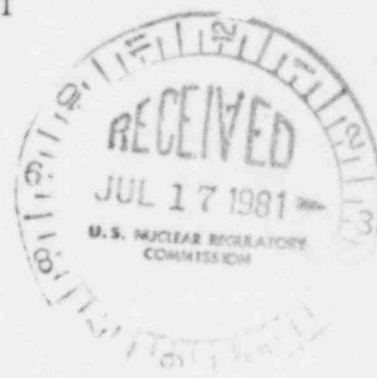




GPU Nuclear
100 Interpace Parkway
Parsippany, New Jersey 07054
201 263-6500
TELEX 136-482
Writer's Direct Dial Number:

July 11, 1981

Mr. Victor Stello, Jr., Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555



Dear Mr. Stello:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Inspection Report No. 50-219/79-18

The purpose of this letter is to provide you with a revised update to our letter of March 17, 1980. That letter provided you with our response to your letter dated February 20, 1980 regarding the findings of the inspection conducted by the NRC Performance Appraisal Branch (PAB). We, at that time, responded to each of the items of alleged noncompliance and provided you with our future plans to improve our overall management controls in each of the seven areas requested in your letter.

The Systematic Assessment of Licensee Performance (SALP) evaluation of September 22, 1980 provided us with information on which aspects of operation at the Station required additional improvements. We then reviewed our program as outlined in our March 17, 1980 letter and have made several changes which we feel will provide us with a stronger more effective management program.

As you are aware, on September 15, 1980 we reorganized to form the GPU Nuclear Group. This change has had a positive effect on the Oyster Creek facility. Major improvements include:

1. Significant increase in manpower

As of September 15, 1980 to present, we have added approximately 541 personnel, covering all disciplines of the nuclear program, to our staff at Oyster Creek, Three Mile Island, and Headquarters.

2. Expanded Training Program

Major improvements are being made in the areas of Radiological Controls, Chemistry, Maintenance, Operations and Security Training. The Training Department is working closely with each division to develop and implement new training programs to fit the specific needs of each group.

8107200408 810711
PDR ADDCK 05000219
Q PDR

is a part of the General Public Utilities System

IE01
s
1/1
IE-01

3. Improved Quality Assurance Program

The new organization has allowed for a significant increase in the number of site and staff Quality Assurance Department personnel. The department has been divided into four sections, each headed by a Section Manager, reporting to the Director of Quality Assurance. The four sections are (1) Oyster Creek QA Modifications/Operations, Materials Technology, QA Program Development and Audits, and QA Design and Procurement. The expanded organization will better establish responsibilities within the QA Department and increase the number of skilled personnel dedicated to the QA functions.

4. Improved Radiological Controls Program

A management plan has been developed and is currently being implemented which identifies the actions to be taken to improve the Radiological Control Program. The specific actions are presented in attachment B. This program provides for extensive management monitoring and input.

5. Improved Tracking of NRC Commitments

We have developed a comprehensive computer generated tracking system which enables us to accurately follow NRC generated tasks resulting from I&E Bulletins, I&E Inspections, Licensee Event Reports, etc. This system is designed to assure a timely response is made to those items of NRC concern.

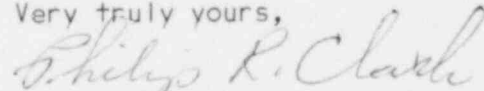
6. Increased Management Awareness

We have directed plant management personnel to conduct increased plant tours to enable them to better assess the everyday operations of the plant. They are expected to evaluate potential problems and take appropriate action to insure corrections are made.

Enclosed as Attachment A are the revised responses to each of the items of noncompliance and as Attachment B the revised descriptions of the actions to be taken or have been taken to improve our overall management controls.

Should you have any questions concerning this submittal, please contact Mr Jim Knubel, BWR Licensing Manager, at 201-299-2264.

Very truly yours,



Philip R. Clark
Deputy-Chief
Operating Executive

lr

cc: Boyce H. Grier, Director
U.S. Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, Pennsylvania 19406

ATTACHMENT A

The following is our revised response to Appendix A, Notice of Violation that was attached to your letter of February 20, 1980. For clarity, the alleged items of non-compliance are repeated in its entirety and followed by our revised response.

B. 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," and Operational Quality Assurance Plan, Section X, "Management and Use of Documents," Revision 2, require that activities affecting quality be prescribed by documented instructions, procedures or drawings, and be accomplished in accordance with those instructions, procedures, or drawings.

B.1 Procedure 120, "Fire Hazards", Revision 5, October 12, 1979, paragraph 5.1.4, requires that stairway and fire doors be kept closed at all times when not being used for passage. Paragraph 5.1.12 requires that all wood used in safety related areas be fire retardant.

Contrary to the above, on October 24, 1979, the inspector found that three fire/hall doors were blocked open. The doors included the 480V hall door, the cable spreading room door, and the 119 foot elevation fuel storage area door. Additionally, the fuel storage area contained wooden crates and boxes which were not fire retardant.

This item is an infraction.

RESPONSE:

1. Fire Doors

The item of noncompliance is correct as stated. With regard to the blocked open doors, at the time of the infraction a site protection officer was present in the immediate area of each door, as required by security procedures, and was instructed to close the door in a fire emergency. Procedure 120, "Fire Hazards" did not, however, recognize this acceptable alternative. The immediate correction action was to close the doors in question and comply with Procedure 120.

Corrective Action Taken:

- Procedure 120, "Fire Hazards", Section 5.1.4 has been revised to state, "Stairway and fire doors should be kept closed at all times except when being used for passage or when an individual is stationed at the door."

- Applicable procedures have been reviewed to insure that the individual will be instructed to close the door in a fire emergency and upon leaving the area. This was completed by May 1, 1980.

2. Fuel Assembly Shipping Container:

The item of noncompliance is correct as stated. The

wooden crates and boxes, which were not fire retardant, resulted from the uncrating of new fuel assemblies in the fuel storage area. The situation had been identified by station personnel prior to the inspection, however, the necessary work to correct the situation had not yet been completed.

Corrective Action Taken:

- The fuel suppliers have been requested to ensure that future crating and packing materials are fire retardant.
- A memorandum has been written to all plant personnel outlining the fire retardant requirements of wood used in safety related areas and directing efforts be taken to preclude a recurrence of this situation.
- Contract No. 4-10F, Article 4, Section A, Page IV-2 between JCP&L Co. and General Electric dated 11/12/80 requires fuel to be provided in fire retardant containers, where practical.
- Under the Guidance of the Fire Protection Manager, a continuous fire watch will be provided should it become necessary to bring untreated wood into a safety related area.

ATTACHMENT B

FIRE PROTECTION

Jersey Central management recognizes the importance of fire protection and prevention at Oyster Creek. In order to more effectively control the direction of the fire protection/prevention program, and in an effort to convey management's attitude to all staff personnel, a more active role will be taken by upper management in the field of fire protection. The following actions are viewed as necessary steps to obtain these goals, and are viewed as improvements to the management control of the fire protection/prevention program.

