GPU Nuclear	GPUNC OPERATIONAL QUALITY ASSURANCE PLAN FOR THREE MILE ISLAND UNIT 1 AND OYSTER CREEK	Number 1000-PLN-7200.01
Title	GPUNC Operational Quality Assurance Plan for Three Mile Island Unit 1 and Oyster Creek	Revision No. 5
Applicability/Scope This Plan Has GPUNC-Wide Applicability Except TMI-2		Responsible Office 6160
This document is within QA plan scope _X_ Yes ___ No Safety Reviews Required _X_ Yes ___ No		Effective Date 03/11/91

List of Effective Pages on Page 2.0

	Signature	Concurring Organizational Element	Date
Originator	C. L. Marcum	Director Quality Assurance	1/21/91
Concurred By	N/A	Corporate Secretary	5/31/90
	N/A	Dir-Administration & Finance	5/24/90
	N/A	Dir-Corporate Services	6/18/90
	N/A	Dir-Independent Safety Review	5/23/90
	W. J. Lindsey	Dir-Nuclear Assurance	1/14/91
	N/A	Dir-OCNGS	6/12/90
	N/A	Dir-Site Services	5/23/90
	N/A	Dir-TMI Unit 1	7/03/90
	N/A	Dir-Technical Functions	5/25/90
	[illegible]	Administrative Support Manager	1/21/91
	[illegible]	Responsible Technical Reviewer	1/14/91
Approved By	[illegible]	Office of the President	1/21/91

9102060135 910128
PDR ADOCK 05000219
P PDR

LIST OF EFFECTIVE PAGES

Page No.	Rev. No.	Page No.	Rev. No.	Page No.	Rev. No.	Page No.	Rev. No.
1.0	5	29.0	2	59.0	4	89.0	2
2.0	5	30.0	2	60.0	4	90.0	1
3.0	2	31.0	2	61.0	4	91.0	1
4.0	4	32.0	4	62.0	4	92.0	2
5.0	4	33.0	2	63.0	2	93.0	5
6.0	5	34.0	4	64.0	4	94.0	2
7.0	2	35.0	2	65.0	4	95.0	1
8.0	4	36.0	2	66.0	2	96.0	2
9.0	4	37.0	2	67.0	2	97.0	2
10.0	4	38.0	2	68.0	4	98.0	2
11.0	2	39.0	4	69.0	4	99.0	2
12.0	4	40.0	2	70.0	4	100.0	2
13.0	4	41.0	2	71.0	1	101.0	1
E1-1	4	42.0	2	72.0	1	102.0	3
E2-1	4	43.0	2	73.0	2	103.0	2
14.0	2	44.0	2	74.0	4	104.0	2
15.0	4	45.0	4	75.0	4	105.0	2
16.0	2	46.0	4	76.0	2	106.0	2
17.0	4	47.0	2	77.0	2	107.0	2
18.0	4	48.0	4	78.0	4	108.0	2
19.0	4	49.0	2	79.0	2	109.0	2
20.0	2	50.0	2	80.0	2	110.0	2
21.0	2	51.0	4	81.0	4	111.0	2
22.0	2	52.0	2	82.0	2	112.0	2
23.0	2	53.0	4	83.0	2	113.0	2
24.0	4	54.0	2	84.0	2	114.0	2
25.0	4	55.0	2	85.0	4		
26.0	2	56.0	4	86.0	1		
27.0	2	57.0	4	87.0	2		
28.0	2	58.0	4	88.0	2		

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

Title	Revision No.
GPUNC Operational Quality Assurance Plan for Three Mile Island Unit 1 and Oyster Creek	5

REVISION	EFFECTIVE DATE	DESCRIPTION OF CHANGE	PREPARED BY: REVIEWED BY: APPROVED BY:
3	10/10/89	The commitment to Regulatory Guide 1.58 has been revised to require that the requirements and recommendations of the 1980 Edition of ASNT SNT-TC-1A be used in conjunction with the provisions of Section XI of the ASME Boiler and Pressure Vessel Code currently committed to by GPUN; and, to permit the use of later editions of ASNT SNT-TC-1A as referenced in Section XI of the ASME Boiler and Pressura Vessel Code provided that later edition of Section XI hsa been incorporated into 10CFR50.55(a).	E. J. Ahern J. Jandovitz P. R. Clark
4	07/18/90	Section 1.0 was revised as a result of Corporate and QA Department reorganizations and; to reduce the level of organizational detail; the activities of "security screening" and "fitness-for-duty" were identified as activities within the scope of the Plan in Section 2.2.2; Sections 6.5, 6.5.2.1, 6.5.2.3, and 6.11.2 were changed to clarify the post-maintenance and installation testing responsibilities of the Site Services Division; editorial changes were made to Sections 6.6 and 7.2.1; Sections 6.11.2.1(a) has been revised to indicate that the Oyster Creek and TMI-1 Divisions are responsible for the technical as well as the administrative procedures associated with maintenance; the commitment to Regulatory Guide 1.8 has been modified to establish experience requirements needed for eligiability for the NRC licensed reactor and senior reactor operator positions; all affected sections have been revised to incorporate the revised Divisional titles to be consistent with Section 1.0; from Section 7.0 text was advanced one page due to changes in Section 6.0.	R. S. Markowski J. P. Heil P. R. Clark
5	01/21/91	The purpose of this revision was to further clarify the text associated with Reg. Guide 1.8 that was inserted by Rev. 4 (i.e. item 2 in Appendix C, Part 2,. The commitment relies on the text of 10CFR55.	M. Heller J. P. Heil P. R. Clark

INTRODUCTION

GPU Nuclear (GPUN) is responsible for the operation and maintenance of TMI Unit 1 and Oyster Creek Nuclear Generating Stations. The Quality Assurance Plan contained herein describes the formal and comprehensive plan which has been established to ensure compliance with 10CFR20; 10CFR50, Appendix B; 10CFR71, Subpart H; and applicable Regulatory Guides during the operation of TMI Unit 1 and Oyster Creek. This plan replaces the Operational Quality Assurance Plans for TMI Unit 1 and Oyster Creek.

This Operational Quality Assurance Plan is formatted in such a manner as to provide all users with a functionally useable document. It describes how this Plan is to be functionally implemented with due regard to the safety and health of the public and the personnel on site. This Plan identifies organizations responsible for the implementation of the Quality Assurance Program (Section 1.0) and an overall description of the Program (Section 2.0). The remaining sections are structured in a functional manner.

The requirements for administrative controls are generic and apply to all subsequent sections. Control of documents and records is contained in Section 3.0; control of design is contained in Section 4.0; control of materials and services, including procurement, is contained in Section 5.0. Sections 6.0 and 7.0 contain the plan requirements for those operational, support, and assurance activities associated with the safe operation of all plants; construction and/or modifications associated with corrective maintenance, plant improvement, and/or repair; and the processing and preparation for the transport and transportation of radioactive wastes. Specific requirements such as control of measuring and test equipment, inspection, special processes, test control, and status of inspections, tests and operations are included therein. Sections 8.0 , 9.0 and 10.0 again apply to all activities within the scope of this plan. Section 8.0 addresses the identification and disposition of nonconformances associated with all aspects of the Program. In addition, this section contains the management controls provided for evaluating collectively material nonconformances and conditions adverse to quality and determining what corrective actions should be taken to preclude their recurrence. Section 9.0 contains the requirements and administrative controls applicable to training; Section 10.0 contains the requirements and administrative controls applicable to the conduct of audits. Appendices A, B and C contain additional requirements associated with the functional areas discussed in this Plan. Appendix D contains the definitions of terms used throughout this Plan.

1.0 Organization

The GPUN Organization Plan is the highest tiered document that assigns major functional responsibilities. Implementing documents assign more specific responsibilities and tasks and define the organizational interface(s) involved in conducting activities and tasks within the scope of this Plan. The requirements of this Operational Quality Assurance Plan apply to those organizations and positions which manage and perform activities within the scope of this plan. This section provides a summary of the organizational units and functions which perform activities within the scope of this plan.

The GPUN organization is structured on the basis that the attainment of the objectives of this plan relies on those who manage, perform, and support the performance of activities within the scope of this plan; and, assurance of this attainment relies on those who have no direct responsibility for managing or performing the activity.

The organizations responsible for the conduct, support and assurance of operation, maintenance, modification, repair, inservice inspection and refueling of the nuclear generating stations is illustrated in Exhibit 1. These organizations have functions located both on site and off site.

1.1 Office of the President

The Office of the President-GPUN has the overall responsibility for the establishment, implementation and evaluation of the effectiveness of the Quality Assurance Program applicable to TMI Unit 1, and Oyster Creek. This responsibility is administered through his management staff, including:

Corporate Secretary
Director - Administration and Finance
Director - Corporate Services
Director - Independent Safety Review
Director - Nuclear Assurance
Director - OCNGS
Director - Site Services
Director - TMI Unit 1
Director - Technical Functions

These OP management staff members give their full support to the requirements set forth in this plan ensuring full compliance by their respective staffs.

1.2 Director-TMI Unit I and Oyster Creek

Each of the Directors of the nuclear generating stations reports to the Office of the President. They are each responsible to operate, maintain, and refuel their respective generating station in a safe, reliable and efficient manner in accordance with corporate policies and all applicable laws, regulations, licenses and technical requirements. The Division Director-Oyster Creek is the senior GPUN representative at Oyster Creek and as such assures consistent implementation of policies and procedures at the plant and at GPUN off-site facilities in the Oyster Creek area. The Division Director-TMI-1 is the senior GPUN representative at the TMI site and as such assures consistent implementation of policies and procedures at the plant and at GPUN off-site facilities in the TMI area.

1.3 Director - Technical Functions

The Director-Technical Functions reports directly to the Office of the President. The Director's Quality Assurance plan responsibilities consist of providing the requisite engineering and/or technical support to: maintain the design basis of the nuclear plant; maintain the configuration control documents; conduct operating experience assessment(s); provide nuclear fuel management; provide core performance monitoring; staff and direct shift technical advisors; monitor and analyze the technical performance and reliability of systems and components; provide selective review of plant operations and testing procedures, and associated training; provide technical control and coordination of plant modifications; and, conduct startup testing.

1.4 Director - Administration and Finance

The Director-Administration and Finance reports directly to the Office of the President. The Director's Quality Assurance Plan responsibilities consist of establishing, maintaining, and implementing procurement and warehousing plans and/or procedures.

1.5 Director - Nuclear Assurance

The Director-Nuclear Assurance reports directly to the Office of the President. The Director's Quality Assurance Plan responsibilities consist of establishing, verifying and implementing quality assurance plans, practices and procedures; establishing, maintaining and delivering training and education programs sufficient to assure safe, reliable and efficient operation; establishing, implementing and maintaining radiological controls, radiological environmental monitoring, emergency preparedness, medical examination, and fitness for duty testing plans and procedures consistent with Corporate Policies and all applicable laws, regulations and licenses.

1.5.1 Director - Quality Assurance

The Director-Quality Assurance has the functional authority, independence and responsibility to assure the effective implementation of and compliance to the Quality Assurance Program. Consistent with this responsibility is the authority to render interpretations in writing on those activities to which this plan applies and the extent to which the plan applies to those activities.

The Director-Quality Assurance reports directly to the Director-Nuclear Assurance. Additionally, The Director-Quality Assurance has direct unencumbered access to the Office of the President and the Directors of each of the nuclear stations with regard to quality activities. This reporting relationship has been established to provide the Quality Assurance organization with sufficient independence from the influence of costs and schedules to be able to effectively assure conformance to Quality Assurance Program requirements. Exhibit 2 identifies the Quality Assurance Department (QAD) sections.

The Director-Quality Assurance has no duties or responsibilities unrelated to Quality Assurance that would prevent his full attention to quality assurance matters. The Director-Quality Assurance has the authority and responsibility to:

a. Develop and administer the maintenance of the Operational Quality Assurance Plan and the Quality Assurance Department procedures required to assure that all GPUN activities provide the required high degree of safety and reliability.

b. Audit, inspect and monitor the conduct of GPUN activities to assure that they provide the required high degree of safety and reliability and are carried out consistent with all applicable laws, regulations, regulatory commitments, licenses, corporate policies and other requirements.

c. Provide welding, inservice inspection and nondestructive examination program development and maintenance. Perform nondestructive examinations.

d. Identify and report nonconformances as they may exist Initiate, recommend or provide solutions through designated channels. Verify implementation of resolutions.

e. Stop work or further processing, delivery or installation or take other comparable actions when warranted to control and/or prevent the use of nonconforming materials or continuance of nonconforming activities.

f. Initiate unit shutdown recommendations when warranted by a safety concern and obtain unit shutdown with appropriate upper-management concurrence.

g. Provide for a review of selected documents which prescribe methods for activities and quality requirements for items, parts and materials within the scope of this Plan.

h. Provide for a review for concurrence of Contractor and Vendor Quality Assurance Programs.

i. Provide for the QA review of selected design and engineering documents within the scope of this plan.

j. Provide for QA review of selected procurement documents within the scope of this plan.

k. Direct and manage the Quality Assurance Department.

l. Provide a working interface and line of communication with other divisions and other appropriate industry and regulatory groups for all QA matters.

m. Provide indoctrination, certification, and/or training programs for the QA Department.

n. Assure QA indoctrination of appropriate personnel outside of the QA organization is provided.

o. Immediately notify the Office of the President and appropriate Unit Director of any significant quality related problem or deficiency.

p. Perform assessments on a planned and periodic basis to comprehensively determine the effectiveness of the program and its implementation; and, detect adverse trends as may be present.

q. Issue periodic reports to the Office of the President and Division Directors on the effectiveness of implementation of activities within the scope of this plan.

r. Provide for and maintain records generated by QAD until turnover to the record storage facility(s) for storage.

1.5.2 Minimum Qualifications of Quality Assurance Personnel

The Director-Quality Assurance shall have, as a minimum a baccalaureate degree in Engineering or Science, with at least fifteen(15) years of technical experience including ten years of managerial/ supervisory experience in operational, technical support and/or quality assurance activities associated with nuclear power plants. At least one year of this experience shall be in a Nuclear Quality Assurance organization or a special training program approved by the Director, Nuclear Assurance will be completed within six months of assuming the position. Additionally, the Director-Quality Assurance must be knowledgeable in operating license conditions, other regulatory requirements and commitments, plans, procedures and quality and technical standards.

Quality Assurance Department Section Managers are required to have a degree in Engineering or Science and experience in a position(s) having responsibility for the supervision and performance of operational, technical and/or quality assurance activities. The degree requirement associated with these management positions may be waived for personnel with demonstrated exceptional capability and a minimum of ten (10) years of equivalent experience.

For personnel performing inspection, examination, and special processes, the qualification criteria shall be delineated to the techniques of inspection or items being inspected and the technical abilities of the person being certified will be consistent with the assigned tasks (e.g., electrical inspection, mechanical inspection, etc.).

The qualification requirements and experience levels for other key Quality Assurance personnel are such as to assure competence commensurate with the responsibilities of and the Regulatory Guides associated with the activities performed by the position.

1.6 Director - Site Services

The Director-Site Services reports directly to the Office of the President. The Director's Quality Assurance Plan responsibilities consist of establishing, maintaining and implementing plans and procedures for managing, planning and conducting maintenance, repair and construction activities; constructing plant modifications as assigned, and conducting maintenance, repair, and construction activities as assigned in accordance with Corporate Policies and all applicable laws, regulations, licenses and technical requirements.

The Director's Quality Assurance Plan responsibilities also include the establishment, maintenance, and implementation of plans and procedures for nuclear plant security, security screening, safeguard contingencies and plant security guard force training and qualification consistent with Corporate Policies and all applicable laws, regulations, licenses and technical requirements.

1.7 Corporate Secretary

The Corporate Secretary reports directly to the Office of the President. The Corporate Secretary's Quality Assurance Plan responsibilities consist of establishing, implementing and maintaining document distribution and record retention programs and facilities.

1.8 Director - Independent Safety Review

The Director-Independent Safety Review reports directly to the Office of the President. The Director's Quality Assurance Plan responsibilities consist of the establishment and conduct of nuclear safety review and assessment activities which include those of the nuclear stations' Independent Onsite Safety Review Group and the General Office Reivew Board.

