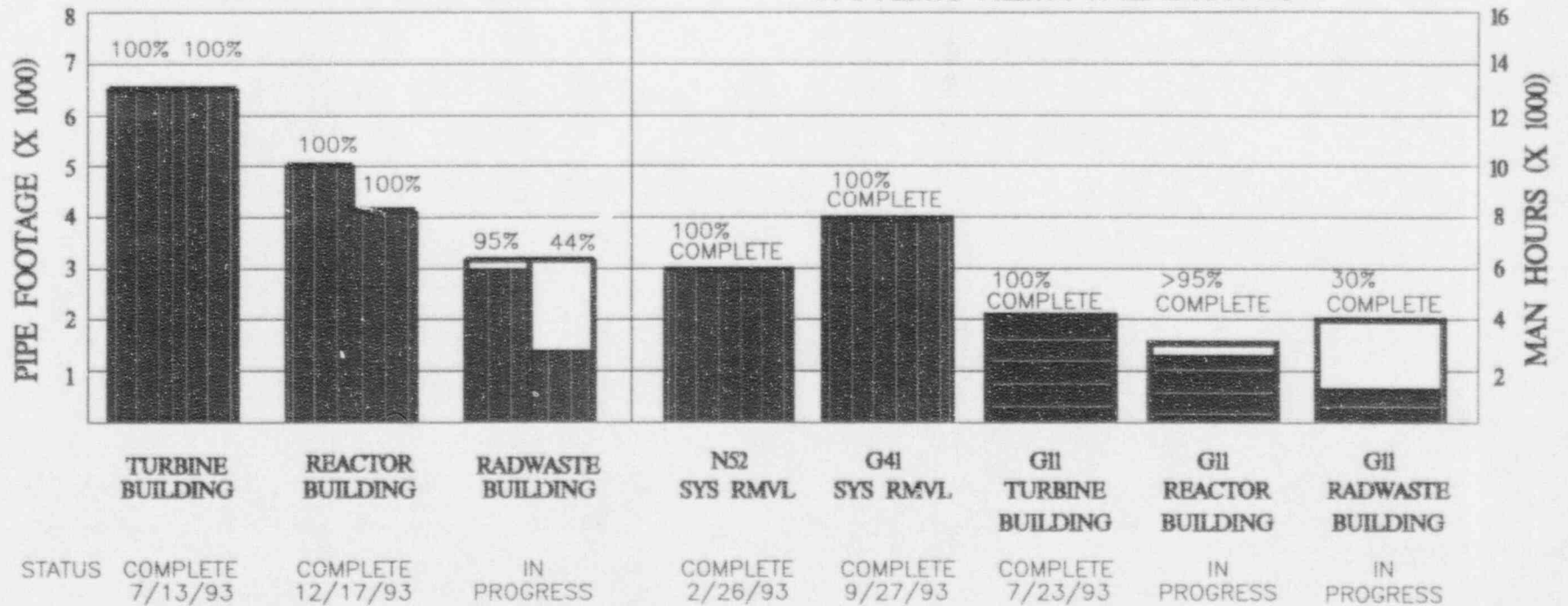
SHOREHAM DECOMMISSIONING STATUS

DECEMBER 20, 1993 TO DECEMBER 31, 1993

G11 DRAIN LINES HYDROLAZING TERM SURVEY STATUS

(LEFT SIDE: HYDROLAZING/RIGHT SIDE: TERM SURVEY)