As committed in the Oyster Creek fire protection plan and recognized by JCP&L management, the Fire Protection Manager is responsible for the detailed implementation and assessment of the program. Since the 1980 outage, the individual in this position has reported to the Manager Plant Engineering for matters pertaining to the program. The individual filling this position has been formally trained in fire protection and has a thorough knowledge of the fire protection equipment at the plant; additionally, this individual will continue to receive formal training in nuclear safety and the systems at the plant including their location in the facility and function in mitigating an accident or precluding uncontrolled release of radiation within and outside the facility.

Recognizing the complexity of the systems which have been installed and the need to assure their operability when called upon to perform, as well as the training, drills, interface with outside fire companies, etc. six new positions have been created to assure that this important area receives the necessary technical support and priority it deserves.

The Manager Plant Engineering has directed the Fire Protection Manager to provide him a periodic status of the fire protection program. The status is in the form of a meeting which delineates progress, accomplishments, and problems in the program. The update is provided on at least a monthly basis and began following the completion of the 1980 outage. In addition, all fire drill reports are now reviewed by the Vice President - JCP&L, Director Oyster Creek. The fire drill reports delineate the drill scenario, the post drill critique, and any recommended corrective actions. Quarterly reports of brigade meetings and fire drill reports provide the Vice President - JCP&L, Director Oyster Creek with the necessary information to evaluate the effectiveness of the Fire Protection Program.

The Fire Protection Manager has been directed to notify, directly, the Director Oyster Creek Operations of fire hazards which could compromise the safety of the plant. This will insure prompt action will be taken to correct the situation.

The Director Oyster Creek Operations has confirmed by memo to the PORC Chairman his instructions that the PORC utilize the expertise of the Fire Protection Manager to assist in the evaluation of potential fire hazards in plant safety related activities.

A job description for the Fire Protection Manager position has been written to incorporate the responsibilities, functions, authority and qualifications described in Procedure 101.2. Alternates to this position have received training and will be available to assume the duties of the Fire Protection

Manager in his absence. These activities have been completed. The administrative control procedures for fire protection have been reviewed, and, as necessary, revised to assure that the necessary controls are in place which address, for example, controlling the storage of combustibles in safety related areas of the plant, assuring the valving out or otherwise disabling of automatic fire protection systems is properly controlled, the use of ignition sources is controlled through a permit system and periodic housekeeping inspections are scheduled and performed. This review was completed at the end of the 1980 outage.

The required fire protection modifications and associated procedures were completed at the end of the 1980 outage.

TRAINING

Significant progress has been achieved in upgrading the Oyster Creek Nuclear Generating Station Training Program. The Manager of Training position was filled in May, 1980 and immediate actions were undertaken to upgrade the training organization. During September, 1980, GPU Nuclear assumed the management responsibility for Oyster Creek and the Oyster Creek Training Department was incorporated into the GPU Nuclear - Nuclear Assurance Division. The Manager of Training (now the Manager of Plant Training - Oyster Creek) reports to the Director - Training and Education and is located at Oyster Creek with his training organization. This action has lead to a further strengthening of the training organization and program associated with Oyster Creek.

The training organization and responsibilities as stated in the March 17, 1980 letter to Mr. Victor Stello, Jr., Attachment B, have been modified by the establishment of GPU Nuclear. The upgraded organization is shown in Figure 1 and is in place. The Director - Training and Education reports to the Director - Nuclear Assurance and is responsible for:

1. Developing and administering a comprehensive training program and organization for the GPU Nuclear Corporate Offices and Plant Sites.
2. Providing training to corporation personnel as needed to carry out their duties and to meet corporate policies and all applicable laws, regulations, licenses, and technical requirements.

The Manager Plant Training - Oyster Creek is responsible for:

1. Developing and administering a comprehensive training program and organization for the Oyster Creek site.
2. Developing and maintaining an up-to-date overall training needs evaluation to provide the basis of the total Oyster Creek Nuclear Training Program.
3. Providing training to Oyster Creek personnel as needed to carry out their duties and to meet corporate policies and all applicable laws, regulations, licenses, and other requirements.

The Manager-Training Corporate is responsible for:

1. Developing and administering a comprehensive training program and organization for the corporate offices.
2. Providing training of corporate office personnel to satisfy corporate management requirements and all applicable laws, regulations, licenses, and technical requirements.
3. Coordinating common elements of nuclear station training.

More significantly the Manager Plant Training is responsible for developing the lesson plans and conducting the training to meet the course objectives. He develops course objectives through interaction with the other functional

managers who will establish the performance requirements. He will establish mechanisms will include monitoring instructor performance, evaluation of on the job training and student performance reviews to ensure the adequacy of his training organization.

All management and supervisory positions shown in Figure 1 have been filled with the exception of the Supervisor - Administrative Support at Oyster Creek. Current recruiting efforts in this area are encouraging and this position should be filled during the third quarter of 1981. Since January, 1980, the Oyster Creek Training Department has experienced a five fold increase in its staff size and currently stands at twenty individuals; additional recruiting is currently in progress to further expand the organizational depth and breadth.

The progress achieved in upgrading the training organization has made it possible to significantly expand the training services. Examples of this expanded service include:

1. The training responsibility has been centralized in the training organization.
2. A Radiological Controls and Chemistry Training capability has been established.
3. A Management and Supervisory Training capability has been established.
4. Maintenance Training capabilities have been expanded.
5. Operator Training capabilities (both licensed and non-licensed) have been expanded.
6. Emergency Plan, Quality Assurance, and General Employee Training Capabilities have been expanded.
7. A Radiological Controls Practical Factors Training Program for all workers working in RWP areas has been established.
8. Security Training capabilities have been expanded to comply with the greatly expanded training needs in this area.
9. An active program is underway to evaluate and procure a simulator for Oyster Creek.
10. The training facilities have been expanded on an interim basis to accommodate the significantly expanded training program. The construction of an even more expanded training facility is underway.
11. Specific training has been accomplished to upgrade the training capability of the Training Department instructors.
12. Numerous new training programs have been established and implemented.

During the past year, significant progress has been achieved in documenting the overall training program. A training program plan was issued in July, 1980 and has acted as guidance during the upgrading efforts during the past year;

the Oyster Creek Training Manual has been revised to reflect changes; and starting with 1981, GPU Nuclear has implemented a Goals and Objectives Program superseding the previously implemented JCP&L Goals and Objectives Program. Significant progress has been achieved in documentation of specific training programs. A major effort was accomplished in the area of documenting the Operator and General Employee Training Program by generating and/or obtaining formal lesson plans and other descriptive materials. A major effort is currently underway to establish and document formalized Radiological Controls and Emergency Plan Training Programs.

During the past year, significant progress has been achieved in documenting the overall training program. A training program plan was issued in July, 1980 and has acted as guidance during the upgrading efforts during the past year; the Oyster Creek Training Manager has been revised to reflect changes; and starting with 1981, GPU Nuclear has implemented a Goals and Objectives Program superseding the previously implemented JCP&L Goals and Objectives Program. Significant progress has been achieved in documentation of specific training programs. A major effort was accomplished in the area of documenting the Operator and General Employee Training Programs by generating and/or obtaining formal lesson plans and other descriptive materials. A major effort is currently underway to establish and document formalized Radiological Controls and Emergency Plan Training Program.