1.9 Director - Corporate Services

The Director-Corporate Services reports directly to the Office of the President. The Director's Quality Assurance Plan responsibilities consist of the maintenance of the nuclear plants' operating licenses and the establishment, maintenance, and implementation of fitness for duty plans and procedures consistent with Corporate Policies and all applicable laws, regulations and licenses.

2.0 Quality Assurance Program

2.1 General

This Operational Quality Assurance Plan is the highest GPUN document which provides the generic and some specific requirements and methods to control activities. The term "Program" as used herein includes this Plan and the approved documents which are used to implement this Plan. This Plan is implemented through such approved documents.

The GPUN Quality Assurance Program has been established to control the activities performed by GPU Nuclear within the scope of this Plan. This control is exerted primarily through the provision of and compliance with implementing documents and assurance that such documents are adequate and consistently used.

Adherence to the requirements of this Plan is mandatory for all GPUN organizations and for all external organizations providing items, parts, materials or conducting activities which are within the scope of this Plan.

The purpose and intent of this Plan is to establish the principles which, when implemented, will provide the level of management control and assurance which is appropriate for each item, part, material or activity within the scope of this Plan. It is recognized that the extent of management control and assurance to be applied varies with different items and activities, and the extent of applicability of this Plan will differ from item to item and activity to activity.

The Director - Quality Assurance is authorized and responsible for determining if and to what degree this Plan applies to a given activity and/or task. In those situations where interpretation of the Plan is required to provide clarity or resolve disagreements, such interpretations shall be documented and approved by the Director - Quality Assurance.

2.2 Scope

The scope of the GPUN Operational Quality Assurance Plan includes but is not limited to items and activities related to safe nuclear plant operation, protection of personnel and protection of the public. To ensure consistency in identifying those items, parts, materials and activities within the scope of this Plan, a classification process has been developed and documented. This process relies on the use of the terms "nuclear safety related," "regulatory required," and "QA Plan Scope."

2.2.1 Items within the scope of this plan are designated as "nuclear safety related" or "regulatory required." The definitions of these terms are provided in Appendix D of this Plan. A Quality Classification process for items has been developed. This classification process produces a Quality Classification List which identifies the permanent plant structures, systems, and components that are within the scope of this Plan and their specific classification. New items to which this Plan applies shall be added to the Quality Classification List subsequent to their installation.

The classification of parts, materials and consumable items (such as chemicals, radwaste liners, diesel fuel, etc.) and the technical and quality requirements will be specified, documented and approved as part of the procurement process.

This Plan may be applied to items, parts, and materials other than those designated as "nuclear safety related" or "regulatory required" as specified by GPUN management.

2.2.2 Activities within the scope of this plan are designated as within "QA Plan Scope." Activites that are within the scope of this Plan are those directly related to nuclear and radiological safety and protection of the public and are delineated below.

Support activities within the scope of this Plan are system/component/part classification, operating experience assessment, design, maintenance of environmental and fire protection qualification, nuclear fuel management, procurement, fabrication, handling, shipping, storage, cleaning, erecting, installing, testing, repairing, training, welding, inservice inspection, heat treatment, document control, records management, security screening and fitness for duty.

Operational activities within the scope of this Plan are normal, abnormal and emergency operation, chemistry control, core performance monitoring, shift technical advice, equipment control, surveillance testing, inservice testing, maintenance, housekeeping, fire protection, security, radiological controls, radiological environmental monitoring, radwaste preparation for shipment, radwaste shipment, fuel handling/refueling, technical specification compliance, and emergency preparedness.

Assurance activities within the scope of this Plan are audit, document review, nondestructive examination, inspection, monitoring, surveillance, and safety review.

The above activities are controlled through the use of approved documents which are, as a minimum, consistent with the requirements of this Plan, the unit Operating License, specific Regulatory Guides to the extent listed and committed to in Appendix C of this Plan, the Final Safety Analysis Report, and other regulatory requirements and commitments. Those approved documents which specifically prescribe the methods to implement this Plan will be identified as prescribed by 3.2.2.2 of this Plan.

A specific task(s) associated with the above activities will be classified as within scope of this Plan or not depending upon:

a. Statements within the text and the regulatory guides identified in Appendix C of this Plan;

b. The relationship of the task(s) to the safe operation of the nuclear plant;

c. The relationship of the task(s) to the protection of personnel from the effects of radiation;

d. The relationship of the task(s) to protection of the health and safety of the public;

e. The relationship of the task(s) to regulatory requirements and commitments, and;

f. Other factors as may be specified by GPUN management.

2.3 Graded Approach

The extent to which the requirements of this Plan and its implementing documents are applied to an item will be based upon the following:

a. The effect of a malfunction or failure of the item on nuclear safety or safe plant operation.

b. The design and fabrication complexity or uniqueness of the item.

c. The need for special controls, and surveillance or monitoring of processes, equipment and operational activities.

d. The degree to which functionality can be demonstrated by inspection or test.

e. The quality history and degree of standardization of the item.

The quality requirements for items within the scope of this plan shall be established using approved procedures based on the "General Logic Considerations" listed in the Appendix to ANSI N45.2.13-1976. Quality requirements will be established by the responsible department and reviewed by the Quality Assurance Department consistent with Appendix B of this Plan.

The extent to which the requirements of this plan apply to activities will be based as a minimum on operating license conditions and other plans previously submitted to the NRC for approval, other regulatory commitments as may have been made associated with activities, the text of this Plan, the unit's technical specifications, and Appendix C of this Plan. Such other plans or regulatory commitments include but are not limited to those associated with emergency planning, physical plant security, safeguard contingency planning, radiological controls, radiological environmental controls, fire protection, inservice inspection, inservice testing, licensed operator qualification and requalification, process control, offsite dose calculation, shift technical advisor training, environmental qualification of electrical equipment, security guard training and qualification, etc.

2.4 Three Level Approach

GPUN is committed to a comprehensive assurance process consisting of a three level approach to assure satisfactory, consistent and complete implementation of this Plan.

2.4.1 Level I - Activities at this level include inspections, checks, or tests performed for the purpose of establishing acceptance and/or verification of items parts, materials and activities within the scope of this Plan. Level I activities are performed by the Quality Assurance, Operations, Plant Maintenance, Radiological Controls, Site Services, Technical Functions, and contractor personnel. Where the first-level activities involve independent inspection for purposes of acceptance and/or verification, the activity will be performed by the QA Department or by organizations authorized to perform those activities by the QA Department.

- Operations, Plant Maintenance, Site Services, Radiological Controls, and Startup and Test personnel perform activities such as tests, calibration of instruments, radiation surveys, analyses of samples, valve line-ups, etc.

- Site Services; and, Plant Maintenance/Material personnel perform checks, inspections and/or tests of modification, replacement, repair and/or overhaul activities.

- Quality Control personnel perform receipt inspection and checks and inspections of modifications and maintenance activities.

- Contractors perform inspections as applicable to their scope of work.

- Technical Functions personnel periodically perform walkdowns, observations, measurements, etc. to revalidate the physical or functional configuration or condition of plant systems or components.

In all cases, the inspection, check and testing activities are performed by individuals who are knowledgeable of the activity being performed and are qualified to perform the work (refer to Section 6.2). Checklists, weld history records, travelers, reports, etc., are used for documenting the results of the activity and for providing a record of the performance of the activity.

2.4.2 Level II - The activities at this level are primarily those of survey, surveillance, monitoring, and document review and are performed as deemed necessary by the QA Modifications/Operations or Corporate Procurement QA Sections. The level of surveillance or monitoring applied is consistent with the importance of the item to safety and the extent of administrative controls utilized for the Level I activity. For activities where GPUN Quality Control is performing first-level inspection, no second-level activity is required.

At this level, procedures and instructions are established and surveillance and/or monitoring records will be completed and maintained. Such surveillance/monitoring normally includes observation of tests and inspections, observation of selected operations, review of records, verifications of test reports, and direct inspection on a spot-check basis. The organizations performing this activity have the levels of authority, the lines of internal and external communication for management direction, and properly trained personnel for implementation of these activities.

2.4.3 Level III - The purpose of this level of activity is to assure, through a comprehensive program of review and audit, that the first and second levels of the program are properly functioning, and that all organizations conducting activities and/or tasks within the scope of this plan are properly satisfying all the requirements of the Operational Quality Assurance Program.

At this level, procedures and instructions are established, including the use of comprehensive checklists or detailed reports for documentation of the audit or third-level activity. The program requirements of ANSI N45.2.12 shall be satisfied. Lead auditors shall be utilized who are qualified to the requirements of ANSI N45.2.23. Additional technical support personnel, from areas with administrative reporting outside the function that is being audited, will be utilized as Audit Program Management deems necessary. The organization performing this audit activity has sufficient authority, independence and lines of internal and external communications to obtain the necessary access to management to conduct the review and audit, resolve any issues which may arise from the review and audit and secure additional technical support for the performance of audits as may be required.

2.5 Operational Quality Assurance Plan Control

This Plan is authorized by the Office of the President and requires that the appropriate levels of management, as designated herein, implement the Program. This Plan is controlled to ensure that only the latest approved revision is implemented. This Plan is implemented through approved documents (refer to Section 3.0).

Appendix A provides a correlation of the sections of this Plan with the requirements of 10CFR50 Appendix B; 10CFR71, Subpart H; ANSI N45.2; and ANSI N18.7.

With the exception of Organization, Section 1.0 and QA Program, Section 2.0, each section of this Plan contains three major subsections:

General - A summary description of the general approach of GPUN with regard to controlling the specific subject(s) of the section. It characterizes the intent of the section by stating the overall objectives to be met and/or the results to be achieved.

Requirements - A description of the requirements applicable to the specific subject of the section.

Responsibilities - Identification of those organizations and their responsibilities relative to the specific subject of the section.

2.5.1 Approval

This Plan shall be originated by the Director-QA and be approved by the Office of the President after being reviewed for concurrence by the following:

Corporate Secretary
Director - Administration and Finance
Director - Corporate Services
Director - Independent Safety Review
Director - Nuclear Assurance
Director - OCNGS
Director - Site Services
Director - TMI Unit 1
Director - Technical Functions
Administrative Support Manager

2.5.2 Revisions

The Director - Quality Assurance, with the assistance of the Licensing and Regulatory Affairs Director, shall, for each revision to this Quality Assurance Plan, determine if the changes reduce or do not reduce the commitments in this plan previously accepted by the NRC.

Revisions to this Quality Assurance Plan that do not reduce the commitments in this Quality Assurance Plan previously accepted by the NRC shall be originated by the Director Quality Assurance and approved by the Office of the President with the concurrence of the Director - Nuclear Assurance and any Division Director affected. The Cover Page containing the approval and concurrence signatures of the Office of the President and the Division Directors shall be retained. Revisions of this type do not require approval by the NRC prior to implementation, but must be submitted to the NRC at least annually. The Document History page will be utilized to identify such changes.

Revisions of this Quality Assurance Plan that reduce the commitments in this Quality Assurance Plan previously accepted by the NRC shall be submitted to the NRC and receive NRC approval prior to implementation. Such revisions shall be regarded as approved by the NRC upon receipt of a letter to this effect from the appropriate reviewing office or 60 days after submittal to the NRC whichever comes first. The submittal of the revision to the Quality Assurance Plan must include all pages affected by that change and must be accompanied by a transmittal letter identifying the change, the reason for the change, and the basis for concluding that the revision continues to satisfy 10CFR50, Appendix B and to provide a suitable level of control. The letter need not provide the basis for changes that correct spelling, punctuation, or editorial items. A copy of this letter must be maintained as a facility record for three years. Revisions of this type shall be originated by the Director - Quality Assurance, approved by the Office of the President with the concurrence of the Division Directors as indicated by their signatures on a revised Cover Page.

2.5.3 Distribution

Copies of the Operational Quality Assurance Plan may be distributed as "Controlled" or "Uncontrolled" in accordance with the requirements established in Section 3.

2.5.4 Effective Date of Implementation

Changes to this Plan shall be incorporated in the implementing documents within 60 days of the issuance date of the Plan unless an interim action plan is defined and approved by the Director - Quality Assurance.

2.6 Quality Assurance Program Review

The effectiveness of the QA Program and its implementation is periodically reviewed by various organizations at various levels and the results of these reviews are documented in reports to the Division Directors and the Office of the President for evaluation and corrective action as required. The effectiveness of the QA Program is evaluated and reported by the QA Department through the surveillance, monitoring and auditing functions. Other divisions provide additional information/evaluations are requested.

In addition to the reviews and evaluation performed by the QA Department, the Office of the President shall have, at least once per year, an independent assessment performed of the QA Program implementation to ensure that the QA Program is effective in ensuring that regulatory requirements and commitments; and, GPUN policies are met. This assessment may be performed utilizing the safety review groups, an independent consultant, representatives of other utilities and/or his own staff. Any corrective action which may be deemed necessary as a result of these assessments shall be formally identified and tracked through resolution.

2.7 Indoctrination and Training

Formal indoctrination and training programs for personnel performing or verifying activities within the scope of this Plan are required to be established and maintained. A Training department is established and staffed and is responsible for planning, scheduling, developing and providing training to GPUN personnel. The indoctrination and training programs are established by on-site and by off-site organizational units responsible for the performance or verification of activities within the scope of this Plan. These training programs are developed, implemented and maintained as delineated in Section 9.0 of this Plan.

The proficiency of personnel shall be evaluated; and, measures to maintain proficiency shall be implemented through either retraining, reexamining and/or recertifying.

When certification is required, a certificate(s) shall delineate the specific function(s) the individual is certified to be able to perform and the criteria used to certify the individual for that function(s).

2.8 Classification Process

Activities that are within the scope of this Plan and general criteria for further classification of tasks associated with these activities are identified in Subsection 2.2.2 of this Plan. Subsection 2.3 provides further basis for grading the extent of application of the requirements of this Plan to activities. Documents that prescribe methods for implementing the requirements of this Plan shall be marked as specified by 3.2.2.2.b of this Plan.

Items within the scope of this Plan shall be classified and identified as "Nuclear Safety Related" or "Regulatory Required." A procedure(s) shall be prepared to establish, implement and maintain a classification process for items. This procedure(s) and changes thereto shall be reviewed for concurrence by the Director - Quality Assurance prior to issuance.

Structures, systems and components, but not parts thereof, shall be identified on a Quality Classification List (QCL). A QCL shall be established and maintained, by Technical Functions, for each plant. The classification of structures, systems and components will be subject to independent design review as part of the classification process.

Spare or replacement parts and materials are not necessarily classified the same as the component of which they are a part. Such parts and materials that perform or contribute to the performance of a nuclear safety-related or regulatory required function are within the scope of this Plan and classified similarly as the component of which it is a part. For procurement of spare or replacement parts which are of a different classification, the classification will be determined by Plant Engineering or Technical Functions. The determinations will be documented, reviewed by Quality Assurance consistent with Appendix B of this Plan, and retained. Refer to Section 5.0 for specific requirements.

2.9 Regulatory Commitments

Records of regulatory requirements and commitments are maintained by Licensing and Regulatory Affairs. Appendix C herein lists those Regulatory Guides which contain specific quality assurance requirements with the stated GPUN position, exceptions and/or clarifications provided. These must be complied with in conjunction with this QA plan. Appendix C will be revised, as necessary, to reflect any change in the GPUN commitment to the Regulatory Guides.

2.10 Safety Reviews

The safety review program involves four major elements:

2.10.1 The first element of the safety review program consists of technical review and, as necessary, an independent safety review.

The technical review is a thorough review conducted by someone other than the individual who prepared the work. This review is performed by a qualified Responsible Technical Reviewer on documents and substantive revisions of documents as specified by the GPUN Review and Approval Matrix.

The independent safety review is an independent review of documents and substantive revisions of documents as specified by the GPUN Review and Approval Matrix. It includes a review of a safety evaluation. This review is conducted by a qualified Independent Safety Reviewer (ISR) on safety evaluations associated with documents and substantive revisions to documents as specified by the GPUN Review and Approval Matrix. The ISR shall not have direct responsibility for the activity reviewed.