SYSTEMS REMOVAL STATUS



ATTACHMENT 1

NRC/ORISE VERIFICATION SURVEY STATUS
PHASE 1 FINAL REPORT NOV. 8 THROUGH NOV. 12, 1993

| SURVEY UNIT/COMPONENT | STATUS | COMMENTS |
|---|-----------------------|--|
| SE002, Secured Area North Bldgs. | completed 11/09 | |
| TB016, North side of main condenser water boxes | completed 11/09 | |
| TB081, "B" Moisture Separator Reheater Area East | completed 11/08 | |
| TB082, "B" Moisture Separator Reheater Area West | completed 11/08 | |
| TB060, Chemistry Laboratory | completed 11/09 | |
| TB089, Black Battery Charging Room | completed 11/09 | |
| TB017, West Side of Main Condenser | completed 11/09 | |
| TB031, Steam Seal Evaporator Room | completed 11/10 | |
| TB035, Turbine Bldg Truck Bay | completed 11/11 PM | ORISE and Term Survey comparative survey area. |
| SG003, Secured area West | completed 11/10 | |
| SU024 MAIN STEAM, #3 Main Steam Line | completed 11/11 | |
| SU024 MAIN STEAM, #1 CV Drain Flange Connection | completed 11/11 | |
| SU024 MAIN STEAM, #2 CV | completed 11/11 | |
| SU024 MAIN STEAM, Southeast Crossunder Pipe Manway | completed 11/11 | |
| SU024, MAIN STEAM, South MSR to #4 CIV Manway | completed 11/10 | |
| SU024, MAIN STEAM, 1N11-310-08V-0012, Ext.Stm.to Stm Seal Evap. | completed 11/11 | |

* Areas or components selected by NRC after arrival that was term surveyed.

** Areas or components selected by NRC after arrival that was not included in the term survey.

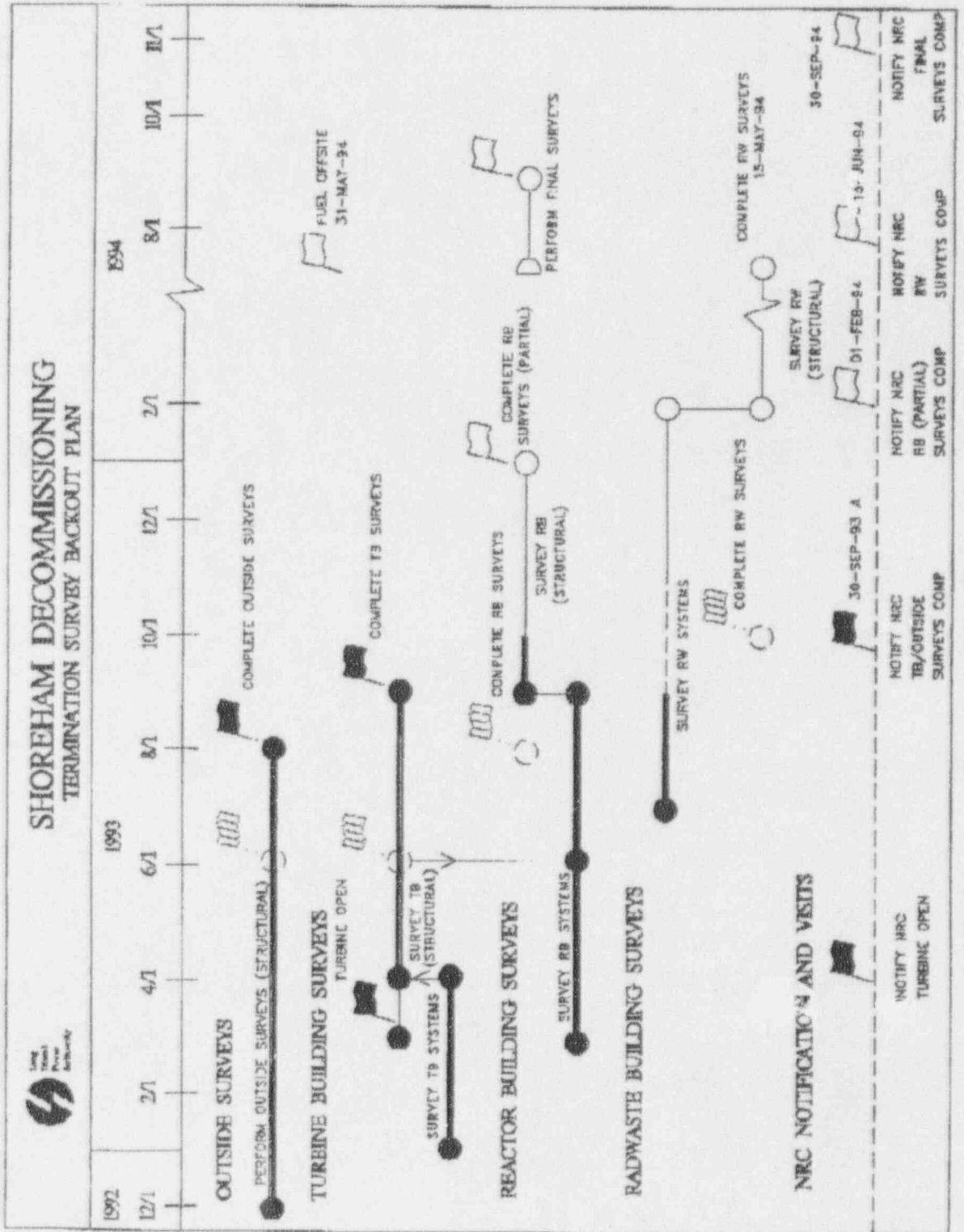
NRC/ORISE VERIFICATION SURVEY STATUS (cont)
PHASE 1 FINAL REPORT NOV. 8 THROUGH NOV. 12, 1993