The company is continuing the development of a long term sustained program to ensure qualified hourly employees are continually available to operate the Oyster Creek Nuclear Generating Station. The program is referred to as Time Oriented Proficiency Progression System (TOPPS). Employees can advance in this program through established grades for their line of work on a prescribed time schedule. With successful completion of classroom work, on-the-job training, capability demonstrations and work experience in each grade, they can reach the top skill level for their classification. Those not capable of achieving the required level of proficiency will be removed from the program. In the interim, the Maintenance Training Program is being expanded into Electrical and Instrument and Control Training Areas and will become the foundation for the TOPPS Training Program.

The newly established Training and Educational Development Organization will provide professional and supervisory employee training in accordance with the requirements established by the individual department managers. These requirements would encompass such areas as communication skills, management skills, and supervisory training.

With regard to Radiological Controls Technician Training, the Oyster Creek Training Department assumed the responsibility for training during December, 1980. Prior to this transition, the Radiological Controls Department provided significant training to Radiological Control Technicians as discussed in the Radiological Controls section of this report. At this time, the Training Department is working closely with the Supervisor Radiological Training for the purpose of identifying training needs for the various types of Radiological Controls Technicians and developing the associated training programs. These training programs will provide appropriate training for both GPU Nuclear employees and contractor support personnel. They will provide both initial and requalification training, and distinguish between experienced and non-experienced personnel. These programs are being developed and implemented

on the basis of priorities. Wherever possible, existing material is being utilized to expedite this process; however, this overall effort is extensive and will require a significant amount of time to fully implement. The program development phase is well underway and one training program has been completely developed and implemented. It is envisioned that all programs will be developed and at least partially implemented by December 1981.

With regard to Radiological Control Support Technicians (dosimetry technicians), a training program has been developed and implemented.

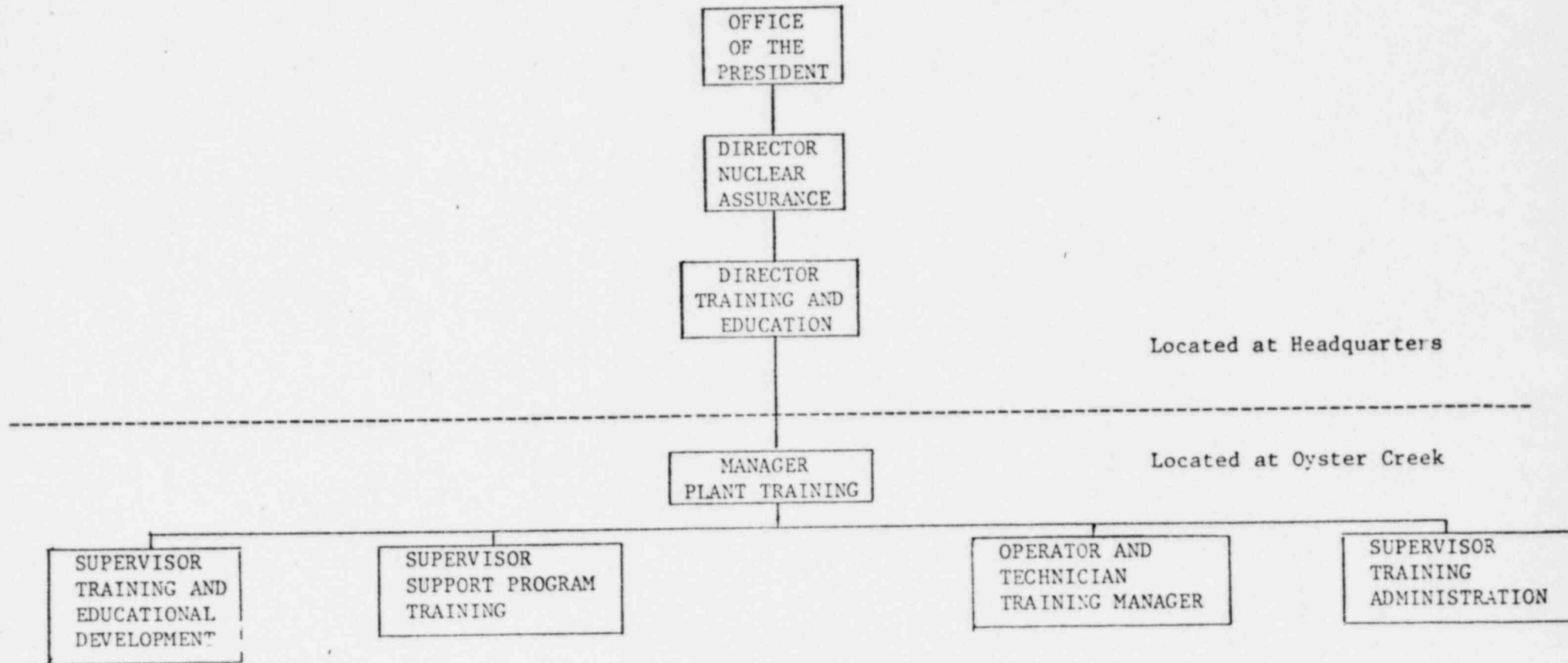
An upgraded and revised Radiation Controls Orientation and Retraining Program for all personnel is implemented and continues to: inform the worker of the risks of radiation exposure; define radiation and contamination; state the limits and administrative control levels; state the worker's responsibilities and rights; familiarize him/her with protective clothing and dosimetry; and instruct in proper use of these devices. It also identifies typical sources of radiation, contamination and airborne radioactivity related to his/her type of work. ALARA principles, procedures and response to abnormal situations are addressed.

A major improvement, has been the implementation of a Practical Factors Training and Evaluation Program which assesses each RWP area worker's hands-on knowledge and capabilities in the appropriate Radiological Control practices. A second improvement, which is under development, will be to standardize (wherever practical) the Radiological Controls Training at TMI and Oyster Creek. When implemented, this will combine the best qualities of both programs and minimize the potential for error on the part of individuals who work at both plants, due to differences in work practices. The Oyster Creek Training Department is responsible for the Orientation and Retraining Program and works closely with the Supervisor Radiological Training for the purpose of establishing program effectiveness, content, and revisions.

The Oyster Creek Training Department has developed and implemented a formal respiratory protection training program which complies with the requirements of NUREG 0041. The Radiological Controls Department supplements this training program through its implementation of a respirator fit test program which also complies with NUREG 0041.

Significant progress has been achieved in the area of special training such as mockup training, walk through exercises, and detailed worker briefings. A control rod drive mechanism has been purchased to train workers on the removal, installation, and repair practices. Radiological Controls Containment training program, which will provide hands on training on how to install and utilize a contamination containment system, is in the final stages of approval. As stated earlier, practical factors training has been established for RWP area workers; in addition, practical factors training is being provided to Radiological Control Technicians. A full scale pictorial mockup of the Oyster Creek Control Room is under construction and will be available for training while the final discussion on Oyster Creek's simulator needs is made and implemented. Maintenance Training includes hands on training with specific equipment. We will continue to expand and refine this type of training in the future.