2.10.2 The second element of the safety review program is the Independent On-Site Safety Review Group (IOSRG). An IOSRG shall be located at each generating station. The IOSRG has no line responsibilities or line functions and is devoted solely to safety matters. It is independent of the plant staff and reports off-site to the Nuclear Safety Assessment Director. Each IOSRG will consist of a Manager, Nuclear Safety who reports to the Nuclear Safety Assessment Director and a minimum staff of three members, each of whom shall have an academic degree in engineering or a physical science field and 3 years of professional level experience in the nuclear power field including technical supporting functions or 8 years of appropriate experience. Credit toward experience will be given for advanced degrees on a one-to-one basis up to a maximum of two years.

Each IOSRG shall have access to the unit and unit records as necessary to perform its evaluations and assessments. Based on its reviews, the IOSRG shall provide recommendations to the management positions responsible for the areas reviewed. IOSRG reports of evaluations and assessments shall be prepared, approved, and transmitted to the Nuclear Safety Assessment Director, Director - Independent Safety Review, and the management positions responsible for the areas reviewed.

2.10.3 The third element of the safety review program is the review by the Nuclear Safety Assessment Department (NSAD).

NSAD is an independent organization reporting to the Director - Independent Safety Review.

In addition to overseeing the IOSRG, the Nuclear Safety Assessment Department, through its headquarters staff, will assess all aspects of GPUN activities as well as developments elsewhere in the nuclear industry. It shall provide the following safety review functions:

a. An overview of activities affecting or potentially affecting safety. This is a broadly defined responsibility which involves no specific tasks thus making it possible to assess the adequacy of the entire safety review program and identify areas for improvement.

b. A Corporate Ombudsman accessible on a confidential basis to anyone in the company having a nuclear or radiation safety concern he or she considers is not being adequately addressed. The Ombudsman is empowered to investigate such matters, identify any needed action and seek its resolution. The Ombudsman will reply to the individual who raised the matter.

c. Staff support to the General Office Review Board.

2.10.4 The fourth element of the safety review program is the General Office Review Board. This is a group of senior level individuals with diverse backgrounds. It reports to and takes general direction from the Office of the President but has direct access to the Chief Executive Officer and the Board of Directors. Its charter is broadly defined to encompass all matters potentially affecting nuclear safety so as to foresee potentially significant nuclear safety and radiation problems.

2.11 Responsibilities

2.11.1 Office of the President

The Office of the President - GPUN is responsible to regularly assess the scope, status, adequacy and compliance of the Quality Assurance Program to the requirements of 10CFR50, Appendix B, 10CFR20, and 10CFR71, Subpart H. This assessment shall be the combined result of:

a. Review of audit reports, periodic status reports, etc. on the effectiveness and implementation of the Quality Assurance Program.

b. Performance at least once a year of an independent assessment of the effectiveness of the Quality Assurance Program to assure that this program ensures compliance with regulatory requirements and commitments and GPUN policies and directives. This assessment may be performed utilizing the safety review groups, an independent consultant, representatives from other utilities and/or the President's own staff. Any corrective action which may be deemed necessary as a result of these assessments shall be formally identified and tracked through resolution.

2.11.2 Director - Nuclear Assurance

The Director-Nuclear Assurance has overall responsibility for establishment of the GPUN Operational Quality Assurance Plan. The Director through the Director-Quality Assurance shall provide periodic status reports to the Office of the President on the effectiveness and implementation of the Quality Assurance Program.

2.11.3 Director - Quality Assurance

The Director-Quality Assurance has the authority and direct responsibility to verify the effective implementation of this Quality Assurance Program. This responsibility is principally discharged through the review of documents which implement this Plan, the verification that such documents are effectively and consistently implemented, and providing the requisite leadership to assure that required corrective action is promptly defined and implemented.

The Director-Quality Assurance shall establish and implement a formally documented and procedurally controlled process to evaluate and report on the adequacy and continued effectiveness of this Plan and its implementation. The basis for this evaluation report(s) includes reports of audits performed by Quality Assurance; QA monitoring of station activities; evaluations of suppliers, source surveillance of equipment suppliers; audits of external service organizations; and quality trend analyses based on nonconformance and deficiency reports and reports of inspections, examinations, surveillance/monitoring and audits. These actions may involve specific actions to provide compliance with this Plan and may include follow-up audits and revision to the Quality Assurance Program.

Implementation and closeout of corrective actions shall be effectively followed up by the Director Quality Assurance to assure timely correction and compliance.

The Director-Quality Assurance is responsible for the contents of this Plan and for ensuring that this Plan is modified and updated as standards, regulations, requirements, and experience dictate. Proposed revisions to this Plan may be suggested by GPUN personnel by submitting the request, in writing, to the Director-Quality Assurance for review and action.

2.11.4 Director - Technical Functions

The Director-Technical Functions is responsible for development and maintenance of the Quality Classification List.

2.11.5 Director - Corporate Services

The Director-Corporate Services through Licensing and Regulatory Affairs is responsible for providing GPUN documented positions and interpretations on all other regulatory guides not contained in Appendix C of this Plan as may be required.

2.11.6 GPUN - Management

Management personnel in each division are responsible for the implementation of the Quality Assurance Program by their division, department or group, including the development and implementation of approved documents, and, the training and indoctrination of their personnel associated with those of their activities within the scope of this plan.

Management personnel in each division are responsible for the conduct of the technical and independent safety reviews within their division, department or group. This includes the identification and qualification of personnel as Responsible Technical Reviewers and Independent Safety Reviewers; the review and approval of documents within their functional area of responsibility as assigned by the GPUN Review and Approval Matrix and other activity as may be required to implement Technical Specifications Appendix A, Section 6.5, requirements.

Management personnel in each division are responsible to take positive action to evaluate and correct nonconformances identified in the conduct of those of their activities within the scope of this Plan. This responsibility to correct includes adverse trends as may be identified by appropriate analysis.

2.11.7 External Organizations

Suppliers who provide items, parts, materials, consummables, and/or services which are within the scope of this Plan shall have a QA Plan and implementing procedures appropriate for the items, parts, materials, consummables, and/or service. The supplier's QA program shall be subject to review for concurrence by the Director-Quality Assurance or his designee. The extent to which the supplier's QA program will be applied will be specified by procurement documents.

2.11.8 Resolution of Disputes and Escalations

Disputes involving quality arising from a difference of opinion between QA/QC personnel and another organization(s) (engineering, procurement, manufacturing, construction, operation, maintenance, etc.) personnel shall, if possible, be resolved at the level at which such disputes occur. If this is not possible, the difference of opinion shall be escalated through supervisory/management levels until resolution is achieved.

The Director-Quality Assurance shall make the decision on matters related to if and to what degree this Plan applies to activities, quality requirements, and verification and acceptance to established requirements.

The Director-Technical Functions shall make the decision on matters related to classification of items, parts, materials, and technical requirements or design changes.

The Director-Quality Assurance shall be responsible for evaluating deficiencies for trends. Significant or repetitive failures to comply with administrative, technical, operational or this Plan's requirements will be further evaluated to determine the safety significance of the condition. In these cases, management of the organization shall be notified of the condition and shall be afforded an opportunity to take appropriate corrective action. If this action is not taken, a Stop Work Notification will be issued.

3.0 CONTROL OF DOCUMENTS AND RECORDS

3.1 Plans, Procedures, Instructions, Drawings, Specifications

3.1.1 General

Activities which are within the scope of this Plan shall be prescribed by approved documents of a type appropriate to the circumstances. These documents shall be complied with in the performance of the activity or changed prior to proceeding with the activity. These documents typically include but are not limited to those termed plans, procedures, instructions, directives, drawings and specifications. All personnel shall be indoctrinated in the use or content of such documents prior to commencement of the activity.

3.1.2 Requirements

Documents which prescribe the methods for the performance of activities and/or tasks within the scope of this Plan shall be consistent with the requirements of this Plan. These Plan requirements include compliance with the text of this Plan and the Regulatory Guides and ANSI standards to the extent delineated in Appendix C. To accomplish this, these documents shall:

a. Define the responsibilities and authorities of personnel performing the activity.

b. Describe interfaces between GPUN organizational units and/or external organizations that participate in or are affected by the conduct of the activity.

c. Prescribe actions to be taken or the results to be achieved which are consistent with the requirements of this Plan.

d. Include quantitative (such as dimensions, tolerances, and operating limits) and/or qualitative (such as workmanship) acceptance criteria sufficient for determining that such activities have been satisfactorily accomplished.

e. Identify and specify the content of records to be generated in conducting the activity.

f. Include references as needed to implement the activity. When such references are utilized, the specific requirements of the references which are applicable shall be identified or incorporated into the document.

g. Be approved and concurred with by responsible personnel prior to the initiation of the activity.

h. Be distributed in a controlled manner to preclude the use of obsolete documents and with sufficient number of copies to assure availability to responsible personnel.

Reviews of such documents shall be conducted by the Quality Assurance Department (QAD). The timing and scope of QA document reviews shall be as detailed in Appendix B. These QAD reviews are conducted to independently verify that the document is appropriate for use. These QAD reviews assure, as a minimum, that the reviewed document is consistent with the pertinent QA Plan requirements; contain inspection and verification requirements where applicable; contain quantitative and/or qualitative acceptance criteria; contain clear definition of the extent of documenting results of completed actions when required; and, has been (after implementing approval) prepared and reviewed consistent with QA Plan requirements;.

Documents which prescribe methods for implementing this Plan shall be followed as written or changed. The requirements for use of such documents and how to proceed if such documents cannot be complied with as written shall be prescribed by procedure(s).

Plans, procedures, and instructions shall be revised as needed to ensure that such documents can be implemented as written. Appropriate documents shall be thoroughly reviewed following plant transients, incidents, and/or events and revised as needed. Such documents shall be reviewed by an individual knowledgeable in the area affected by the document(s) no less frequently than every two years to determine if changes are necessary or desirable. A revision of the document(s) may constitute the above review provided the results of the review are documented.

3.1.3 Responsibilities

3.1.3.1 Department Managers

The Director or Manager of each department performing activities within the scope of this Plan is responsible for the preparation, approval and implementation of documents which prescribe activities and/or tasks necessary to effectively implement this Plan. This responsibility includes ensuring that provisions are made for interface controls for internal and external lines of communications among participating organizations and technical disciplines.

3.1.3.2 Quality Assurance Department (QAD)

QAD shall review those approved documents which prescribe the methods of complying with the requirements of this Plan. When specified in procurement documents supplier Quality Assurance Plans/Manuals, special process procedures, and inspection and test procedures shall be reviewed for concurrence by QAD prior to authorizing the supplier to start work.

3.1.3.3 External Organizations

Those activities within the scope of this Plan which are performed by an external organization(s) shall be prescribed by approved documents(s). The extent and type of such approved documents to be utilized by the external organization shall be prescribed within approved procurement documents. Compliance shall be verified through the audit, source surveillance, source inspection, monitoring and inspection programs.

3.2 Document Control

3.2.1 General

Document control procedures shall be established to control and coordinate the classification, review, approval, issuance, revision, and change of approved documents which prescribe methods or provide the technical and/or quality requirements for activities and items within the scope of this plan. These document control procedures shall ensure that such documents are reviewed for adequacy, approved for release and use, and distributed to the location where the activity is performed.

3.2.2 Requirements

3.2.2.1 Written document control procedures shall be established to provide for the control of the following types of approved documents:

a. Operational Quality Assurance Plan, GPUN Organization Plan, GPUN Review and Approval Matrix, Quality Classification List, Environmental Qualification Master List(s), and Supplier Quality Classification List(s).

b. Plans, procedures, directives, and/or instructions as required to implement the provisions of this Plan and the Regulatory Guides to the extent delineated in Appendix C.

c. Quality Assurance Department Plans, Procedures, and Standards.

d. Operating, Surveillance Testing, Refueling and Equipment Control Procedures and Instructions.

e. Maintenance Work Authorizing Documents, Procedures, Instructions, Vendor Manuals and Vendor Information.

f. Engineering Configuration Control documents which include safety analysis, safety evaluations, calculations, standards, specifications, system/modification design descriptions, design reviews and/or verifications, drawings and lists.

g. Computer codes utilized for calculational tasks associated with activities within the scope of this Plan.

h. Engineering, Manufacturing, Construction, Modification, Installation, Welding, Test, Inspection and Nondestructive Examination Procedures, Instructions, Standards, and Specifications.

i. Procurement Documents, Specifications, and Contracts.

j. Final Safety Analysis Report(s), Fire Protection Plan(s), Fire Hazards Analysis Report(s), Emergency Plan(s), Security Plan(s), Safeguard Contingency Plan(s), Guard Force Training and Qualification Plan(s) and Offsite Dose Calculation Manual(s).

k. Nonconformance, Deficiency and Deviation Reports or Requests.

l. Operating and Special Orders.

m. Procurement and Material Control Procedures and Instructions.

n. Radiological Control, Process Control, Radiological Environmental Monitoring, Radwaste Shipping and Chemistry Control Plans, Procedures, Instructions, Standards, and Specifications.

3.2.2.2 Procedures established for document control shall prescribe the following requirements:

a. Drawings, design descriptions and specifications for items, parts, and materials designated as Nuclear Safety Related shall be marked as such.

b. Documents which prescribe how to perform activities within the scope of this Plan shall be marked as within "QA Plan Scope". These documents typically will be those termed plans, procedures, instructions, and directives. Specifications and drawings will be marked as stated in 3.2.2.2.a above.

c. Review and approval requirements for documents and their revisions shall be specified to ensure that adequate technical and quality requirements are incorporated prior to issue. Issuance requirements shall be specified to ensure adequate dissemination for use.

d. The organizations or positions responsible for reviewing, approving and issuing documents and their revision shall be specified.

e. Revisions shall be documented, approved, and issued prior to being implemented. Temporary changes shall be reviewed and approved consistent with Technical Specification requirements.

f. Revisions and changes shall be reviewed and approved by the same organizations that performed the original review and approval or by organizations designated by the originating organizations except for documents originated by organizations outside GPUN. In this case, GPUN may designate the review and approval organizations. Approved changes shall be promptly transmitted for incorporation into documents and obsolete or superceded documents shall be eliminated from use.

g. Document distribution shall be sufficient to assure that the documents are readily available to responsible personnel prior to commencement of work.

h. The user of approved documents is responsible for assuring that the latest issue of the document is being used to perform work, thus assuring that voided, superseded or obsolete documents are not used. Master lists or indices which identify current revision status of approved documents will be maintained to assist users. In addition to master lists or indices, documents may be stamped "Controlled Copy". Holders of controlled documents or master lists are responsible for maintaining their assigned copies in a current status. Documents distributed and stamped as information only will not be considered to be current, and, as such, will not be used in performing an activity within the scope of this plan.

i. In the special case of documents containing information pertaining to plant security, provisions shall be made to prohibit unauthorized disclosure of certain safeguards information. These provisions shall include identification of the documents, restrictions on their distribution and storage in locked security storage containers.

3.2.3 Responsibilities

3.2.3.1 Corporate Secretary

Responsible via the Information Management Center Managers to establish and maintain approved documents to implement the GPUN Document Control Program.

3.2.3.2 Director - Corporate Services

Responsible to develop and administer a corporate policies and procedures system.

3.2.3.3 Director - Nuclear Assurance

Responsible via the Director-Quality Assurance for the review of GPUN document control procedures and the evaluation of the overall document control system effectiveness through document review and audit.

3.2.3.4 All Functional Managers

Responsible to provide specific document control procedures, as required, to implement the corporate document control policy. Responsible to ensure that documents are available when required; to properly review and approve documents such as procedures, instructions, specifications, drawings, etc. to ensure that changes to documents are reviewed and approved by the same organization that performed the original review and approval of the document; to ensure that approved changes are promptly transmitted for incorporation into documents; to ensure that obsolete or superseded documents are eliminated from use.

3.3 Records

3.3.1 General

Records related to items, parts, materials and activities within the scope of this plan shall be identified, reviewed, retained, and retrievable. These requirements are imposed on all organizations performing activities within the scope of this plan. Records shall be described and controlled by approved written procedures or instructions. As a minimum, these procedures or instructions shall prescribe the method(s) for the identification, generation, collection, storage, maintenance, retention, and retrieval of such records.