| SURVEY UNIT/COMPONENT | STATUS | COMMENTS |
|---|--------------------|----------------------------------|
| *SU014, TB Drains (various) | completed 11/10 | Sampled 14 drains |
| SU025X02, Lower Main Condenser | completed 11/12 | |
| *SU032, Main L.O. Drain Sump Tk-91 | completed 11/12 | |
| **SU034, EXTRACTION STEAM, (1N36-NRV-035C) NRV to HTR #3 | completed 11/12 | |
| SU046X02, Condensate Storage Tank | completed 11/12 | |
| *SU054X03, Tk-186B, Influent Drains | completed 11/11 | |
| **SU065, U41 TB Ventilation (El. 15 grill work) | completed 11/10 | Sampled 4 vents |
| SU071, X70, Secondary Access Facility Ventilation | completed 11/10 | |
| *SU014X03, Tk-012, Decon Room Sump | completed 11/11 | |
| SU005, C32, Feedwater Control, 1C32-LCV-007X | completed 11/11 | |
| SS001, Site Grounds Soil Sampling | completed 11/11 | 5 Locations selected |
| ORISE to observe embedded piping term survey | completed 11/12 | |
| Provided ORISE with 5 randomly picked soil samples taken by term survey | completed 11/12 | Samples SS001- 4,6,8,13,30 |
| Provided ORISE with a sewage system sample taken Wed.11/10/93 | completed 11/12 | |

* Areas or components selected by NRC after arrival that was term surveyed.