OYSTER CREEK TRAINING ORGANIZATION



TRAINING - FIGURE I

QUALITY ASSURANCE

Since the Performance Appraisal Branch (PAB) Inspection in 1979, a total reorganization of the Quality Assurance Department has taken place, effective 9/15/80. The new organization has allowed for a significant increase in the number of site and staff Quality Assurance Department personnel. The department has been divided into four sections, each headed by a Section Manager, reporting to the Director Quality Assurance. The four sections are: Oyster Creek QA Modification/Operations, Materials Technology, QA Program Development and Audits, and QA Design and Procurement. The expanded organization will better establish responsibilities within the QA Department and increase the number of skilled personnel dedicated to the QA functions. An explanation of each section, along with some pertinent data, is presented below.

The Design and Procurement Section with a quality engineering staff constitutes the main technical support section establishing quality programs and inspection requirements in support of design and procurement activities. The same group reviews quality-related materials as well as product specifications and procurement requisitions to assure that the requirements have been established. Additionally, this group participates in the evaluation of specific vendors (contractors) and the adequacy of their programmatic controls in light of established requirements. The Manufacturing Assurance subsection of the Design and Procurement Section has its prime responsibility to perform those necessary post contract award activities required to assure that a vendor's product is designed, manufactured, and tested in accordance with the specified quality requirements. Trend information supplied by this group weighs heavily in the maintenance of the vendor's classification list which affects future procurements.

The Oyster Creek QA Modifications/Operations Section has three major subsections, Quality Control, Operational Quality Assurance, and Systems Engineering. Quality Control is responsible for the inspection and/or monitoring activities related to corrective maintenance, modifications, installation or new construction. Operational Quality Assurance is responsible for monitoring functional testing and performing monitoring of all operations activities. The latter includes monitoring of plant operations, preventive maintenance, radiation protection, and the processing, packaging, and shipping of radioactive materials. QA Systems Engineering is responsible for procurement document review, receipt inspection, warehouse support, training support, and program development. This group will also provide a site interface with the offsite engineering organization.

The QA Program Development and Audit Section is responsible for QA Department program development. It, therefore, coordinates activities associated with department procedures, trending, and indoctrination and training. Computer program development for the purposes of deviation tracking and records control is a priority function of this section. Additionally, the group conducts independent evaluation and assessment of the program's implementation through the Quality Assurance Audit Program. This includes an evaluation of the effectiveness of the Quality Assurance Program. Assisting in this assessment is a full-time site audit group, under the direction of the Site QA Audit Manager, reporting to the Manager QA Program Development and Audit and the Director of Quality Assurance, thus providing to management an independent

assessment of the state of implementation and the effectiveness of the QA Program. Additionally, both the on-site and off-site audit sections are available to administer timely close out and verification of problems identified by the audits.

The fourth section, Materials Technology, has the responsibility of developing, maintaining, and implementing the Oyster Creek ISI Program. Additionally, the section provides technical support to design and construction in welding and materials applications. Their services include the capabilities to conduct nondestructive examinations, inservice inspections, materials engineering support and welding engineering.

To effect a smooth transition of the responsibilities within the Quality Assurance Department and to minimize disruption of QA activities, a temporary satellite QA engineering interface section has been established at Morristown, where the Oyster Creek Project Engineering office is located. This group will continue in this interface function until the reorganization has been completed. The personnel in this group will then be incorporated into the appropriate QA sections. Quality Assurance activities are being turned over as each section becomes ready to assume the added responsibilities.

The above organizational changes represent a significant increase in the manpower assigned to the Oyster Creek QA function.

Recruitment to fill open positions within the Quality Assurance Department is continuing. Until this recruitment is complete, open positions are being filled by contractors or by staff personnel out of the home office.

The need for the development and implementation of formal training classes in the area of Quality Assurance has been recognized. In 1980, formal training was given to the Quality Assurance personnel in the areas of weld inspection and metallurgy (40 hours), nondestructive examination (32 hours), and persuasive and effective communication skills (40 hours). Additional formal training was given in the area of nuclear fuel inspection. One member of the site QA Department was dedicated to the OCNGS Hot License Reactor Operating Training Program. He completed his R.O. examination in February and became licensed on April 14, 1981.

The Training Department at Oyster Creek has expanded the QA Training Program and is in the process of presenting introductory courses related to the aspects of quality assurance to all site employees at Oyster Creek. Lesson plans have been formulated for courses on quality assurance to be tailored to meet the needs of specific departments at Oyster Creek. Initial courses have been approved and presented and others are in development.

The Oyster Creek auditing program has undergone extensive changes since the 1979 PAB team inspection. A site auditing group has been established at Oyster Creek under the direction of the site QA Audit Manager. Staffing for this group is nearly complete. During the transition, two highly qualified, independent consultants, previously involved in the audit program, are being retained to assist in the audit program. The establishment of this group on site and the addition of new auditing personnel is expected to improve the depth and scope of audits, as well as increase the emphasis on followup and corrective action of open audit findings. The corporate audit group has taken the responsibility for

home office and vendor audits.

During 1980, a major emphasis on the performance of audits was the evaluation of action taken in response to past audit findings, the PAB Report commitments and items identified by other regulatory requirements. This emphasis will continue to be included as a major part of audits conducted in the future.

In the first quarter of 1981, one primary goal of the audit group is to focus on effective and timely corrective action. The Site QA Audit Manager has held a series of meetings with Managers of responsible departments to evaluate the open items and to encourage the establishment of new plans for effective and timely corrective action. Another area of concentration has been to emphasize the closeout of open audit notices pertaining to procedure revisions.

The following action has been taken to improve management controls affecting timely followup and corrective action on open items. The distribution list for the computerized log, listing the status of all open audit notices has been revised to include VP's and Directors of departments responsible to take action. The format of this log is in the process of being revised to make management more aware of the status of those audit findings pertaining to their areas of responsibility with emphasis on overdue items. An initial hand-drafted listing identifying overdue items by department was distributed through the Vice President-Oyster Creek in August 1980. In addition, audits are being addressed to Vice Presidents of responsible departments for their consideration.

INSERVICE INSPECTION

The Materials Technology Section of the GPU Nuclear Quality Assurance Department has assumed the responsibility for the management, development and implementation of the Inservice Inspection/Nondestructive Examination program for the Oyster Creek Nuclear Generating Station. The Materials Technology Section is under the direction of the Manager Material Technology who reports to the Director of Quality Assurance.

The Inservice Inspection/Nondestructive Examination Subsection is organized into a corporate and a site staff. The corporate staff, which supports a full-time on-site staff, is under the direction of the ISI/NDE Manager (the Manager Materials Technology is acting ISI/NDE Manager until this position is filled).

To increase technical support and expertise, the organization provides for an Inservice Inspection Engineer. This position is currently being filled by a contractor until a permanent ISI Engineer can be hired. Additional technical support is available to the NDE/ISI program through the Welding Engineering and Materials Support/Metallurgical Laboratory Subsections, which are also in the Materials Technology Section.