3.3.2 Requirements

Approved documents shall be established for the identification, generation, collection, storage, maintenance, retention and retrieval of records and shall provide for the following minimum requirements:

a. Design specifications, procurement documents, and/or GPUN procedures shall specify the records to be generated, supplied and maintained by or for GPUN, including retention times. Typical records to be specified include operating logs, maintenance and modification procedures and related inspection results, reportable occurrences, inspection and verification procedures (excluding completed checklists when results are documented in a separate report), results of reviews, inspections, tests, audits, and material analysis; qualification of personnel, procedures, and equipment; other documentation such as calculations, computer codes, design verifications, drawings, specifications, procurement documents, calibration procedures and reports; nonconformance reports; corrective action reports; and other records required by Technical Specifications.

b. Sufficient records and documentation shall be maintained to provide evidence of the acceptability of items, parts, materials or activities within the scope of this plan. Inspection and test records shall contain the following where applicable:

   1. Identification of the type of observation.

   2. The date and results of the inspection or test.

   3. Identification of any conditions adverse to quality.

   4. Inspector or data recorder identification.

   5. Evidence as to the acceptability of the results.

   6. Action taken to resolve any discrepancies noted.

c. Record storage facilities shall be established and utilized to prevent destruction of quality records by fire, flooding, theft and deterioration by environmental conditions such as temperature or humidity in compliance with the standards, codes and regulatory guides endorsed in Appendix C of this Plan.

d. All records shall be legible in original or reproduced form.

3.3.3 Responsibilities

3.3.3.1 Director - Nuclear Assurance

The Director-Nuclear Assurance is responsible through the Director - Quality Assurance, for:

a. Reviewing procedures related to the identification, generation, collection, retention, storage, retrieval, and maintenance of records.

b. Establishing procedures and/or instructions for the identification, generation, collection, retention, storage, retrieval, and maintenance of records generated by QAD, until they are turned over for storage.

c. Performing planned and periodic audits to verify the adequacy and implementation of records requirements by both GPUN internal organizations and suppliers of services.

d. Performing source surveillance source inspection, or receipt inspection to verify that required records have been generated and supplied with items, parts or materials.

3.3.3.2 GPUN Division Directors

Each Division Director is responsible for:

a. The identification, generation, collection, maintenance, and storage of records in accordance with approved written procedures or instructions which conform to the requirements of this section until such time as they are transferred to the applicable Information Management Center for storage.

b. Providing direction in approved documents to ensure the identification generation and maintenance of records with sufficient detail to furnish objective evidence that activities within the scope of this Plan were conducted in compliance with this Plan and the standards, codes and regulatory guides endorsed by this plan.

3.3.3.3 Corporate Secretary

The Corporate Secretary is responsible through the Information Management Center Managers for:

a. The collection, maintenance, and storage of records in accordance with approved written procedures and instructions which conform to the requirements of this section.

b. Providing procedures and/or instructions which ensure the maintenance, storage and retrievability of records.

c. Establishing and implementing the GPUN Records Control System.

3.3.3.4 External Organizations

Records generated by suppliers shall be controlled according to the supplier's or GPUN procedures until such time as they are turned over to the GPUN for review, acceptance, and transmittal to the permanent records file. Purchased equipment records shall be retained by the supplier until the equipment is released for shipment at which time the records required by procurement documents are to be submitted to GPUN.

When required by the procurement documents, suppliers shall establish procedures for the identification, generation, collection, storage, maintenance, retrieival and/or transmittal of records. Implementation of these procedures shall be assured by performance of source surveillance, source inspection, monitoring and audits performed by QAD.

Records to be submitted with the shipment or retained by the supplier will be specifically identified in procurement documents. If records are to be retained by the external organization for GPUN, then the storage condition and retention period shall be specified in the procurement document(s). These records will be reviewed by QAD and/or Engineering to provide the required degree of confidence in the adequacy of compliance of the supplier with the requirements of this section.

4.0 DESIGN CONTROL

4.1 General

Measures shall be established and documented to assure that the applicable specified design requirements, such as design bases, regulatory requirements, codes and standards are correctly translated into specifications, drawings, procedures or instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included or referenced in design documents for design of systems and structures.

4.2 Requirements

Design control measures require that:

4.2.1 The organizational structure be defined, and authority and responsibility of personnel involved in preparing, reviewing, approving and verifying design documents be delineated.

4.2.2 The design bases, safety analysis, regulation., codes and standards and Plant Technical Specifications including all effective amendments will be utilized in, reviewed for revision, and revised, as necessary, during the design process.

4.2.3 The materials, parts and processes selected by design are reviewed to assure that they are suitable for the inte.ded application, including compatibility of materials, accessibility for inservice inspection, maintenance and repair, ALARA considerations, personnel safety, fire hazards analysis, and quality standards. The review will also evaluate suitability with regard to human factors which may affect safe operation and the suitability of commercial grade materials, parts and equipment to the application.

4.2.4 Internal and external design interface controls, procedures, and lines of communication among participating design organizations and across technical disciplines are established and described for the preparation, review, approval, release, distribution, and revision of documents involving design interfaces.

4.2.5 E rors and deficiencies in approved design documents, including design me hods (such as computer codes) that co'ld adversel affect items and act ivities within the scope of this plan shall be doc ented, and acti n shall be taken to assure that these errors or deficiencies are corre ted. In addition, any errors or deficiencies resulting from the applic tion or use of the design documents shall be identified and correct d.

4.2.6 Deviations in specified quality standards shall be identified and procedures shall be established to assure their resolution and control.

4.2.7 Review of commercial grade items for suitability of use in structures, systems or components within the scope of this Plan shall be conducted prior to such use.

4.2.8 Design verification methods (design review, alternate calculations or qualification testing) shall be established and completed prior to turnover for operation.

4.2.9 Design verification procedures shall be established which assure the following:

a. The verifier is qualified and is not directly responsible for the design.

b. Verification, including approved field changes, shall be complete prior to turnover of the component or system to Operations.

c. The responsibilities of the verifier, the areas and features to be verified, and the extent of documention of the verification shall be specified.

4.2.10 When verifications are to be accomplished solely by test:

a. Prototype, component or feature testing shall be performed prior to installatio. of the equipment, or prior to the point when the installation would become irreversible.

b. Verification by test shall be performed under conditions that simulate the most adverse design conditions as determined by analysis.

4.2.11 Procedures shall be established to assure that computer codes, and changes thereto, are verified, certified and controlled to prevent unauthorized changes.

4.2.12 Changes to approved engineering documents, including field changes, will be subject to design control measures. Design changes shall be reviewed and approved by the organization responsible for the original design or by another organization with comparable expertise designated to review and approve changes.

4.2.13 Design documents subject to procedural control include, but are not limited to, specifications, calculations, computer programs, design descriptions, and drawings, including flow diagrams, piping and instrument diagrams, system diagrams, facility drawings showing equipment locations and site arrangements.

4.2.14 Measures, which include procedure changes, shall be provided to assure that responsible plant personnel are made aware of design changes and/or modifications, which may affect the performance of their duties.

4.3 Responsibilities

4.3.1 Director-TMI Unit 1, and Oyster Creek

The Directors-TMI Unit 1, and Oyster Creek are each responsible through their respective Plant Engineering Directors for the implementation of design control measures in accordance with approved Technical Functions procedures.

4.3.2 Director-Technical Functions

The Director-Technical Functions is responsible for the development and implementation of the design control measures utilized by Technical Functions and Plant Engineering departments.

4.3.2.1 The Director-Technical Functions is responsible through the Director-Engineering Projects and the Director Engineering and Design for coordination and direction of plant modification projects which are outside of the scope of Plant Engineering. To fulfill these responsibilities, the Director-Engineering Projects and/or the Director-Engineering and Design will:

a. Control and coordinate the activities of all contractors with design responsibility.

b. Coordinate the efforts of the System Engineering Department as may be needed to support design related projects.

c. Provide for the review and approval, as appropriate, of baseline design documents such as selected design criteria, flow diagrams, system descriptions, arrangement drawings, one-line diagrams and logic diagrams.

d. Ensure Quality Assurance review of applicable design criteria documents and specifications, and changes thereto.

4.3.2.2 The Director-Technical Functions, through the Director - Systems Engineering, is responsible for:

a. Providing conceptual and analytical engineering service to other engineering groups as required.

b. Providing technical administration of nuclear fuel-related engineering activities.

c. Providing direct technical support to the Plant operating staff by providing Shift Technical Advisors.

4.3.2.3 The Director-Technical Functions is responsible, through the Engineering Services Director, for providing detailed design and drafting services and for the preparation and maintenance of the Quality Classification List (QCL).

4.3.2.4 The Director-Technical Functions is responsible through the Director-Engineering and Design for providing centralized technical capabilities in conventional engineering disciplines as required to produce engineering documents for plant modifications and for the technical performance of components and systems within the nuclear plants.

4.3.3 Director-Nuclear Assurance

The Director-Nuclear Assurance is responsible through the Director-Quality Assurance for providing Quality Assurance review of design and engineering documents to assure that appropriate quality requirements have been included. In addition, Quality Assurance will perform planned and periodic audits of responsible design organizations to verify the effective implementation of design control measures and the technical adequacy of engineering results produced.

5.0 PROCUREMENT AND MATERIAL CONTROL

5.1 Control of Procurement

5.1.1 General

5.1.1.1 Procurement of items, materials, parts, consumables, equipment, and services which are within the scope of this plan shall be performed in accordance with approved documents which shall establish methods for preparation, review, approval, and control of procurement documents. These methods shall ensure that technical, quality and regulatory requirements and regulatory commitments applicable to the procurement are met as a minimum. These methods shall ensure that procurement sources are evaluated and confirm that the activities of consultants, vendors and contractors, and purchased items conform to procurement document requirements. The programs of all participants shall be in accordance and/or compatible with the applicable requirements of this GPUN Operational Quality Assurance Plan.

5.1.1.2 The general and specific requirements for the Quality Assurance Program of all suppliers including their subsuppliers supplying items materials parts, consumables, equipment or services, or within the scope of this plan shall be prescribed by procurement documents. These quality program requirements shall be consistent with Section 2.3 of this Plan.

5.1.1.3 Quality Assurance Plan measures shall be applied with a graded approach to the procurement of new and spare parts, replacement parts, commercial grade items and consumables. Procurement of spare or replacement parts for structures, systems and components shall be subject to current QA program controls and to codes, standards, technical and quality requirements equal to, or better than, original, as may have been superseded or upgraded by regulatory requirements or commitments. As a minimum, when documented quality and technical requirements are not available, then the procurement of spare parts, replacement parts, and consumables within the scope of this Plan shall be in accordance with an approved specification or the use justified by a documented engineering determination. The use of commercial grade items in nuclear safety-related applications shall be controlled as specified by Section 5.1.2.4 of this Plan.

5.1.2 Requirements

5.1.2.1 Procurement Documents

The requirements for the preparation, review, approval and control of procurement documents shall be prescribed in detailed procedures. These procedures shall prescribe requirements to ensure that procurement documents:

a. Specify the technical and quality assurance requirements commensurate with regulatory requirements and commitments and this Plan.

b. Require applicable quality assurance requirements to be imposed on subvendors and subcontractors.

c. Specify or reference design basis technical requirements, including applicable regulatory requirements and commitments, material and component identification requirements, drawings, specifications, codes and standards, test, calibration, and inspection requirements, handling, storage and shipping requirements, and special process instructions.

d. Identify the documentation to be prepared, maintained, and submitted for review, approval and record information as applicable.

e. Include an identification of those items and activities within the scope of this plan.

f. Identify those records which vendors or contractors shall retain, maintain, and control; and those which vendors or contractors shall deliver prior to use or installation of the item.

g. Include right of access to vendors or contractors and subtier vendor and contractor facilities and records for source inspection and/or audit.

h. For spare or replacement parts, contain technical requirements at least equivalent to those used for the original procurement.

i. Include the provision that suppliers shall refrain from implementing procedures which require owner approval prior to obtaining such approval.

j. Require design organizations performing design activities for GPUN to have and implement quality programs which include design control provisions equivalent to those provided in this plan.

k. Identify the programs, procedures, activities or conditions that require GPUN approval and/or release.

Measures shall be established for the review, approval, and release of procurement documents and subsequent revisions. The reviews shall assure the inclusion of the applicable technical, quality, regulatory, and administrative requirements in procurement documents prior to their use. Review of procurement documents shall be documented to provide objective evidence of their approval prior to release.

5.1.2.2 Qualification and Selection of External Organizations

Evaluations of prospective suppliers shall be conducted and documented to demonstrate qualifications based upon one or more of the following criteria:

a. Review of performance histories which provide records of supplier previous capability to provide similar products or services.

b. Review of the external organization's capability to comply with the GPUN Quality Assurance Program, as applicable to the items or services to be supplied.

c. A pre-award survey of the external organization's facilities and Quality Assurance program to determine his capability to meet the technical and quality requirements of the procurement document(s).

Procedures shall be established to prescribe the evaluation and selection of external organizations. Contracts or purchase orders for items, materials, parts, consumables, equipment or services within the scope of this plan shall be awarded either to:

d. External organizations whose Quality Assurance Program has been reviewed and accepted by GPUN Quality Assurance Department as being commensurate with the equipment or services to be provided, or

e The external organization will be required, by procurement documents, to work under the direct control of the GPUN Quality Assurance Program. In these instances, the supplier will not be required to have a separate quality assurance program.

When GPUN's acceptance of an external organization's quality assurance program is required, it shall be reviewed for concurrence by GPUN prior to initiation of the activity affected by their program.

In the case of "commercial grade items" the procurement process shall be controlled so that the dedication process described in 5.1.2.1 shall be met.

5.1.2.3 Manufacturing Assurance

Measures shall be established to provide control of manufacturing activities of suppliers. These methods shall be described in detailed written procedures.

The attributes of the manufacturing assurance program shall include:

a. Provisions for the review for concurrence of the supplier's drawings, Quality Assurance manual, manufacturing and quality procedures prior to fabrication. When specified in approved procurement documents suppliers may not implement procedures until written notice of GPUN acceptance is received.

b. Established supplier inspection plans that delineate, as required, the hold and/or witness points in the manufacturing process for specified review, inspection, verification and test.

c. Methods for identifying and reporting nonconformances and resolving of nonconformances where the supplier's suggested disposition is "Use-as-is" or "Repair". Such methods shall require the approval of the supplier disposition of nonconformances by the responsible engineer and approval of the responsible Quality Assurance organization. GPUN Quality Assurance shall also verify that repairs are accomplished in accordance with the approved disposition.

d. Notification of site QC Receipt Inspection of outstanding nonconformances and/or incomplete pre-shipment inspection prior to item shipment from the supplier.

e. Planned and systematic audit, source inspection and/ or source surveillance of supplier activities or products. Scope of coverage and frequency shall be determined by the criticality of the furnished items or services and the evaluated results of supplier qualifications, including pre-award surveys and QA document reviews. Revisions to source verification plans shall be made as warranted by supplier performance. Typically, audits will be conducted on suppliers of services; and, source inspection, source surveillances, and/or receipt inspection will be conducted on suppliers of hardware.

f. Control of supplier document package including review for completeness and acceptability. Inadequate records which render the quality status of item(s) furnished indeterminate shall be sufficient cause for rejection of this item(s).

g. Assessments of supplier control of quality shall be made at a frequency and depth commensurate with the importance, complexity and quantity of the items furnished. These assessments shall utilize the qualitative and quantitative information provided by supplier noncompliance documents; surveillance, inspection and audit reports; and receiving inspection and test records.

h. Material acceptance procedures that assure:

1. The material, component, or equipment is clearly identified and that the identification and quantity correspond to the information on the shipping documents and quality records.

2. The item's handling and shipping requirements have been met by the supplier and maintained by the carrier.

3. The item's record package or compliance certificate is complete and adequate.

4. The material, component or equipment meets the tec al requirements specified in the procurement documents, inspection plans, checklists or other special engineering document..

5. Items delivered which are not in compliance with requirements are documented in accordance with the nonconformance procedure, tagged (As item configuration or storage conditions permit. Additional administrative controls shall be used if tagging is not possible.), segregated (if possible), and prevented from being inadvertently issued for installation or use.

6. Items accepted and released are identified as to their inspection status prior to forwarding them to a controlled storage area or releasing them for installation or further work.