** Areas or components selected by NRC after arrival that was not included in the term survey.

versch11.93,11/12/93

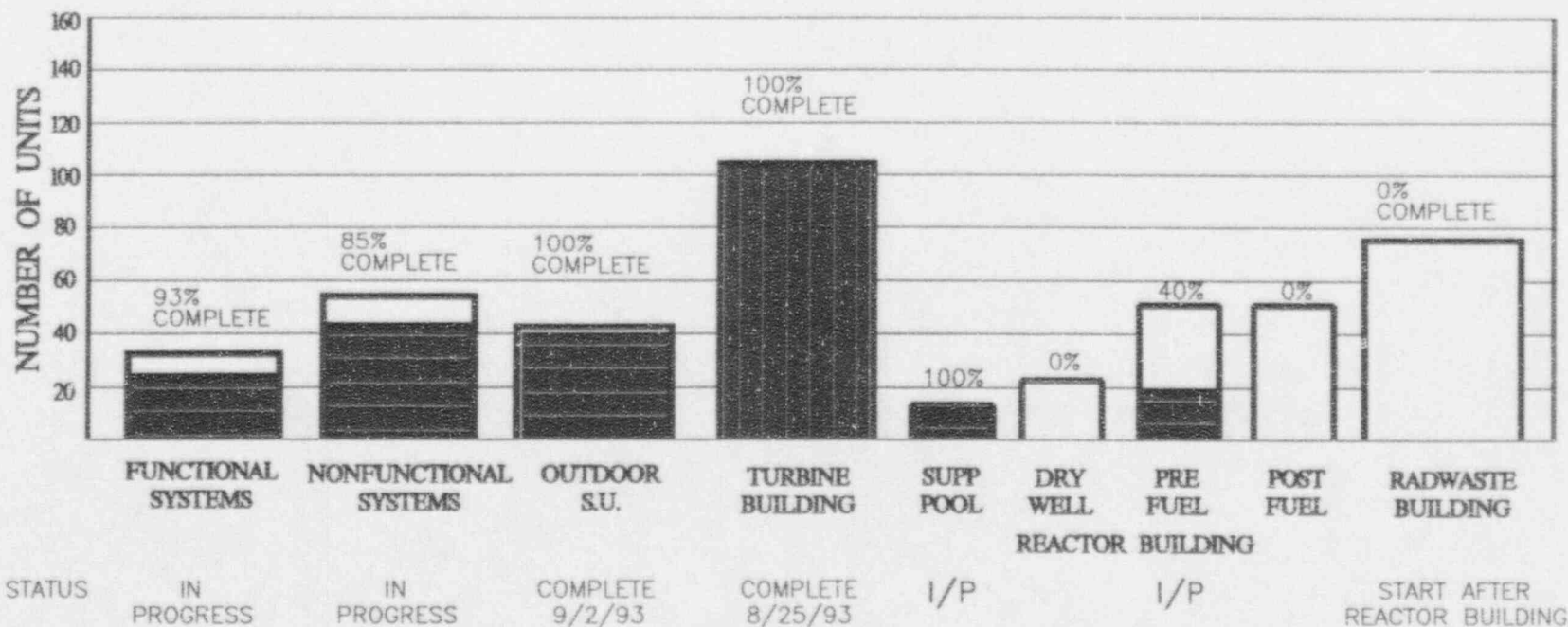




SHOREHAM DECOMMISSIONING STATUS

DECEMBER 20, 1993 TO DECEMBER 31, 1993

TERMINATION SURVEY STATUS



EMPLOYEE CONCERNS PROGRAMS

PLANT NAME: Shoreham LICENSEE: Power Authority DOCKET #: 50-322
Long Island

NOTE: Please circle yes or no if applicable and add comments in the space provided.

A. PROGRAM:

- 1. Does the licensee have an employee concerns program?
(Yes) or No/Comments) QAP 2 X 12 - Quality Hotline Program
- 2. Has NRC inspected the program? Report # 93-04
Yes, individual reports and summary reports

B. SCOPE: (Circle all that apply)

- 1. Is it for:
 - a. Technical? (Yes) No/Comments)
 - b. Administrative? (Yes) No/Comments) For any item including safety
 - c. Personnel issues? (Yes) No/Comments)
- 2. Does it cover safety as well as non-safety issues?
(Yes) or No/Comments)
- 3. Is it designed for:
 - a. Nuclear safety? (Yes) No/Comments)
 - b. Personal safety? (Yes) No/Comments)
 - c. Personnel issues - including union grievances?
(Yes) or No/Comments)
- 4. Does the program apply to all licensee employees?
(Yes) or (No) Comments)
Yes for onsite personnel. Not at LIPA office at Garden City, Long Island
- 5. Contractors?
(Yes) or No/Comments)

- 6. Does the licensee require its contractors and their subs to have a similar program?
(Yes or No/Comments) Contractors have a similar program but not required.
- 7. Does the licensee conduct an exit interview upon terminating employees asking if they have any safety concerns?
(Yes or No/Comments) The licensee has a formal exit check list and interviews contractors to see if they have any concerns. Exit interviews not required.