The on-site organization for Inservice Inspection became effective January 1, 1981. The Supervisor-ISI site has responsibility for site implementation of the ISI program. He is assisted by a full-time site staff. Consultants are being employed to insure sufficient support until the open positions can be filled.

The new assignment of responsibility establishes direct GPU management control of all ISI on-site activities requiring GPUN personnel to work in the field, all work will be done by GPUN procedures. Actual examinations may be performed by contractor personnel, but under direct GPUN personnel supervision. This elimination of the owner-agent arrangement for implementation of the inservice inspection is an important factor for providing direct feedback of possible problems and permits updating of the ISI program on an as-needed basis.

Instituting a separate subsection for the Inservice Inspection/Nondestructive Examination function has allowed for the hiring of personnel who are specialists in this field. The personnel staffing the Inservice Inspection Subsection have considerable working experience in the application of the Boiler and Pressure Vessel Code, Section XI. Three of the staff members have their Level III certifications in several areas of nondestructive examination. The Manager, Materials Technology has extensive Section XI background and is currently an appointed member of some Section XI working committees.

Formal transferral of program responsibilities of Oyster Creek ISI program from JCP&L Generation Engineering to GPU Nuclear Materials Technology was effected in October 1980. Between the end of the 1980 outage in July and the transfer of implementing responsibility in January 1981, a site engineering group maintained the inservice inspection function to assign on-site management control/responsibility, pending establishment of the GPU Nuclear Group. In January 1981, on-site ISI implementation was split with Plant

Engineering retaining the ISI Pump and Valve Testing program (IST) and Materials Technology assuming responsibility for all other ISI/NDE activities. Materials Technology maintains overall programmatic responsibility for ISI, including the IST program.

Implementation of the 1981 schedule and the second 10-year program for Inservice Inspection will begin during the Spring outage scheduled for April. All ISI/NDE activities will be performed under the new program. Most of the ISI examinations are scheduled to be performed during the Fall outage. Results will be reported within 90 days of examination as required by ASME Boiler and Pressure Vessel Code, Section XI. The Spring outage will provide a basis for demonstrating the capabilities of the new ISI program and will also allow time for evaluation of the program and the implementation of changes or improvements, if needed, before the end of 1981.

Work is now in progress in the areas of procedure development and scheduling. The formal implementation of procedures and schedules will be complete by April 1981.

The last audit of the inservice inspection program was performed in December 1980. Because of the many changes to the Inservice Inspection program in recent months, the auditing function will be examining this area closely. Two audits of ISI activities are tentatively scheduled for 1981. In the future, the program will be reviewed to determine the necessary frequency of audits in this area. As a minimum, one audit per year will be performed as required by the Tech. Specs. In addition, this activity is subject to QA monitoring.

The new Inservice Inspection program has been designed to provide direct management control of and responsibility for the inservice inspection/nondestructive examination activities at Oyster Creek. The significant increase of technically qualified staff personnel in this area will provide for thorough and effective program development and implementation. The increase in site personnel will keep the management function directly involved and informed of the inservice inspection/nondestructive examination activities at Oyster Creek. This provides a means of continuous ISI program evaluation and upgrade.

MANAGEMENT PLAN
FOR THE
OYSTER CREEK NUCLEAR GENERATING STATION
RADIOLOGICAL CONTROL PROGRAM

TABLE OF CONTENTS

- I. Introduction
- II. Radiological Control Organization
- III. Training
- IV. Deficiency Analysis/Commitment Tracking
- V. Exposure Reduction/Procedure Preparation
- VI. Respiratory Protection
- VII. Dosimetry, Internal and External
- VIII. Radioactive Material
- IX. Plant/Equipment Decontamination

1. INTRODUCTION

The purpose of this plan is to identify the actions taken and planned in management's commitment to improve the Oyster Creek Nuclear Generating Station Radiation Protection Program. The progress made in implementing and completing the identified corrective actions will be closely monitored by the Manager, Radiological Controls. The progress made implementing this plan will be independently monitored by auditing groups and the Radiological Engineering Group.

Certain actions have already been taken to improve the Radiation Protection Program performance. These actions are as follows:

1. The President and Vice President-Generation, of Jersey Central Power & Light Company, held meetings with all of Oyster Creek's managerial and line supervisory personnel to express Oyster Creek's strong commitment to achieving a high quality Radiation Protection Program. They pointed out at these meetings that the Radiological Controls Department is responsible for establishing and maintaining the Radiation Protection Program, which includes the stoppage of any work not being conducted in a radiologically safe manner. It is, however, the responsibility of all personnel at Oyster Creek to ensure compliance with the Radiation Protection Program.
2. A permanent Manager, Radiological Controls has been hired.
3. As part of the corporate reorganization which created GPU Nuclear Group, the Radiological Controls Department was removed from the reporting chain of personnel directly responsible for station operation. The Manager, Radiological Controls now reports to the Director, Radiological and Environmental Controls, GPU Nuclear Group (Prospective Vice President, GPU Nuclear Corporation). The Director's office is located at the Parsippany General Offices making the Manager, Radiological Controls the senior representative of this Division on site; he maintains close liaison with the Vice President-JCP&L, Director Oyster Creek and Director Oyster Creek Operations to ensure proper radiological controls are applied and practiced during plant work.
4. Radiological Controls Field Operations has been reorganized to provide more supervision in the field, each with specific areas of responsibility. This reorganization consists of 3 Group Radiological Control Supervisors each having functional responsibility for a distinct portion of the plant. In addition a permanent Manager has been hired who has extensive experience in shipyard radiological controls. All Field Operations supervisory personnel are now company employees.
5. Efforts have been made to improve contamination control and to emphasize management's commitment to a high quality Radiation Protection Program. These efforts include:

a. Lectures to all personnel at the station by the Director Oyster Creek Operations and the Manager, Radiological Controls which discussed the Station's commitment to a high quality Radiation Protection Program and techniques used to minimize contamination.

b. Consultants were brought in to review the current Radiation Protection Program and associated contamination control practices and make recommendations for improvements. These recommendations were included in the actions cited herein and may have been implemented as indicated later.

c. Improved dressing/undressing areas were provided in an effort to minimize contamination spread.

d. Improved frisking areas have been provided nearer to some work sites as well as at exit points. In addition, new frisking instructions were developed and increased technician surveillance is provided to enforce these instructions at exit points.

e. Lectures specific to the radiological controls associated with refueling operations were given to individuals working in the refueling area during the 1980 outage. Procedures now require pre-work briefings by radiological controls personnel for all jobs which involve significant radioactive work.

6. Decontamination operations have been initiated in both the Reactor Building and some outlying areas with the goal to minimize areas requiring protective clothing.

7. A major effort was accomplished to remove "Hot Spots" from the Reactor Building floor drain system. Hot Spots of up to 38 R/hr were reduced to less than 100 mR/hr. A follow-up program is currently in progress to design and install shieldings around other "Hot Spots" in order to minimize the number of accessible high radiation areas.