5.1.2.4 Commercial Grade Dedication for NSR Applications

The process of acceptance of commercial grade items intended for use in nuclear safety related applications shall be controlled and implemented through an approved procedure(s) which includes the following:

a. An engineering evaluation to determine if the commercial grade item performs a safety function or if its failure could compromise a safety functions.

b. A determination that the definition of commercial grade item as provided in 10CFR21 is met.

c. A determination of the critical characteristics which are essential for the performance of its safety function.

d. The definition of functional tests and/or inspections, including acceptance limits, to be performed to verify critical characteristics.

e. Verification that critical characteristics have been met by one of the following:

1. Performance of functional tests and/or inspections after receipt by GPUN;

2. Witnessing of functional test and/or inspections at the supplier's facility.

3. Assuring through audit or surveillance that the supplier has a quality program which adequately controls the critical characteristics; performs tests and/or inspections which verify that critical characteristics have been met;

4. Establishing the commercial grade part performance history concurrent with performing one of e(1), e(2) or e(3) above; or,

5. Any combination of e(1) through e(4) above.

This dedication process shall result in the documented basis for the appropriateness of the use of the commercial grade item(s) in the specific nuclear safety related application(s).

5.1.3 Responsibilities

5.1.3.1 Director-Administration & Finance

The Director-Administration & Finance is responsible through the Director Materials Management for the:

a. Administration and operation of contracting, procurement and warehousing activities of GPUN.

b. Assurance that the technical and quality requirements, as established by requisitioners, are incorporated into contract/procurement documents without revision.

c. Assurance that bids are evaluated for conformance to technical and quality requirements by the requisitioners.

d. Assurance that the contractual, legal and commercial requirements are incorporated into the procurement documents in a manner which will enforce the technical and quality requirements.

e. Assurance that documents and records, as required by procurement documents, are submitted in a timely manner and that they are complete and legible.

f. Assurance that purchase orders and contracts for items and services within the scope of this Plan are issued to external organizations listed on the Suppliers Quality Classification List.

5.1.3.2 Director-Nuclear Assurance

The Director-Nuclear Assurance is responsible through the Director-Quality Assurance to:

a. Assure that QAD procedures for the control of purchased equipment, material and services are established, approved, implemented and effective.

b. Review for concurrence GPUN procedures necessary for the control of purchased equipment, material, and services that are within the scope of this Plan.

c. Review supplier Quality Assurance Programs for concurrence to the extent required by the procurement documents.

d. Review for concurrence supplier record packages as required by applicable procedures or procurement documents.

e. Establish and implement an adequate program of source inspection, source surveillance and receipt inspection to assure that items, parts, materials and consumables within the scope of this Plan comply with contract requirements.

f. Review procurement documents to assure that quality requirements are correctly stated, inspectable and controllable; that there are adequate acceptance/rejection criteria; that source verification or receipt inspection is specified; that minimum documentation to be supplied is specified; and that the procurement documents have been processed in accordance with established requirements. This review may include sampling review of previously approved procurement documents or in-line reviews of selected purchase requisitions or orders prior to placement.

g. Establish and maintain a Supplier Quality Classification List (SQCL) which documents the results of the evaluations of prospective suppliers.

5.2 Identification and Control of Materials, Parts and Components

5.2.1 General

Measures shall be established to provide for the identification and control of items, parts, materials, and consummables within the scope of this plan. These measures shall assure that incorrect or nonconforming items are identified and controlled in order to prevent their

inadvertent installation or use. Where required by design documents, the system established shall provide traceability of components from the receipt of material through fabrication, installation and testing. Verification shall include review of objective evidence of inspections and tests which demonstrate that product identification and control is maintained at various stages of manufacture, installation, or erection. Identification requirements shall be specified in the applicable design and procurement documents.

5.2.2 Requirements

5.2.2.1 Identification and traceability requirements shall be included in specifications and drawings.

5.2.2.2 Material, parts, and components, including partially fabricated subassemblies or subdivided materials shall be identified to preclude the use of incorrect or defective items.

5.2.2.3 Items, materials, parts, consumables, and equipment within the scope of this Plan shall be identified so that they can be traced to appropriate documentation, which provides objective evidence of the technical and quality requirements met; such documents include but are not limited to:

a. Specifications

b. Drawings (including as-builts)

c. Procurement Documents

d. Physical and Chemical Test Reports

e. Nonconformance Reports

f. Inspection Reports and Checklists

g. Storage Maintenance Instructions

h. Nondestructive Examination Reports

i. Vendor Certificates of Compliance

The identification and/or end use of items, materials, parts, consumables, and equipment shall be specified in procurement documents and work authorizing documents to provide this traceability.

Traceability to heat and/or lot number shall be provided when required by code(s). Traceability is provided for parts of items within the scope of this plan. However, if the parts do not provide or contribute to the performance of a nuclear safety function, traceability will not be provided for those parts unless required by code(s) or regulation(s).

5.2.2.4 The location and method of identification shall be specified so as not to affect the form, fit, function or quality of the item being identified.

5.2.2.5 Correct identification of materials, parts and components shall be verified prior to release for fabrication, shipping, installation, and testing.

5.2.2.6 Where physical identification is either impractical or insufficient, physical separation, procedural control, or other approved means may be employed.

5.2.2.7 A receipt inspection, when specified by procurement documents, shall be performed at the site to verify that identification for received items is complete and accompanied by specified documentation. In the case of commercial grade items, receipt inspections shall be conducted consistent with 5.1.2.4 of this plan.

5.2.3 Responsibilities

5.2.3.1 Responsible Department Manager

Each Department Manager is responsible for ensuring that procurement documents contain appropriate requirements for the identification and control of materials, parts, or components and that only materials, parts or components which have been accepted by QAD are used.

5.2.3.2 Director-Nuclear Assurance

The Director-Nuclear Assurance is responsible through the Director-Quality Assurance for:

a. Review of procedures for maintaining identification in accordance with the requirements of this section.

b. Verification of identification during receipt inspection.

c. Monitoring and conducting inspections, surveillances and audits to verify conformance to the requirement of this section.

5.2.3.3 Director-Administration & Finance

The Director-Administration & Finance is responsible through the Director Materials Management for assuring that correct identification of materials, parts, and components are verified prior to release for fabrication, shipping, installation and testing.

6.0 CONTROL OF STATION ACTIVITIES

6.1 General

This section provides general requirements which are applicable to the operational, support, and assurance activities which are directly related to the safe operation, maintenance and modification of the nuclear station.

6.2 Control of Inspections

6.2.1 Requirements

6.2.1.1 A program for performance of inspections of activities within the scope of this plan shall be established and executed by, or for, the organization performing the activity to verify conformance to the documented instructions, procedures, specifications and drawings for accomplishing the activity. Design specifications, drawings, procedures, or instructions shall include the necessary requirements for performance of inspections. These requirements include acceptance criteria and reference to codes, standards, and regulatory requirements and commitments. These requirements shall be further translated into procedures, instructions, or checklists which shall contain, as required, the following:

a. Identification of characteristics and activities to be inspected.

b. Methods to be used including necessary measuring and test equipment and the accuracy requirements.

c. Identification of organization responsible for performing the inspection.

d. Acceptance and rejection criteria.

e. Identification of required procedures, drawings and specifications, including the applicable revisions.

f. Documentation of inspection results including identification of the individual performing the inspection.

6.2.1.2 Inspectors (including NDE personnel) shall be qualified in accordance with applicable codes, standards and GPUN or GPUN accepted qualification programs and their qualification and certification shall be kept current and documented.

6.2.1.3 Individuals performing inspections and/or examinations shall be other than those who perform or directly supervise the activity being inspected and shall not report directly to the immediate supervisors who are responsible for the work activity being inspected. If the individuals performing the inspections and/or examinations are not part of the responsible Quality Assurance organization, the procedures and personnel qualification criteria shall be reviewed and concurred with by the responsible Quality Assurance organization prior to the initiation of the activity. Inspections may be conducted by second line supervisory personnel or by other qualified personnel not assigned first line supervisory responsibility for the conduct of work. These activities, i.e., those performed by individuals not assigned first line supervisory responsibility, are not intended to dilute or replace the clear responsibility of first line supervisors for the quality of work performed under their supervision. When inspections and/or examinations associated with normal operations of the plant (such as routine maintenance, surveillance and tests) are performed by individuals other than those who performed or directly supervised the work, but are within the same group (reporting to different supervisors), the following controls shall be met:

a. The quality of the work will be demonstrated through a functional test when the activity involves breaching a pressure retaining item.

b. The qualification criteria for the personnel are reviewed and found acceptable by the Quality Assurance organization prior to initiating the inspection.

Inspections of maintenance activities may be conducted by individuals who directly report to a supervisor immediately responsible for the maintenance being inspected. However in such cases the following shall be met:

a. The qualification of individuals shall be reviewed for concurrence by Quality Assurance.

b. Deficiencies identified shall be handled consistent with the requirements of Section 8.0 of this plan.

c. Independent inspections and/or monitoring of such cases of maintenance and inspection shall be conducted by Quality Assurance. The frequency and scope of such independent verifications shall be based on the observed quality of the inspections.

6.2.1.4 The Quality Assurance Department shall establish documented methods to review work activities prior to implementation to determine the need for inspection and the specification of the requisite hold and/or witness points.

6.2.1.5 When QA Hold Points have been established, either contractually, by procurement, or internally by plant procedures, work may not proceed beyond the Hold Point until either inspection is performed or waived by the responsible Quality Assurance organization.

6.2.1.6 Inspections of modifications, repairs, and replacements shall be by the same method and to the same criteria as the original or by an approved, documented, engineering and QA alternate. Where verification of inspection is being performed on previously accepted lots, sampling inspection shall be representative and only to the extent necessary to assure adequacy of control. The sampling plan shall be determined by Quality Assurance. Inspection personnel shall be provided with suitable equipment and tools, which are calibrated as necessary, and controlled to assure that accuracy requirements are satisfied and that inspections are complete.

6.2.1.7 Inspection data and results shall be evaluated by designated personnel to assure that the objectives have been met and that items requiring action or follow-up are identified and documented.

6.2.1.8 Records shall be kept in sufficient detail to provide adequate confirmation of an inspection program.

6.2.2 Responsibilities

6.2.2.1 Director-Technical Functions

The Director-Technical Functions is responsible for ensuring that requirements for inspections are included in design specifications, drawings, procedures and instructions and that these requirements include acceptance criteria and, as applicable, references to codes, standards and regulatory requirements and commitments.

6.2.2.2 Director-Nuclear Assurance

The Director-Nuclear Assurance, through the Director-Quality Assurance, is responsible for:

a. Assuring that inspectors are qualified in accordance with applicable codes, standards, regulatory requirements and commitments, and GPUN or GPUN accepted qualification programs.

b. Reviewing maintenance and installation documents for inclusion of inspection and test requirements and QA hold and/or witness points.

c. Reviewing and concurring with the personnel qualification criteria of individuals performing inspections, including those who are not part of the QA organization.

d. Identification of inspection plans to be used for verification of inspections on previously accepted lots.

6.2.2.3 Responsible Department Manager

Each responsible Department Manager performing work requiring inspections is responsible for:

a. Notifying the QA Department of the work being performed.

b. Ensuring that maintenance and installation documents within the scope of this plan are transmitted to QA to provide for the inclusion of hold and/or witness points prior to approving such documents for use.

c. Assuring that established QA Hold Points are not bypassed without prior QA authorization.

d. Assuring that all information, records or copies of records associated with their work are made available to QA personnel.

Each responsible Department Manager performing inspections is responsible for:

e. Assuring that the personnel performing inspections are qualified in accordance with applicable codes, standards, regulatory requirements and commitments, and GPUN or GPUN accepted qualification program(s).

f. Assuring that the results of all inspections are properly documented and the results are evaluated by designated personnel.

6.3 QA Monitoring

6.3.1 Requirements

6.3.1.1 A program for QA Monitoring of activities affecting items or processes within the scope of this plan shall be established and executed by the QA Department.

6.3.1.2 Monitoring is used to establish adequate confidence levels that activities within the scope of this plan are being performed in accordance with the QA Program requirements and plant administrative controls. Monitoring will be performed on a graded approach and the degree of monitoring performed shall be based typically upon the status and safety importance of activities, extent of previous experience, thoroughness of overall coverage, uniqueness of testing or operating activities and trending data.

6.3.1.3 Monitors shall be qualified in accordance with a documented QA Department procedure that ensures that Monitors are knowledgeable in the activities they are monitoring to the extent that they can readily verify compliance of the activity being performed.

6.3.1.4 Monitoring reports shall contain as a minimum the following:

a. Identification of activity being monitored including specific reference to the program or procedural requirements governing the activity.

b. Indication of compliance.

c. Identification of Monitor

d. Appropriate distribution to supervisory or managerial personnel that have responsibility for the performance of the activity.

e. Identification of each nonconformance document when such nonconformances exist and are identified as a result of the monitoring.

6.3.1.5 Records shall be kept in sufficient detail to provide adequate documentation of a monitoring program

6.3.2 Responsibilities

6.3.2.1 Director-Nuclear Assurance

The Director-Nuclear Assurance through the Director-Quality Assurance, is responsible for:

a. Establishing the requirements for QA monitoring of activities and practices affecting items or processes within the scope of this plan.

b. Assuring that QA Monitors are adequately trained and are qualified to perform their duties.

c. Assuring that adequate awareness of plant status is maintained by site QA Management through discussions with plant personnel, attendence at status meetings, etc., to permit the definition of appropriate real-time monitoring activities.

d. Assuring that reports of the monitoring activities have sufficient details and provide adequate confirmation of the monitoring program.

6.4 Control of Special Processes

6.4.1 Requirements

6.4.1.1 Special processes are those processes that require interim in-process controls in addition to final inspection to assure quality. Such processes include, but are not limited to, welding, heat treating, chemical cleaning, nondestructive examination, plant chemistry control, and the processing and preparation for shipment of radioactive wastes.

6.4.1.2 Measures shall be established and documented to assure that special processes are accomplished under controlled conditions in accordance with applicable codes, standards, applications criteria, regulatory requirements and commitments and other special requirements including the use of qualified personnel and procedures.

6.4.1.3 Procedures for special processes shall be established to meet the requirements of applicable codes, standards, and regulatory requirements and commitments or to meet the requirements of special process specifications which may be produced by or for GPUN. These procedures shall provide for recording evidence of acceptable completion of special processes. Procedures and instructions for the control of special processes shall be reviewed and approved by qualified personnel. Procedures, equipment, and personnel performing special processes shall be qualified in accordance with applicable codes, standards, and specifications. Organizational responsibilities shall be delineated for the qualification of special processes, equipment and personnel. Qualification records of personnel, equipment, and procedures associated with special processes shall be established, prepared and kept current. For special processes not covered by the existing codes or standards, or when item quality requirements exceed the requirements of established codes or standards, the necessary qualifications of personnel, procedures and equipment shall be defined in the procedure.

6.4.2 Responsibilities

6.4.2.1 Responsible Department Manager

Each responsible Department Director/Manager performing special processes is responsible for:

a. Assuring that the established program requirements for controlling and accomplishing special processes are implemented.

b. Assuring that the procedures, including changes, are reviewed, approved and qualified prior to use.

c. Assuring that personnel and equipment used in the performance of special processes are qualified and the records of qualification are maintained.

6.5 Test Control

6.5.1 Requirements

6.5.1.1 A documented test program shall be established to assure that all testing required to demonstrate that the structures, systems and components within the scope of this plan will perform satisfactorily in service. The tests shall be performed in accordance with written, approved, and controlled test procedures or instructions which incorporate or reference the requirements and acceptance standards contained in the applicable design documents. The extent of testing shall be based on the complexity of the modification, replacement, or repair. Testing, including proof tests prior to installation, hydro testing, Inservice Testing (IST) and preoperational tests, necessary to demonstrate that the installed or modified structures, systems and components will perform satisfactorily in service, shall be accomplished in accordance with written approved procedures or instructions. These procedures shall be consistent with or incorporate the technical and quality requirements and acceptance limits specified by applicable design and procurement documents. These test procedures or instructions shall provide for the following as required:

a. A description of the test objective.

b. Instructions for performing the test, including caution or safety notes in sufficient detail to avoid operator interpretation.

c. Test prerequisites such as calibrated instrumentation, adequate test equipment and instrumentation including accuracy requirements, completeness of item to be tested, suitable and controlled environmental conditions, and personnel to be provided to conduct testing under the direction of a qualified test supervisor or test engineer.

d. Provisions for data collection and storage.

e. Acceptance and rejection criteria as specified in design and procurement documents.

f. Methods of documenting or recording test data and results, in sufficient detail to prevent misinterpretation.

g. Mandatory hold or witness points for inspection by GPUN Quality Assurance and/or other designated personnel.

h. Provisions for control of jumpers, lifted leads and jurisdictional or safety tags.

i. Provisions for returning a system to normal configuration upon completion of the test, including verification.

j. Provisions for assuring test prerequisites have been met.