C. INDEPENDENCE:

- 1. What is the title of the person in charge?
Quality System Division (QSD) Manager
- 2. Who do they report to?
Quality Assurance Department Manager
- 3. Are they independent of line management?
Yes, Report to off-site Vice-President
- 4. Does the ECP use third party consultants?
No. Not unless needed.
- 5. How is a concern about a manager or vice president followed up?
Individual to go to manager about ^{ve} these individuals including the Executive Vice-President.

D. RESOURCES:

- 1. What is the size of the staff devoted to this program?
1 part-time clerk; 1 QA engineer (part-time), QSD manager
- 2. What are ECP staff qualifications (technical training, interviewing training, investigator training, other)?
None- However, program overseen by QA personnel who are qualified auditors

E. REFERRALS:

- 1. Who has followup on concerns (ECP staff, line management, other)?
The line organization is selected to follow-up and QA follow-up on closure.

F. CONFIDENTIALITY:

- 1. Are the reports confidential?
(Yes or No/Comments)
Only employee's names may be used if he/she requests it.
- Hotline items keep in locked safe.
- Tape recorder for incoming concerns is locked.

- 2. Who is the identity of the alleged made know to (senior management, ECP staff, line management; other)?
(Circle, if other explain)

In most cases don't get identity. Typically made anonymously. Name known only to QA.

- 3. Can employees be:

a. Anonymous? (Yes, No/Comments)

b. Report by phone? (Yes, No/Comments)

Phone is locked.

G. FEEDBACK:

- 1. Is feedback given to the alleged upon completion of the followup?
(Yes or No - If so, how?) Concern is posted with 30 day posting of QA follow-up of concern close-out.

- 2. Does program reward good ideas?

Not tied into suggestion program.
QA recommends that personnel go to suggestion program if appropriate.

- 3. Who, or at what level, makes the final decision of resolution?

QA or QS Division Manager

- 4. Are the resolutions of anonymous concerns disseminated?

Yes, (See 1 above)

- 5. Are resolutions of valid concerns publicized (newsletter, bulletin board, all hands meeting, other)?

Yes bulletin board

H. EFFECTIVENESS:

- 1. How does the licensee measure the effectiveness of the program?

Look at it as trend program. Used to measure employee attitude. Include concerns in work controls audits.

- 2. Are concerns:

a. Trended? (Yes or No/Comments)

b. Used? (Yes or No/Comments)

Used as part of evaluation of correction action program.

- 3. In the last three years how many concerns were raised? 30*
Of the concerns raised, how many were closed? 28 What percentage were substantiated? _____ Every concern was substantiated and some programmatic enhancement initiated as a result.

*In last two years since LIPA took over as licensee.

- 4. How are followup techniques used to measure effectiveness (random survey, interviews, other)?

As part of corrective action audit, evaluate closure of concerns. Program looks for repeat concerns. Also, concerns reviewed during quarterly trend reviews.

- 5. How frequently are internal audits of the ECP conducted and by whom? An annual correction Action Audit is performed. Also, QA program is independently evaluated every two years.

I. ADMINISTRATION/TRAINING:

- 1. Is ECP prescribed by a procedure? (Yes or No/Comments)

Yes, QAP 2X12, Quality Hotline Program.

- 2. How are employees, as well as contractors, made aware of this program (training, newsletter, bulletin board, other)?

Training is provided in general employee training (GET) Highlighted in QA training in GET. Also, Hotline posters are put up around the station.

ADDITIONAL COMMENTS: (Including characteristics which make the program especially effective, if any.)

°If individual not satisfied can go back to hotline to get concern re-issued.

°Licensee has not had individuals raise concerns about its adequacy of its program.

- Note: Individuals Interviewed
- Acting Licensing and Compliance Division Manager
 - QA Department Manager
 - Quality System Division Manager

NAME: R. L. Nimitz TITLE: Sr. Radiation Specialist PHONE #: 610-337-5267 DATE COMPLETED: December 30, 1993