8. Calibration procedures have been written for radiation detection instruments in use.

9. The use of contamination containment areas and tents to keep contamination confined has been initiated and will continue to be increased.

10. A major "housecleaning" effort is underway to remove extraneous material from within controlled areas.

The following portion of this plan describes corrective actions taken and planned to correct the identified weaknesses in the Radiation Protection Program.

1. Objective: Establish firm, visible commitment to a high quality, strictly adhered to Radiation Protection Program via a

Radiation Protection Plan/Policy Statement, as well as with all levels of supervision and with workers on the subject. A morale and attitude problem existed, and continues to exist to some degree today, in the radiation protection organization. Personnel within the organization felt that they did not have the authority nor the management support to stop operations in the interest of radiological safety.

a. A Radiation Protection Plan, outlining the philosophy, basic policies and objectives of OCNCS and Jersey Central Power & Light Company has been issued. This plan outlines the Radiological Program, delineates each worker's responsibilities to support the program, and stresses management's commitment to a high quality Radiation Protection Program. This plan closely parallels NUREC 0761.

b. Training programs have been utilized to improve management and supervisory skills in the Radiological Controls Department. Group Supervisors (Foremen) in both radiological field operations and radiological support have received detailed training in their areas of expertise. Field Operations Supervisors have completed a qualification program including oral examinations specifically designed to test their supervisory response to abnormal casualty situations. In addition, some management personnel have attended management development training offered by outside organizations (e.g. University of Scranton program offered to various GPU personnel). Most radiological engineers have attended a two week ALARA engineering course offered by General Dynamics, Electric Boat Division; further attendance is planned to ensure all radiological engineers have received this training. Additional training will be provided to management and supervisory personnel as necessary to ensure management skills are retained and improved.

II. RADIOLOGICAL CONTROL ORGANIZATION

1. Objective: Formalize the organizational structure for the Oyster Creek Nuclear Generating Station Radiation Protection Program.

Corrective Actions:

a. Reorganize the Radiological Controls organization to eliminate production related functions and provide better visibility and authority through a direct chain to senior management. Publish this organization and define areas of responsibility.

Action Taken: The Department has been reorganized as shown on the attached chart and now reports to senior corporate management. Technical Specification changes have been submitted and approved.

The department reorganization identifies the chain of command and delineates areas of responsibility within the Radiological Controls Department. All contractor controlled radiological functions are included within this organization along with Oyster Creek employees. In the past year, all management and supervisory positions have been filled with permanent Jersey Central Power & Light Company employees.

The Radiation Protection Department activities and functions are now organized into four groups under the direction of management personnel as follows:

1) Radiological Engineering Group. An outline of this group's functions is as follows:

a) Prepares procedures used in the Radiological Controls Department.

b) Reviews radiation work meeting certain specified criteria to assure that radiological engineering concepts are employed for control of exposure (both internal and external), and contamination spread and identifies other unique radiological problems and/or provides solutions.

c) Provides technical support for all Radiological Controls operations, such as evaluation of survey types and frequencies, instrument usage, contamination control techniques, etc.

d) Assists in performing internal audits of the Radiological Controls Program.

e) Implements and controls the exposure reduction program.

f) Implements and controls a Radiological Deficiency Reporting

system. Reviews Surveillance Reports, Radiological Deficiency Reports, audit findings and incident reports to assist in determining program weaknesses and developing solutions.

g) Reviews and approves radiological support material specifications.

h) Evaluates exposure control levels and evaluates justifications for additional exposure requests.

2) Radiological Field Operations: An outline of this group's functions is as follows:

a) Perform radiological monitoring and implement radiological controls in the field.

b) Prepares Radiation Work Permits (RWP) for work in high radiation areas, contamination areas, airborne radioactivity areas, neutron radiation areas, and all maintenance work on radioactive systems.

c) Staff to assure detailed supervision/review of routine work in order to obtain a quality product.

d) Ensure contractor technicians are appropriately trained and supervised.

e) Ensure that all work in controlled areas is performed under the cognizance of radiological controls personnel.

f) Provide areas near the work site to frisk and rapidly evaluate samples.

3) Radiological Support Group. An outline of this group's functions is as follows:

a) Implement a bio-assay program including whole body counting, fecal and urine analysis as required, and internal dose commitment.

b) Implement a dosimetry program including TLD monitoring for exposure record purposes and recording/dissemination of self-reading pocket dosimeter data to provide real-time information for exposure control.

c) Establish a Quality Assurance Program, which consists of both internal audits and checks, as well as checks against NBS standards.

d) Review systems and procedures to determine adequacy and develop a plan for upgrade.

e) Perform radiation instrument calibration, repair and accountability.

f) Perform respirator testing.

g) Tests, maintains, issues, and implements respiratory protection program.

h) Maintains official radiation protection records.

4) Radiological Training. An outline of this group's functions is as follows:

a. Responsible to the Manager, Radiological Controls to ensure adequate training is provided to radiation protection personnel consistent with the department's responsibilities.

b. Reviews, audits, and approves technical content of all radiological controls training programs used at Oyster Creek.

c. Reviews technical qualifications of Radiological Control instructors.

III. TRAINING

1. Objective: Upgrade the knowledge, understanding and ability of Radiological Controls Technicians and radiological workers for performing their job assignments in the radiological environment by improving the training program.

Actions Taken:

a. The reorganization of the Radiological Controls Department includes the assignment of a Supervisor, Radiological Training reporting to the Manager, Radiological Controls. This individual is responsible for formalizing the training program for Radiological Controls and Support Technicians and Group Supervisors. He is responsible for establishing the minimum acceptable knowledge, understanding, practical abilities and experience for qualification of these personnel. Qualification is verified by satisfactory performance on a comprehensive written examination, demonstration of practical abilities and satisfactory performance on an oral examination covering the response to abnormal situations. (Oral examinations are not administered to Radiological Support Technicians and their Supervisors). During oral examinations, particular emphasis is placed on communications with others, the Technician's responsibility to enforce radiological requirements and direct others during unusual situations.

Problem-solving sessions which review past abnormal situations or postulated potential situations with student participation are used by having the students analyze the initial data, state immediate and supplementary protection and corrective actions, communications with workers and operations personnel, taking of additional radiological measurements, and a review of the radiological consequences of the postulated situation.

Training in the performance of practical abilities to assure personnel understand what is expected of them in performing the routine duties is followed by verification of the performance of the practical abilities by supervision or specially designated Technicians.

This program has been implemented for Jersey Central Power & Light Company technicians. A similar qualification program for contractor Radiological Control Technicians will be implemented following the Spring, 1981 outage. Technicians and Supervisors who have not successfully completed the qualification program are limited in duties. Requalification, including the written examination, practical abilities verification and oral examination is required of Radiological Controls Technicians and their supervisors every two years.

b. Radiation orientation and retraining for all personnel employed at OCNGS is being performed by the Training Department.