6.5.1.2 Test results shall be documented, evaluated, and their acceptability determined by a responsible individual or group.

6.5.1.3 The test program shall cover all required tests including:

a. Preoperational tests of components or systems to demonstrate that performance is in accordance with the design intent.

b. Tests during initial operation to demonstrate system performance (that could not be tested prior to operation) to confirm compliance to design criteria.

c. Tests during the operational phase to provide assurance that failures or substandard performance do not remain undetected and that the required reliability of systems within the scope of this plan is maintained.

d. Tests during activities associated with plant maintenance during the operational phase and to demonstrate satisfactory performance following plant maintenance or procedural changes.

6.5.1.4 Tests performed following plant repairs or replacements shall be conducted in accordance with the original design and testing requirements or approved, documented alternatives. Testing shall be sufficient to confirm that the changes reasonably produce expected results and that the change does not reduce safety of operations.

6.5.2 Responsibilities

6.5.2.1 Directors TMI Unit 1, and Oyster Creek

The Director of the nuclear generating stations are each responsible for assuring that testing performed at their assigned station is performed in accordance with the requirements of this Plan including, as a minimum, the following:

a. Assuring that testing is performed in accordance with written, approved and controlled procedures or instructions.

b. Prescribing, performing and/or ensuring the performance of post-maintenance testing for the work performed by TMI Unit 1 or Oyster Creek.

c. Ensuring that all post-maintenance testing performed by TMI Unit 1 or Oyster Creek is documented and the results accepted prior to operation.

d. Assuring that operations personnel have the required special training and skills.

e. Assuring that the test results are documented and are evaluated for acceptability by a responsible individual or group.

f. Assuring that identified discrepancies are addressed, resolved and reported as required by the Operating License and Technical Specifications of the Unit.

6.5.2.2 Director-Technical Functions

The Director-Technical Functions, through the Director-Startup and Test is responsible to perform a startup and test function to assure new or substantially modified plants, facilities and systems are tested. These responsibilities shall include:

a. Preparing test plans and implementing procedures.

b. Directing testing and assuring test engineers have the required special training and skills.

c. Ensuring that test documentation is completed, as required, and reviewed prior to turnover to Operations.

d. Coordinating technical assistance of testing.

6.5.2.3 Director-Site Services

The Director-Site Services, through the applicable station Site Services Director, is responsible for:

a. Ensuring supporting personnel have the required special training and skills.

b. Prescribing, performing and/or ensuring the performance of construction or post-maintenance testing requirements for the work managed and/or performed by Site Services.

c. Ensuring that all construction or post-maintenance testing including hydrotesting, for the work managed and/or performed by Site Services is documented and the results reviewed and accepted prior to turnover.

6.6 Control of Measuring and Test Equipment (M&TE)

6.6.1 Requirements

6.6.1.1 Measures shall be established to control installed and portable equipment which are used to conduct measurements or tests related to determining the functionality or quality of structures, systems and components within the scope of this Plan. Such measuring and test equipment typically includes tools, gauges, meters and other devices. Such measurements and tests include as a minimum those associated with the activities of operation, maintenance, modification, chemistry, radiological and environmental controls, nondestructive examination and inspection. Such measures shall ensure that measuring and test equipment are properly identified and calibrated or adjusted at specified periods to maintain accuracy within specified limits. Measures shall also be established to ensure that range, type, accuracy and use of the equipment conforms to specified requirements.

6.6.1.2 Requirements for each control program shall include inspection and verification of accuracy upon receipt of equipment, identification of all gauges and instruments, calibration and scheduled recall for calibration and traceability to an accepted Standard. These activities shall be subject to QAD monitoring and auditing. Procedures shall be established to implement the following requirements:

a. Establish the calibration technique and frequency requirements, maintenance requirements, and controls for all M&TE which are used in the measurement, inspection, and monitoring of components, systems, and structures within the scope of this Plan (e.g. instruments, tools, gauges, fixtures, reference and transfer standards, and nondestructive examination equipment).

b. The identification of M&TE traceable to the calibration test data.

c. M&TE requiring calibration shall be identified and controlled in accordance with written, approved procedures to assure that approved calibration intervals are not exceeded. M&TE shall be clearly labelled to indicate the date on which the current calibration expires. M&TE that has exceeded the approved calibration interval shall not be used for measurements or tests until its calibration has been re-established.

d. Establish calibration frequency for M&TE based on required accuracy, purpose, degree of usage, stability characteristics, and/or any other condition which may affect the measurement. A calibration recall system shall be implemented to assure recalibration within the required period for each piece of M&TE covered under the scope of this program.

e. Establish methods for determining the validity of previous inspections performed when the M&TE is found to be out of calibration. Inspections or tests are repeated on items determined to be suspect. Such determination is to be documented in suitable form. If any calibration, testing or measuring device is consistently found to be out of calibration, it shall be repaired or replaced.

f. M&TE used to calibrate instruments and gages (e.g. flowmeters, transmitters, sensors, pressure gauges, level indicators, etc.) shall have been calibrated against working standards with accuracies at least four times greater than that of the equipment being calibrated. The instrument or gage calibration accuracy in reference to the M&TE shall be at least 1:1.

In cases where the instrument or gage is calibrated directly against working standards, the working standard shall have an accuracy of at least 1:1 and the secondary standards used to calibrate the working standards shall have an accuracy of four times greater than that of the working standards.

When the above requirements cannot be met, the standards used to calibrate the M&TE shall have a precision and repeatability that assures that the equipment being calibrated will be within the required tolerance. The basis of acceptance will be documented and authorized by the supervisor of the calibrating organization.

Some M&TE because of their construction (such as mechanical dial indicators) or because they are not adjustable (such as rulers) need not be periodically calibrated. However, their physical condition and where applicable the accuracy shall be routinely checked prior to use.

g. The calibration status of M&TE which is used for determining the functionality or quality of structures, systems and components within the scope of this Plan shall be maintained.

h. Utilization of reference and transfer standards traceable to nationally recognized standards. Where national standards do not exist, provisions shall be established to document the basis for the calibration.

i. NDE equipment shall be controlled and calibrated in accordance with the industry code governing its use.

6.6.2 Responsibilities

6.6.2.1 Responsible Department Manager

Each Department Manager utilizing M&TE in activities affecting the function or quality of structures, systems, components and activities within the scope of this plan shall assure that such M&TE is controlled in accordance with an approved calibration control program which conforms to the requirements of this Plan.

6.7 Handling, Storage and Shipping

6.7.1 Requirements

6.7.1.1 Measures shall be established and documented to control handling, storage, and shipping, including cleaning, packaging, and preservation of items within the scope of this plan in accordance with established instructions, procedures, and drawings to prevent damage, deterioration or loss. The requirements for handling, storage, packaging and shipping of radioactive wastes are contained in Section 7.0 of this Plan.

6.7.1.2 Procedures shall be established to control the cleaning, handling, storage, packaging, and shipping of materials, components, systems in accordance with design and procurement requirements to preclude damage loss or deterioration by environmental conditions such as temperature or humidity. These procedures shall be implemented by suitably trained individuals. The procedures shall include but not be limited to, the following:

a. Packaging and preservation procedures to provide assurance of adequate protection against corrosion, contamination, physical damage or any effect which would lower the quality of the items or cause deterioration during shipping, handling or storage. Special protective environments, special coverings, inert gas atmospheres, moisture contents, and temperature controls shall be specified as required and their existence verified and documented.

b. Cleaning methods to provide assurance that necessary cleaning operations are carried out prior to packaging, storage or installation. The level of cleanliness required, and verification and documentation requirements shall be specified in the procedures.

c. Detailed handling methods for all items that require special handling. Special handling tools and equipment shall be provided and controlled to ensure safe and adequate handling. These tools and equipment shall be maintained, inspected and tested in accordance with written procedures at established intervals to ensure their reliability and availability for use.

d. Storage practices to provide for methods of storage and the control of items in storage which will minimize the possibility of damage or deterioration during storage. Periodic inspections of storage areas shall be performed and documented to verify compliance with storage procedures. Release of items for installation shall also be procedurally controlled.

e. Provisions to assure that proper marking and labeling of items and containers is accomplished to provide identification and necessary instructions during packaging, shipment and storage.

f. Provisions for documenting and reporting nonconformance to handling, and shipping requirements.

g. Provisions for the storage of chemicals, reagents, lubricants and other consumable materials which will be used in conjunction with systems which are within the scope of this plan.

h. Provisions for "Limited Life" requirements (including "Shelf Life" and "Service Life" for applicable materials).

6.7.2 Responsibilities

6.7.2.1 Responsible Department Managers

Each responsible Department Director/Manager is responsible for identifying in procedures, drawings, specifications or procurement documents those handling, storage and shipping requirements necessary to assure compliance with the requirements of this Plan.

6.7.2.2 Director-Administration and Finance

The Director-Administration and Finance, through the Director-Materials Management, is responsible for:

a. Providing the procedures for the receiving and storage of materials, parts and components.

b. Assuring that the personnel responsible for the handling and storage of materials, parts and components are adequately trained in the performance of their duties and that they implement the procedures properly.

c. Providing adequate storage of items, materials, components, and parts within the scope of this plan.

6.7.2.3 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for assuring that the handling, cleaning and storage activities, under their direction, associated with the operation and maintenance of their assigned station are performed in accordance with the requirements of this Plan.

6.7.2.4 Director-Site Services

The Director-Site Services is responsible for assuring that the handling, cleaning and storage requirements of this Plan are incorporated in the procedures and are properly implemented on all maintenance and modification projects performed by Site Services at the generating stations.

6.8 Inspection, Test, and Operating Status

6.8.1 Requirements

6.8.1.1 Measures shall be established and documented to ensure that the required inspections and tests are performed and that the acceptability of items with regard to inspection and tests performed is known throughout manufacturing, installation, and operation. Status of items covered by the scope of this Plan shall be controlled in accordance with approved procedures. These procedures shall include the use of appropriate tags, markings, lists, logs, diagrams, electrical and mechanical jumpers, or other suitable means, to assure that required inspections and tests are satisfactorily completed to prevent inadvertent bypassing of required inspections and tests and to prevent inadvertent operation.

6.8.1.2 The requirements for an acceptable inspection, test and operating status program for structures, systems, and components throughout fabrication, installation, test and operation include:

a. Design and quality documents which address the requirements for the identification of inspection, test, and operating status of structures, systems and components.

b. Procedures which include controls for the application and removal of inspection and welding stamps, and other status indicators such as tags, jumpers, markings, labels, and stamps.

c. Procedures for controlling the bypassing or altering of the sequence of required inspections, tests or other critical operations are procedurally controlled with concurrence by the Quality Assurance organization. The procedures shall provide for the identification of items which have satisfactorily passed such inspections and tests, where necessary to preclude inadvertent bypassing of required inspection and tests.

d. In cases where documentary evidence is not available to confirm that an item has passed required inspections and tests, that item shall be considered nonconforming until such evidence becomes available. Affected systems shall also be considered to be inoperable and reliance shall not be placed on such systems to fulfill their intended safety functions.

e. Procedures requiring identification of the operating status of systems, components, controls, or support equipment in order to prevent inadvertent or unauthorized operation. These procedures shall require control measures such as locking or tagging to secure and identify equipment in a controlled status. Independent verification shall be required, where appropriate, to ensure that necessary measures, such as tagging equipment, have been implemented correctly.

f. Methods which ensure temporary modifications/variations shall be controlled by approved procedures which include a requirement for independent verification. A log shall be maintained of the current status of such temporary modifications/variations.

g. Methods which ensure that nonconforming services and inoperative or malfunctioning structures, systems, components or materials shall be identified in accordance with the requirements of this Plan.

6.8.2 Responsibilities

6.8.2.1 ectors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for assuring that the appropriate requirements for controlling the inspection, test and operating status, including independent verification, are incorporated in the procedures used on all fabrications, installation, test and operation activities performed at their respective stations.

6.9 Housekeeping and Cleanliness

6.9.1 Requirements

6.9.1.1 Good housekeeping practices shall be utilized at all times to maintain the facilities in a neat and clean condition and to assure the control of radioactive contamination areas and the control of work activities, conditions and environments that can affect the quality of parts of the nuclear plant within the scope of this plan.

6.9.1.2 Housekeeping encompasses all activities related to the control of cleanliness of facilities, materials and equipment; fire prevention and protection including disposal of combustible material and debris; control of access to areas, protection of equipment, radioactive contamination control; and, storage of solid radioactive waste.

6.9.1.3 Housekeeping practices shall assure that only proper materials, equipment, processes, and procedures are utilized and that the quality of the item is not degraded as a result of housekeeping practices or techniques. During maintenance activities, certain portions of safety-related systems or components may be subject to potential contamination with foreign materials. To prevent such contamination, control measures, including measures for access control, and tool accountability shall be established. Additionally, immediately prior to closure of system(s) or component(s), an inspection shall be conducted and documented to ensure cleanliness. Special housekeeping considerations shall be made for maintenance of radioactively contaminated systems and components.

6.9.2 Responsibilities

6.9.2.1 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for establishing and maintaining programs and practices for housekeeping and cleanliness control of all work activities performed by the plant site staff, support organizations and contractors in accordance with the requirements of the GPUN QA Program.

6.9.2.2 Director-Site Services

The Director-Site Services through the site Site Services Directors is responsible to implement housekeeping and cleanliness control plans, procedures, instructions or practices associated with all work activities performed by MCF personnel and contractors.

6.9.2.3 Director-Nuclear Assurance

The Director-Nuclear Assurance, through the Director-Quality Assurance is responsible for monitoring the housekeeping and cleanliness practices at the nuclear generating stations.

6.10 Equipment Control

6.10.1 Requirements

6.10.1.1 Authorization to remove plant installed operational equipment or systems from service, for maintenance or modification, shall be granted by the on-duty Shift Supervisor.

6.10.1.2 Procedures shall be provided for control of equipment, as necessary, to maintain personnel and reactor safety, to avoid unauthorized operation of equipment, and to assure that operational equipment is in a ready status. Work on equipment and systems, critical to the safe operation of the plant, shall not be performed while the plant is operating without specific advanced approval by the designated Operations management personnel in each instance. The procedures for controlling the removal from service and the return to service of equipment shall require:

a. Control measures such as locking or tagging to secure and identify equipment in a controlled status.

b. Independent verifications when necessary to ensure that measures, such as tagging equipment, have been implemented correctly.

c. Temporary modifications/variations, such as temporary bypass lines, blank flanges or similar mechanical inserts, electrical jumpers, lifted electrical leads and temporary trip point settings shall be controlled by approved procedures which shall include a requirement for independent verification by either a second person or by functional test which conclusively proves the proper installation and subsequent removal of the temporary modification. A log or equivalent documented evidence shall be maintained of the current status of such temporary modifications which are installed.

d. Control of inspection and test status on individual items by the use of markings such as stamps, tags, labels, routing cards or other suitable means.

e. When equipment is ready to be returned to service, operating personnel shall place the equipment in operation and verify and document its functional acceptability.

f. The equipment shall be adequately identified on the documentation to assure traceability.

6.10.2 Responsibilities

6.10.2.1 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for establishing and maintaining procedures and assuring implementation of the procedures for identification and control of equipment to avoid unauthorized use and to assure that operational equipment is in a ready status. These requirements shall include independent verifications to ensure proper implementation.