The Supervisor, Radiological Training reviews the existing program, develops the criteria for minimum qualification of workers based on their trade/craft and provides guidance to the Training Department in establishing/implementing the radiation orientation and retraining program for workers. The program has both written and practical ability demonstration requirements. This program will continue to inform the worker of the risks of radiation exposure, define radiation and contamination, state the limits and administrative control levels, state the worker's responsibilities and rights, familiarize him/her with protective clothing, dosimetry and instruct in proper use of these devices. The worker will also have typical sources of radiation, contamination and airborne radioactivity identified and related to his/her type of work. ALARA principles, procedures and response to abnormal situations will be covered.

The Supervisor, Radiological Training periodically audits/evaluates training, recommends changes to the training program, approves course materials, presentations and programs to verify practical ability performance.

c. In addition to the training programs identified above, special training such as mock-up training, walk-through exercises and detailed worker briefing will be required for major evolutions and/or those tasks which may result in encountering unusual or uncertain radiological conditions with significant radiological risk or exposures expected.

The determination of the necessity for this special training will be made by Radiological Engineering personnel based on the review of work procedures or task definitions. The actual training/briefings will be conducted by technical, operations or maintenance personnel in conjunction with Radiological Controls personnel.

IV. DEFICIENCY ANALYSIS/COMMITMENT TRACKING

1. Objective: Improve self-analysis of problems and assure that identified corrective actions are taken.

Corrective Actions:

a. To identify weaknesses in radiological work practices in a more timely fashion and reduce the number of findings resulting from formal audits, an "in house" surveillance program has been developed. It is the intent of this program to document all deficiencies noted, to monitor radiological work practices and to identify weaknesses in the Radiological Controls Program. These deficiencies can be documented by any worker observing the condition. Copies of the deficiency reports are distributed to the Radiological Engineering group for review and trend analysis.

To identify and track the more generic problems associated with the Radiation Protection Program on either an engineering or management level, a Radiological Deficiency Reporting (RDR) system has been implemented. This system identifies the deficiency noted, the recommended corrective action, the response and an evaluation of that response. The Radiological Engineering section administers this system and provides periodic status reports to station management.

b. The Radiological Audit Program has been upgraded to provide more frequent and indepth audits of various phases of the Radiological Program. These audits will divide the program into areas, such as those listed below and will be performed both by assigned in house personnel, including Quality Assurance, and by individuals recognized as experts in the specific fields. Frequency of these audits will be at least annually in each area and more frequently in areas that would be considered more likely to have problems or where small problems have a higher potential.

Typical Audit Areas

Exposure Control
Contamination Control
Surveys
Airborne Radioactivity Control
Respiratory Protection
Dosimetry

Instrumentation
Radioactive Material
Training
Emergency Response
Environmental Monitoring
ALARA

Conduct of these audits will be in accordance with pre-developed audit plans developed in consideration of statutory requirements, applicable regulatory guides and ANSI standards, etc., as well as state-of-the-art techniques. Findings will be formally addressed and tracked, and responses will be reviewed by individuals capable of assessing the adequacy of the response.

c. In order to assure adequate management involvement and subsequent corrective actions, all incidents having radiological

significance (see listing below) shall be thoroughly investigated, documented and follow-up corrective actions developed. Inclusive in this is immediately stopping associated work in all instances where job continuation could result in a recurrence or deteriorating situation.

CRITERIA FOR HOLDING CRITIQUE/PREPARING INCIDENT REPORT

- 1) External exposure in excess of 10 CFR 20 limits.
- 2) Internally deposited radioactivity greater than 5% of MPBB.
- 3) Radioactive skin contamination.
- 4) Unplanned personnel exposure to concentrations of airborne radioactivity above the 40 hr MPC without respiratory protection.
- 5) Loss of Control of radioactive material.
- 6) Spread of contamination in excess of:
 - 50,000 dpm above surrounding contamination levels within a contaminated area
 - spread of contamination outside contamination area.
 - more than 1 gallon of contaminated water greater than 10 CFR 30.70Schedule A, Column II.
- 7) Personnel entry into a radiation area or high radiation area without proper dosimetry.
- 8) Improper control of high radiation areas.
- 9) Unauthorized or improper disposal of radioactive material.
- 10) Other reportable radiologically oriented violations of Technical Specifications, 10 CFR 19, 10 CFR 20.

d. To ensure a continuing independent assessment of Oyster Creek Radiological Controls, a position independent of the Radiological Controls Department has been created. This Radiological Assessment position reports independently to the Director, Radiological and Environmental Controls, GPU Nuclear. The duties of this position are full-time assessment of station radiological controls, and the incumbent has no production-related functions which could interfere or create a conflict with this assessment function. Assessment reports are issued at least monthly to the Director, Radiological and Environmental Controls and the Vice President-JCP&L, Director Oyster Creek.

V. EXPOSURE REDUCTION/PROCEDURE PREPARATION

1. Objective: Revise and implement procedures which will ensure strict verbatim compliance and revise the procedure review practices to expedite implementation of radiological controls procedures and practices.

Corrective Actions:

a. The format for all Radiological Controls associated procedures has been restructured to achieve verbatim compliance. Included in this effort were the findings and recommendations made by the Nuclear Regulatory Commission Management Inspection Report. Following revision, each procedure was field tested prior to formal implementation to ensure verbatim compliance is possible.

b. A requirement has been established that all work procedures which exceed or could exceed any of the below noted requirements must be reviewed and signed off by Radiological Engineering prior to issue. (Such reviews are also required for jobs meeting these criteria which do not have a specific work procedure and are performed in accordance with the general procedure, "Conduct of Maintenance.")

Radiological Engineering Review Criteria

- 1) Total job >1 Rem
- 2) Airborne >MPC
- 3) Surface Contamination >100,000 dpm/100 cmE2
>50,000 dpm/100 cmE2 for airborne
activity generating operations
- 4) Release of contaminated water >10 CFR 30.70 Schedule A,
Column II
- 5) Radiation levels >1 R/hr Gamma
>2 Rad/hr Beta
- 6) Non-routine Release to environment

This insures that ALARA concepts are being employed, exposure budgets are developed, that contamination (airborne and loose surface) is being controlled, and, if there are any special Radiological Controls precautions, they are so noted. Station procedures require a radiological engineering review of all jobs meeting these criteria, whether or not a job procedure is to be used, before an RWP can be issued.

c. The review and approval requirements for station procedures has been revised to require review by Radiological Engineering before procedures are submitted to the Plant Operating Review Committee for approval.

d. Action sign off steps are added to work procedures for work on major evolutions during the procedure review performed by

Radiological engineers. The purpose of these sign off steps is to ensure a responsible individual verifies by signature that the radiological safety requirements have been satisfied prior to continuing with the work evolution.

e. To aid in radiation exposure reduction, man rem goals are established for each major job and approved by the Radiological Engineering Section. In addition, annual goals have been developed. These goals are then be compared to actual returns for trend analysis and to determine what operations should be reviewed in more detail to further reduce exposure. A revised system to accomplish the above, provide reports to cognizant supervision, and to document action taken to reduce exposure is required.

f. A Radiological Work Practice Manual is being developed which will establish routine techniques for working in a radiological environment. These techniques are directed towards minimizing the impact (e.g., reduce exposure, minimize contamination spread) of working with radioactivity. Several work practices have been developed and are in use. Additional work practices will be developed as time permits or as the need develops. In the interim, specific methods of accomplishing radiological controls tasks necessary for individual jobs are specified by Radiological Engineering.

VI RESPIRATORY PROTECTION

1. Objective: Upgrade the Respiratory Protection Program to assure compliance with NUREG-0041.

A review of the Respiratory Protection Program revealed that improvements should be made in certain areas to further minimize the possibility of ingestion of radioactivity and to assure such ingestion, in fact, has not occurred. The efforts described elsewhere in this plan support and compliment the Respiratory Protection Program, particularly in the training, procedures, decontamination and dosimetry.

Corrective Actions:

Management evaluation of the sources of airborne activity and engineering controls is necessary to:

- 1) Identify and reduce the sources of airborne radioactivity
- 2) Minimize airborne concentrations
- 3) Monitor airborne radioactivity in more probable areas.

These concerns are being addressed in reviews of work procedures performed by Radiological Engineering personnel. The requirements for obtaining such a Radiological Engineering Review are detailed elsewhere in this report. Specific review of work evolutions with the potential for generating airborne radioactivity serves to ensure the most effective engineering controls are applied to prevent inhalation or ingestion. Such controls include containments, portable and facility filtered ventilation systems, work sequences designed to minimize airborne radioactivity, and air sampling requirements specifically designed to verify the extent of airborne radioactivity present during work.

b. The administration of medical examinations did not specifically certify compliance with NUREG-0041 nor did existing procedures give definitive guidelines for the handling of contaminated employees or those having ingested/inhaled radioactivity. The bioassay and medical examination procedures required revision to assure compliance with NUREG-0041 and ANSI N343-78. The medical examination for respiratory protection device users was combined as a separate section with radiation worker physical examination requirements for ease of administration. The procedure for routine and special bioassays was revised and made compatible with the procedure for handling contaminated personnel, including follow-up actions such as decontamination, investigation, dose assessment and medical evaluation.

c. The administration of the Respiratory Protection Program required a policy statement and designation of the supervisor in writing and formalization/qualification of personnel who train/operate/test/issue respiratory protective devices.

A management policy statement regarding respiratory protection was issued by the Vice President, Generation on May 22, 1978. This statement is included in the Respiratory Protection program description first issued April 15, 1980. Formalized training programs for radiological support technicians have been implemented including theoretical and practical knowledge requirements; certification requires classroom instruction, successful completion of a written examination and demonstration of practical abilities.

d. The Respiratory Protection Supervisor must be made cognizant of the service air system as it relates to the air breathing system and approve all modifications, maintenance and operating procedures and changes to the system and procedures to assure the integrity of the system is not compromised and personnel are protected during these evolutions. The system has been certified and a routine testing and inspection program is in place to assure continually acceptable breathing air.

VII DOSIMETRY, INTERNAL AND EXTERNAL

1. Objective: Improve the internal and external personnel dosimetry program. The TLD program utilized by the Oyster Creek Nuclear Generating Station consists of the licensee's in-house system plus TLDs supplied and processed by an off-site commercial vendor. The official dose records are established from data supplied by the off-site vendor. The licensee's in-house program serves as a back-up and provides information for high exposure jobs usually encountered during maintenance and refueling outages.

Corrective Actions:

a. The current TLD system Quality Control Program has been expanded to include comparison with outside agencies. The University of Michigan has provided two sets of badges exposed to known gamma doses and to a Sr-90 source. U-M has ordered additional calibrated beta sources which will be used in future evaluation. A contract is being developed for routine badge exchange with U-M.

b. Inter-comparison of monthly processing results, both by the vendor and the licensee, has been incorporated into procedures. The vendor supplied TLD processing result is compared to the licensee-processed badge and accumulated self-reading pocket dosimeter results. Differences of greater than 25% are evaluated if either the TLD or SRD results indicate greater than 150 mr.

c. Personnel neutron dosimetry has not been utilized by the licensee. Neutron doses have been established based on survey data. The need for neutron dosimetry has been formally evaluated. Few areas exist with detectable neutron radiation levels and these areas are generally inaccessible during reactor operation. The evaluation indicates it is highly unlikely that any personnel will receive greater than 300 mr neutron exposure per quarter; thus personnel monitoring is not required. Activities involving personnel exposure to neutron radiation will be evaluated and doses will be assigned based on calculations of dose rate and stay time if necessary.

d. Dosimetry procedures were upgraded to define the types of dosimetric devices required for personnel allowed inside the licensee's restricted area. Additionally, associated dosimetry forms were upgraded to reflect the requirements for individuals who are exempt from dosimetry issuance.

e. A permanent job classification of radiological support technician has been created. A training program was developed and has been attended by all current radiological support technicians. The training program includes basic radiological sciences, dosimetry and respiratory protection (emphasizing equipment and procedures used at Oyster Creek). Upon successful

completion of the training program, radiological support technicians are certified by the Manager, Radiological Controls.

f. The bioassay program has been revised to formalize the basis for bioassays under routine conditions, following skin contamination or internal deposition, and following exposure to airborne radioactivity without appropriate respiratory protection. All dose assessments and evaluations of internally deposited radionuclides are performed by the Radiological Support Group.

VIII RADIOACTIVE MATERIAL

1. Objective: Upgrade the labeling, packaging, handling and transporting of radioactive material within controlled areas, within the protected area, upon receipt and prior to shipment.

In order to control radioactive material, minimize the generation of solid radioactive waste, assure compliance with shipping and burial site packaging and identification requirements, a well defined, organized and managed radioactive material handling program is necessary.

Corrective Actions:

a. In order to properly coordinate and effect the necessary identification, radioactive contents, package integrity and minimize exposure due to rehandling, a comprehensive Radioactive Material Handling Program is required with a Radwaste Shipping Supervisor who is responsible to assure safe, effective handling, control, identification, packaging and shipping of this material. The position of radwaste shipping supervisor has been established and procedures, developed to accomplish the program, are currently being implemented.

b. Preparation of procedures which define how radioactive material is received, monitored, identified, packaged, labeled, stored, transported from controlled areas, protected areas and off-site, including release criteria, shipout procedures, and the means for maintaining status, location and closeout of items, was required. Such procedures have been developed and are in the process of being implemented.

IX PLANT/EQUIPMENT DECONTAMINATION

1. Objective: Decontaminate the reactor building, equipment and other outlying areas to the maximum extent practical.

Corrective Actions:

a. A task force was assigned consisting of representatives of Radiological Controls, Operations, and Maintenance to:

- 1) identify radiological conditions
- 2) develop priorities for decontamination
- 3) identify Hot Spots and evaluate removal/shielding
- 4) establish a plan/schedule for action

b. A housekeeping policy was established and incorporated into plant procedures to minimize extraneous material from within controlled areas.

d. A program was developed to reduce solid waste generation through minimizing material which becomes contaminated, increase reuse of contaminated items and improve decontamination techniques. Procedures have been written and the program is in the process of implementation.