6.11 Control of Construction, Maintenance (Preventive/Corrective) and Modifications

6.11.1 Requirements

6.11.1.1 Construction, maintenance or modifications which have the potential to affect the functioning of structures, systems or components within the scope of this plan shall be performed in a manner to ensure quality at least equivalent to that specified in the original design basis and requirements, materials specifications and inspection requirements. A suitable level of confidence in structures, systems or components on which maintenance or modifications have been performed shall be attained by appropriate inspection and performance testing. Construction, maintenance or modification of equipment shall be pre-planned and performed in accordance with written procedures, instructions or drawings appropriate to the circumstances which conform to applicable codes, standards, specifications, and criteria. In this regard, modification type work in areas and systems of the plant, critical to the safe operation of the plant, shall not be performed while the plant is operating without specific advance approval by the Plant Division Director or designee(s).

6.11.1.2 Detailed step by step procedures are not required for all maintenance and modification work. The supervisor planning the job must consider the skills required to ensure proper completion of the work and identify the procedural requirements accordingly. Work such as replacing chart or drive speed gears, replacing fuses or tightening valve packing may not require written procedures.

Whereas, work involving inter-departmental coordination or risk of nuclear or personnel safety requires a higher level of administrative control such as approved procedures and sign offs to properly coordinate, direct and document the activity.

6.11.1.3 Skills normally possessed by qualified maintenance personnel may not require detailed step-by-step delineations in a written procedure but are subject to general administrative procedural controls that govern or define the following areas:

a. Methods for obtaining permission and clearance from Operation personnel to work and for logging such work.

b. Factors to be taken into account, including the necessity of maintaining occupational radiation exposure as low as is reasonably achievable (ALARA).

c. Method for identification of what procedural coverage is necessary for the maintenance, construction and modification activity.

d. Considerations for system/equipment cleanliness control.

e. Method for identification of post maintenance, construction or modification, testing, including system/equipment functional capability to meet operational requirements in all respects.

f. Method for ensuring that maintenance, construction or modification activities, performed either on-site or off-site, are properly reviewed.

g. Considerations for other activities already taking place in the general area.

6.11.1.4 Means (for example, inspections, measurements, tests, welding, heat treatment, cleaning, nondestructive examination and worker qualifications in accordance with applicable codes and standards) for assuring quality of maintenance, modifications or construction activities and measures to document the performance thereof shall be established. Measures shall be established and documented to identify the inspection and test status of items to be used in maintenance, modification, and construction activities.

6.11.1.5 A corrective maintenance program shall be developed to maintain structures, systems and components within the scope of this plan at the quality required for them to perform their intended functions. Corrective maintenance shall be performed in a timely manner to ensure that items within the scope of this plan are adequately maintained in the original, as designed, functional status.

6.11.1.6 A preventive maintenance program including procedures as appropriate for structures, systems, and components within the scope of this plan shall be established which prescribes the frequency and type of maintenance to be performed. In all cases, maintenance shall be scheduled and planned so as not to compromise the safety of the plant. Planning shall consider the possible safety consequences of concurrent or

sequential maintenance, testing or operating activities. Preventive maintenance shall be performed in a timely manner to ensure that items within the scope of this plan are adequately maintained in the original, as designed, functional status.

6.11.1.7 Proposed modifications shall be reviewed, approved and controlled in accordance with the applicable requirements of the Operating License and Technical Specifications and procedures governing the design, procurement, construction, testing and inspection. Modifications to structures, systems and components within QA Plan scope shall be reviewed and accepted in accordance with the requirements of Section 2.8 of this Plan.

6.11.1.8 Design, procurement, construction, testing and inspection of all modifications shall be performed in accordance with the applicable portions of this Plan.

6.11.1.9 Upon completion of the design phase of a modification, Technical Functions turns the project over to Site Services for installation of the modification with an engineering document package. Procurement of the required materials, parts and components is generally initiated by Technical Functions, but may be initiated by other organizations as necessary.

Site Services prepares the necessary installation procedures or instructions consistent with the engineering requirements, completes the installation and construction testing and compiles the records which it generated for record retention. Engineering problems identified during installation shall be identified to Technical Functions for resolution using the appropriate documentation as identified in the implementing procedures. Site Services shall notify Quality Assurance and, where applicable, the Authorized Inspection Agency of all witness and hold points in sufficient time for performance of the inspection. Witness and hold points may be waived only with prior written authorization from the QA Department.

6.11.2 Responsibilities

6.11.2.1 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for:

a. Establishing procedures for preventative and corrective maintenance consistent with the GPUN organization and maintenance plans.

b. Ensuring that maintenance and modification activities are performed in accordance with the requirements of this Plan and the applicable Operating License and Technical Specifications.

c. Planning, scheduling, performing, directing and documenting maintenance consistent with the GPUN organization and maintenance plans.

d. Establishing administrative control procedures for modification work consistent with the GPUN organization plan.

6.11.2.2 Director-Technical Functions

The Director-Technical Functions is responsible for:

a. Reviewing and approving the procedures which define the scope and limits of responsibilities of plant engineering with regards to modifications.

b. Ensuring that design and procurement activities associated with plant modifications are implemented in accordance with approved procedures.

c. Controlling the drawings and specifications used for plant modifications.

d. Preparing and issuing as-built drawings of plant modifications, as appropriate.

e. Ensuring that modifications are designed, procured and installed in accordance with requirements which are either equal to or better than the original requirements.

f. Preparing and filing design, engineering and Technical Functions initiated procurement records in accordance with the QA Records requirements of this Plan.

g. Providing the design and engineering support during installation and testing of plant modifications including the resolution of engineering problems identified during installation.

h. Maintaining control of technical configuration of the plants and maintaining the associated drawings current.

6.11.2.3 Director-Site Services

The Director-Site Services, through the applicable station Site Services Director, is responsible for:

a. Planning, scheduling, performing, directing and documenting construction, modification and maintenance consistent with the GPUN Organization and maintenance plans.

b. Providing the supervision and labor necessary to complete the assigned work.

c. Ensuring that installation of a modification is implemented in conformance with engineering requirements. Deviations from engineering requirements are not authorized except as specifically approved by engineering in advance. QA review for concurrence is also required in advance if the deviation affects the inspectability or planned inspections of the installation(s) affected.

d. Providing Technical Functions with the information necessary to prepare and issue as-built drawings.

e. Preparing and filing installation records in accordance with the QA Records requirements of this Plan.

6.11.2.4 Director-Nuclear Assurance

The Director-Nuclear Assurance, through the Director-Quality Assurance, is responsible for:

a. Reviewing installation and maintenance procedures or equivalent work authorizing documents to provide for the assignment of QA hold and/or witness points to selected documents.

b. Performing inspections and/or examinations required for the completion and acceptance of the installation.

c. Verify the appropriateness of quality requirements in fabrication and installation specifications.

6.12 Control of Surveillance Testing and Inspection

6.12.1 Requirements

6.12.1.1 A surveillance testing and inspection program shall be established and implemented in accordance with the Operating License and Technical Specification requirements of the plant to ensure that structures, systems, and components within the scope of this plan will continue to operate, keeping parameters within normal bounds, or will act to put the plant in a safe condition if they exceed normal bounds.

6.12.1.2 Provisions shall be made for performing required surveillance testing and inspections, including inservice inspections. Such provisions shall include the establishment of a Technical Specifications surveillance testing schedule reflecting the status of all planned inplant surveillance tests and inspections. Frequency of surveillance tests and inspections may be related to the results of reliability analyses, the frequency and type of service, or age of the item or system, as appropriate.

6.12.1.3 Additional control procedures shall be instituted, as necessary, to assure timely conduct of surveillance tests and inspections and appropriate documentation, reporting, and evaluation of the results. Procedures shall be established to assure proper review of surveillance test data and the return of systems to an operable status following the completion of testing. These procedures shall include provisions for the documentation of authority, conduct, responsibility, and verification involved in returning the system to an operable status. Such provisions shall include the use of procedures, checklists, and independent verification as appropriate, considering the degree that system status was altered during the performance of the test.

6.12.2 Responsibilities

6.12.2.1 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations are each responsible for:

a. Providing the procedures, schedules and manpower necessary to implement the Surveillance Testing and Inspection requirements of the Operating License and Technical Specifications as applicable to the assigned unit.

b. Ensuring that the requirements for Surveillance Testing and Inspection are completed as required.

6.13 Radiological Control

6.13.1 Requirements

6.13.1.1 A radiological controls program shall be established and implemented at each station to:

a. Control radiation hazards

b. Avoid accidental radiation exposures

c. Maintain exposures to workers and the general population as low as reasonably achievable (ALARA) and within regulatory requirements.

d. Provide guidance and specify appropriate methods or techniques to ensure that the performance of activities are in accordance with sound radiological control principles and in compliance with applicable regulatory requirements.

6.13.1.2 The radiological controls program is to be fully integrated into the applicable activities of each and every phase of operations at the nuclear generating stations.

6.13.1.3 Procedures shall be provided for the implementation of the radiological controls program. These procedures shall contain the requirements for implementation of the program by the Radiological Cont ols Department and the requirements for inclusion of radiological cont.ols in the plant operation, maintenance and testing procedures.

6.13.1.4 The radiological controls program includes the acquisition of data and provision of equipment to perform necessary radiation surveys, measurements and evaluations for assessment and control of radiation conditions.

6.13.2 Responsibilities

6.13.2.1 Division Directors

Each Division Director is responsible for assuring that the requirements of the radiological controls program as applicable to their activities are adequately included in procedures and that the procedures are implemented properly.

6.13.2.2 Director-Radiological & Environmental Controls

The Director-Radiological & Environmental Controls is responsible for:

a. Establishing and maintaining the radiological controls program.

b. Providing the personnel, procedures and administrative controls to implement the radiological controls program.

c. Providing administrative and technical guidance applicable to radiological controls, radioactive materials, respiratory protection and radiological engineering including ALARA programs and dosimetry control.

7.0 CONTROL OF RADIOACTIVE WASTE

7.1 General

7.1.1 Measures shall be established and documented to assure that the requirements of the Code of Federal Regulations, Title 10, Part 71, Title 10, Part 20, and Title 49, Parts 100 through 199 applicable to the packaging and transporting of radioactive wastes are satisfied.

7.1.2 Subpart H to 10 CFR 71 identifies the quality assurance criteria applicable to the control of radioactive waste. The portions of this Plan that relate to the criteria in Subpart H to 10 CFR 71 describe to a large extent the administrative controls and quality requirements to be applied in the control, packaging and transportation of radioactive material. A comparison of the requirements of 10 CFR 71, Subpart H and the applicable sections of this Plan are listed in Appendix A. These sections of this Plan will be implemented to satisfy the requirements of Subpart H to 10 CFR 71.

7.1.3 It is the policy of GPUN to minimize the generation of radwaste materials consistent with the ALARA concept to minimize personnel exposures and environmental contamination.

7.1.4 Title 10, Part 20, requires that a quality control program be implemented to verify compliance with Title 10, Part 61.55 (Waste Classification) and Title 10, Part 61.56 (Waste Characteristics). This Plan will be implemented to the extent necessary to assure compliance with those Parts of Title 10 (using a graded approach.)

7.2 Requirements

7.2.1 Procedures and administrative controls shall be developed and implemented to cover the following:

a. Processing of radioactive wastes including the collection, handling and preparation for shipment of radioactive liquids and solids. These procedures shall be consistent with the ALARA program and shall clearly identify the administrative controls and organizational responsibilities.

b. Training and qualification of personnel operating radioactive waste processing equipment, health physics monitoring, packaging and shipping (which includes Waste Classification and establishment of Waste Characteristics) and other operations deemed appropriate by management.

c. The activities associated with the packaging of radioactive wastes to include the proper selection of the receptacles to be used for containing the waste materials, the selection of the shipping containers (structures used to contain and support the receptacle and its contents) establishment of Waste Characteristics, Radiological control inspections of the packaging prior to release, proper markings on the outside of the package and the preparation of shipping papers and certificates. The activities shall be in accordance with 10CFR20, 10CFR61, 10CFR71, and 49CFR.

d. Movement of radioactive materials within and outside the protected area to assure personnel protection at all times.

e. The shipment of radioactive material from the Station to be in accordance with the regulations of the U.S. Department of Transportation for the transportation of hazardous materials (49CFR) and of the NRC (10CFR71 and 10CFR20).

f. The packaging used for transporting of radioactive wastes, whether purchased from an outside supplier or designed by GPUN, shall meet the applicable requirements of 10CFR20, 10CFR71 and 49CFR.

g. Minimization of the generation of radwaste materials through training programs, prudent scheduling and use of equipment and personnel and good housekeeping practices.

7.2.2 The carriers to be used for transporting of radioactive wastes shall be selected on the basis of their experience, knowledge of DOT regulations, control and maintenance of their equipment and the selection and control of their drivers. The carrier is required to have or shall be supplied documented procedures covering acceptance of materials from a shipper, certification requirements, placarding, storage control, reporting of incidents and security.

7.2.3 Radwaste operations shall be controlled to minimize personnel exposures or environmental contamination consistent with ALARA.

7.2.4 Operations procedures relating to radwaste shipping and packaging shall be reviewed by QAD to establish any necessary witness or hold points or activities to be monitored.

7.3 Responsibilities

7.3.1 Directors TMI Unit 1, and Oyster Creek

The Directors of the nuclear generating stations, thru their on-site staffs shall develop and implement procedures for minimizing the generation of radwaste materials and the processing of radioactive waste and movement of radioactive materials. These procedures shall include the following:

a. Training of personnel in the methods to minimize the generation of radwaste materials.

b. Processing and packaging of liquid and solid wastes.

c. Collection and identification of radioactive solids such as rags, papers, boots, gloves, etc. and have them moved to the Radwaste facility for packaging.

d. Selection of the proper packaging for the specific contents to be shipped, taking into consideration the radiation levels, contamination limits and shipping requirements. Radiological Control surveys the packaging for radiation level and, if acceptable, the Operations Department marks the outside of the package with the appropriate markings, completes the shipping papers/manifests and certificates, attaches the security seal and advises the carrier that the shipment is ready.

e. Review and acceptance of carrier procedures specified by the procurement documents covering the acceptance of radioactive waste materials for shipment.

f. Review and acceptance of the designs of packaging purchased from an outside supplier.

7.3.2 Director-Nuclear Assurance

The Director-Nuclear Assurance is responsible through the Director - Radiological & Environmental Controls for monitoring all radiological activities associated with the processing and handling of radioactive wastes and for providing advice on radiological matters relating to processing, packaging and shipping.

The Director-Nuclear Assurance is responsible through the Director Quality Assurance to monitor, inspect and audit radioactive waste processing operations and radioactive material packaging and shipping to the extent necessary to verify they are performed in accordance with established procedures, applicable administrative controls and regulatory requirements.

7.3.3 Responsible Department Managers

Each manager shall establish the requirements for personnel qualification and institute training and indoctrination to satisfy these requirements. Training requirements shall be commensurate with the importance and complexity of the activity performed.

8.0 CONTROL OF CORRECTIVE ACTIONS AND NONCONFORMANCES

8.1 General

8.1.1 Nonconforming materials, parts, components, services or activities within the scope of the GPUN Quality Assurance Program shall be identified and controlled to prevent their inadvertent utilization. Measures shall be established which ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. The cause of significant conditions adverse to quality shall be determined and appropriate action taken to prevent recurrence. The identification, cause, and actions taken to correct significant conditions adverse to quality shall be documented and reported to the appropriate levels of management.

8.1.2 Significant conditions within the intent of 10 CFR 21 shall be reported to appropriate management levels within the affected organization for review and evaluation.

8.1.3 Some deficiencies can be promptly corrected without initiating defined deficiency and/or nonconformance reports. Such deficiencies are typically those which are isolated to singular occurrences, not repetitive in nature, and/or are such that appropriate action to prevent recurrence can be initiated at the time the deficiency is identified and do not require any action other than reporting the occurrence. Such deficiencies, when discovered during verification activities, shall be documented in the report of the verification activity. Such deficiencies shall be analyzed as specified by Subsection 8.2.8.

8.2 Requirements

8.2.1 Nonconformances include both hardware problems involving materials, parts, components or systems which do not comply with established requirements and non-hardware problems such as failure to comply with the Operating License and Technical Specifications, procedures, regulations and/or other established requirements.

8.2.2 It is the responsibility of all organizations and individuals involved with the TMI-1 and Oyster Creek Nuclear Stations to identify and report all nonconformances that affect structures, systems, equipment, materials, parts and components within the scope of this plan. These nonconformances may be of a minor nature as a result of work activities, inspections, monitoring or reviews; or of a major nature such as those reportable directly to the NRC under 10 CFR Parts 21, 50 and 71 or the station's Operating License and Technical Specifications.

8.2.3 Activities such as examinations or checks performed to assess the condition of equipment or its operation are not considered to be nonconformances until it has been determined that it does not comply with established acceptance criteria. These activities shall, however, be documented on an appropriate form to control the activity. Once it has been determined that a nonconformance exists the condition shall be reported as a nonconformance and the item controlled to prevent inadvertent use prior to correction.

8.2.4 Procedures shall be established which detail and implement the following corrective action system measures:

a. Conditions adverse to quality shall be evaluated to determine the need for corrective action.

b. Corrective action documentation of significant deficiencies shall include identification, cause, and actions taken to correct and to preclude the similar recurrence. QAD concurrence is required for corrective action disposition for all QAD identified nonconformances.

c. Follow-up activities shall be conducted to verify implementation of corrective actions and to close out corrective actions in a timely manner.

d. Significant deficiencies, nonconformances and defects which are potentially reportable to the NRC shall be identified to appropriate management levels for evaluation and reporting to the NRC, as appropriate.

8.2.5 Procedures shall be established which detail and implement the requirements for identification and control of nonconforming items and activities and for the identification of the cause of the conditions and the actions to be taken to correct the conditions to prevent recurrence. These procedures shall include requirements for the following:

a. Identification of the form to be used for reporting the nonconformance.

b. Description of the nonconforming item or activity and date of identification.

c. Identification of the initiator of the nonconformance report.

d. Description of the nonconformance, including identification of the requirement violated.

e. Identification of nonconforming items by appropriate means (tags, labels, etc.) and segregation, if practical, until disposition of the nonconforming item has been determined.

f. Disposition of nonconformance. The disposition shall be determined by the organization responsible for the nonconformance. Rework and scrap dispositions are made by the material user without engineering review; use-as-is and repair dispositions require concurrence and justification of cognizant engineering organizations. QA concurrence is required for all dispositions.

g. Notification to the affected organizations of the nonconformance.

h. Verification method, verification and close out.

i. Record retention.

j. Required approval signatures of the disposition and the verification.

k. Evidence of review for reportability to the NRC.

8.2.6 Reworked, repaired, and replacement items shall be inspected and tested in accordance with the original inspection and test requirements or acceptable alternatives as determined by Engineering and Quality Assurance. All inspection, testing, rework, and repairs shall be controlled by approved procedures and the results documented.

8.2.7 Prior to the initiation of a preoperational test on a safety related item all nonconformances shall be evaluated for significance or impact on further testing or operation and shall be dispositioned as appropriate. The evaluation/disposition shall be documented.

8.2.8 Nonconformance reports and those deficiencies addressed in 8.1.3 shall be periodically analyzed to detect adverse trends as may be present. Such analysis will be based upon severity, number, frequency of nonconformances, the causes of the nonconformances and the timeliness of the reporting and resolution of nonconformances. The results of analyses shall be periodically reported to management for review and assessment. When significant conditions are identified or when actions are required by upper management to correct problems, such as a generic problem identified by the trend analysis or repetitive failure to disposition nonconformances, these problems shall be elevated to upper levels of management for resolution.

8.3 Responsibilities

8.3.1 Director-Nuclear Assurance

The Director-Nuclear Assurance through the Director-Quality Assurance is responsible for the following:

a. Review and concurrence of all procedures for reporting and controlling of nonconformances for compliance with the requirements of this Plan.

8.3.2 Director TMI Unit 1 and Oyster Creek

The Directors TMI Unit 1 and OCNGS are each responsible for ensuring that nonconformances are reported and corrected for all activities within the scope of this plan. Plant items such as failures, malfunctions, deficiencies, deviations and defective materials, parts or components are handled in a manner consistent with their importance to nuclear safety and reviewed in accordance with appropriate procedures and the applicable Technical Specification.

8.3.3 Responsible Department Manager

8.3.3.1 Each Director/Manager is responsible for the disposition and corrective action of nonconformances identified as within the scope of his responsibilities. In the specific case of materials, parts, components, or systems which have not been installed or accepted as operational at the Station, the responsible Director/Manager approves and the Quality Assurance Department concurs with the disposition of nonconformances.

8.3.3.2 Each Director/Manager is responsible for ensuring that nonconforming conditions are identified and controlled in accordance with approved procedures.

9.0 CONTROL OF TRAINING

9.1 General

GPU Nuclear is committed to the safe operation of its nuclear generating stations and the protection of the public health and safety. This commitment is accomplished, in part, by developing or maintaining the knowledge and skills necessary to manage, supervise, perform and verify activities within the scope of this Plan.

GPU Nuclear considers training to be an important means of effectively developing and maintaining proficiency and solving or avoiding performance problems. Therefore, training shall be provided as determined to be necessary which develops, maintains and supplements the skills and knowledge necessary to perform activities within the scope of this Plan.

Training shall be based on training need assessment. The extent to which prior education, training and experience is sufficient to provide for the requisite job proficiency will be considered in deciding whether and what training will be provided for an individual. The content of the training provided shall be consistent with regulatory requirements and commitments.

9.2 Requirements

9.2.1 Programs accredited by INPO shall be developed and maintained in accordance with a Training System Development (TSD) process. Such a process provides a systematic approach to the design, development, and delivery of effective training programs. TSD is based upon behavioral learning objectives which are linked directly to job performance requirements.

9.2.2 The training programs associated with Radiation Worker, Respiratory Protection, Emergency Preparedness, Fire Protection, and Security Force Training shall be implemented and conducted by training plans and procedures comparable with the GPUN TSD process. The depth to which the process is applied may vary from program to program, but the implementation and conduct of training will be based upon behavioral learning objectives which are linked to job performance requirements.

9.2.3 The documents associated with the training programs accredited by INPO and the Radiation Worker, Respiratory Protection, Emergency Preparedness, Fire Brigade, and Security Force Training Programs shall be reviewed, concurred with, and approved in accordance with the Training Management Control Documentation System procedure to assure that related regulatory, management, technical, and functional requirements and commitments are incorporated.

9.2.4 Technical content review and interface process shall be established between the user department and the Training and Education Department to assure programs accredited by INPO and the Radiation Worker, Respiratory Protection, Emergency Preparedness, Fire Brigade, and Security Force Training Programs are updated to reflect job performance, plant modifications, procedure changes, regulation changes, and job scope changes.

9.2.5 The review and approval of the specific training program documents developed and/or implemented by organizations, including contractors and/or vendors, other than Training and Education Department shall be delineated in procedure(s) or plan(s). The extent of Training and Education review of such training shall be as defined by a procedure(s) or plan(s).

9.2.6 Procedures shall be established for the qualification and certification of instructors for programs accredited by INPO and the Radiation Worker, Respiratory Protection, Emergency Preparedness, Fire Brigade, and Security Force Training Programs.

9.2.7 To assure the integrity of qualification processes which utilize examinations, procedures for the control of examinations shall be used to address examination security.

9.2.8 A program and course evaluation process(s) shall be used to evaluate the effectiveness of training programs and courses in meeting training objectives and in improving job performance. Such a process(s) and the extent of its usage shall be delineated in the appropriate procedure(s) or plan(s).

9.2.9 Procedures shall be established to assure that all required records associated with training provided within the scope of this Plan shall be identified, generated, maintained, and retrievable. These training records shall be sufficient to provide evidence of the content and objective of the training provided, attendees, and date of attendance.

9.3 Responsibilities

9.3.1 The Director, Nuclear Assurance is responsible through the Training and Education Director for providing selected training to GPU Nuclear and specified contractor personnel as necessary to prepare them to carry out their assigned duties and to meet corporate policies, applicable laws, regulations, licenses, and technical requirements. Specifically, the Training and Education Director, shall be responsible for the establishment and maintenance of a training organization to:

a. Manage the training function consistent with regulatory requirements and commitments, corporate priorities, and the Training and Education Department TSD Process.

b. Provide personnel with training which supports the development and maintenance of knowledge and skills required to perform activities within the scope of this Plan in a manner that will ensure the safe and effective execution of their duties.

c. Assure that the content of training provided by the Training Department is consistent with and incorporates appropriate GPUN, local, state and federal regulatory requirements and commitments, including timely requalification.

9.3.2 Department Directors and Managers are responsible for assuring that their staff members are qualified to carry out assigned activities within the scope of this Plan. Training activities performed under their direction shall be performed consistent with the requirements of this Section of this Plan.

10.0 AUDITS

10.1 General

A comprehensive and documented audit system shall be established, implemented and maintained to ensure that:

a. Plans, procedures and instructions define sufficient organizational responsibilities, prescribe methods and provide results consistent with Operating License requirements, other regulatory requirements and commitments, technical requirements, contractualrequirements, and this Plan.

b. Plans, procedures and instructions are effectively implemented.

c. Corrective action systems and management reviews provide for timely completion of requisite action for identified deficiencies/ nonconformances/occurrences/events.

d. Corrective action systems and management reviews provide effective identification and prevention of recurrent and/or significant program nonconformances.

e. Data is provided for GPUN management to optimize the efficiency of methods utilized to ensure regulatory compliance.

f. Data is provided for the continuing assessment of the effectiveness of all elements of the GPUN Quality Assurance Plan and implementing documents.

10.2 Requirements

10.2.1 A comprehensive system of audits shall be established and conducted for both internal and external activities which are within the scope of this Plan.

10.2.2 Planned and scheduled audits shall verify compliance with the following:

a. Operating License conditions, Technical Specification requirements, other regulatory requirements and commitments and the requirements of this Plan.

b. Regulatory Guides, ANSI Standards, and other codes and standards as endorsed by Appendix C of this Plan or other regulatory requirements or commitments.

c. Documents which prescribe methods and provide the technical requirements for activities or items within the scope of this Plan.

d. Contractural requirements associated with external organizations providing nuclear fuel, in-core components and selected technical support and engineering services within the scope of this Plan.

10.2.3 The audit system shall include:

a. Delineation of the authority, responsibility, and organizational independence of those responsible for the management and conduct of audit program.

b. Procedure(s) for the qualification and certification of lead auditors.

c. Procedure(s) for the scheduling, preparation, performance, reporting of the results of audits, and distribution to appropriate levels of management.

d. Periodic analysis of audit results and the reporting of such results to appropriate levels of management.

e. Follow-up action to be taken based upon individual and collective audit results.

10.2.4 The frequency of conducting scheduled internal audits shall be as specified in the nuclear units' Technical Specifications. Unscheduled audits may be conducted at any time. Re-audits shall be scheduled as may be required to assure that corrective action(s) to previous audit results has been effectively implemented.

10.2.5 The frequency of conducting external audits of selected suppliers of technical support, environmental monitoring, radwaste shipping, computer, radioanalytical, and engineering services shall be scheduled once within the life of the activity or every three years depending on the duration of the contractual relationship.

10.2.6 Each audit shall be led by a GPUN certified lead auditor. Audit team members shall be utilized as required and will be classified as either auditors or technical specialists, depending on their function on the audit team.

10.2.7 Those GPUN and external organizations providing items and/or conducting activities within the scope of this Plan are subject to audit consistent with the requirements of this Plan.

10.2 8 Audits shall be performed in accordance with pre-established written procedures or checklists. The personnel utilized to perform on an audit shall not have any responsibility for the activity audited.

10.2.9 Audits shall consist of reviews of approved documents and records and observation(s) of selected activities in sufficient detail to determine the appropriateness of the documents for use, effectiveness of implementation and the effectiveness of actions taken to correct previous nonconformances.

10.2.10 Audited organizations shall provide sufficient support to assure the accuracy of the audit results, review and response to audit nonconformances, and effective resolution/prevention of deficiencies. The corrective actions required to resolve adverse audit findings shall be defined and implemented in a timely manner.

10.2.11 Audit finding nonconformances shall be followed up in a timely manner. Such adverse audit findings shall typically not be closed until the effective implementation of corrective action(s) is verified.

10.2.12 Sufficient records shall be generated and maintained to provide documentation of audit system scope of coverage, individual audit coverage (i.e., audit plans, checklists, or equivalent), audit reports, lead auditor certifications, followup and verification and results of periodic analysis of audit results.

10.3 Responsibilities

10.3.1 Director - Nuclear Assurance

The Director - Nuclear Assurance is responsible through the Director - Quality Assurance to:

a. Establish and implement the audit program and assure all required areas are audited.

b. Provide the auditing organization which meets the requirements of this Plan.

c. Evaluate the effectiveness of the audit program.

d. Ensure the development and implementation of the audit schedule.

e. Analyze the results of audits for quality trends and inform the Office of the President and the affected Division Director of the results.

10.3.2 Director(s) - Audited Organization(s)

The Director(s) of the audited organization(s) are responsible through Directors/Managers to ensure:

a. Sufficient support is given to the audit process to optimize the accuracy of the audit results.

b. Sufficient review of audit results is provided to assure that effective preventive measures for audit nonconformances are defined and implemented.

c. Responses to audit findings are reviewed and approved by their organizations prior to submittal to the auditing organization.

d. Responses to audit finding are submitted to the auditing organization in a timely manner as defined in implementing plans, procedures and/or instructions.

e. Corrective action to resolve audit findings are taken in a timely manner.

APPENDICES

APPENDIX A Comparison Chart of Operational Quality Assurance Plan Requirements with those of various parts of the Code of Federal Regulations and Nuclear Industry Standards

APPENDIX B QAD Documents Review Requirements

APPENDIX C NRC Regulatory Guide Commitments and Exceptions

APPENDIX D Terms and Definitions

APPENDIX A

COMPARISON CHART OF OPERATIONAL QUALITY ASSURANCE PLAN REQUIREMENTS WITH THOSE OF VARIOUS PARTS OF THE CODE OF FEDERAL REGULATIONS AND NUCLEAR INDUSTRY STANDARDS

10 CFR 50, App. B Criterion	10 CFR 50, App. B QA Plan	ANSI N45.2 Paragraph	ANSI N45.2 QA Plan
I	1.0	2.0	2.0;9.0
II	2.0;9.0	3.0	1.0
III	4.0	4.0	4.0
IV	5.1	5.0	5.1
V	3.1	6.0	3.1
VI	3.2	7.0	3.2
VII	6.1	8.0	6.1
VIII	5.2	9.0	5.2
IX	6.4,6.11	10.0	6.4;6.11
X	6.2	11.0	6.2
XI	6.5	12.0	6.5
XII	6.6	13.0	6.6
XIII	6.7	14.0	6.7
XIV	6.8;6.10	15.0	6.8;6.10
XV	8.0	16.0	8.0
XVI	8.0	17.0	8.0
XVII	3.3	18.0	3.3
XVIII	10.0	19.0	10.0

10 CFR 71, Subpart H Criterion	10 CFR 71, Subpart H QA Plan
71.103	1.0
71.105	2.0;9.0
71.107	4.0
71.109	5.1
71.111	3.1
71.113	3.2
71.115	6.1
71.117	5.2
71.119	6.4;6.11
	7.0
71.121	6.2
	7.0
71.123	6.5
	7.0
71.125	6.6
	7.0
71.127	6.7
	7.0
71.129	6.8;6.10
	7.0
71.131	8.0
71.133	8.0
71.135	3.3
71.137	10.0

ANSI N18.7 - 1976 Paragraph	QA Plan	Paragraph	QA Plan
3.1	1.0	5.2.12	3.3
3.2	1.0	5.2.13	8.0
3.3	1.0;9.0	5.2.14	8.0
3.4	1.0	5.2.15	3.0
	Supplements	5.2.16	6.6
4.0	1.0;2.4;2.8	5.2.17	6.2
	10.0	5.2.18	6.4
5.1	2.0;9.0	5.2.19	6.5
5.2.1	1.4	5.3.1	3.1
	Supplements	5.3.2	3.1
5.2.2	3.1	5.3.3	3.1
5.2.3	3.1	5.3.4	3.1
5.2.4	3.1	5.3.5	6.11
5.2.5	3.1	5.3.6	6.13
5.2.6	6.8;6.10	5.3.7	6.6
5.2.7	6.11	5.3.8	6.13
5.2.8	6.12	5.3.9	3.1
5.2.9	-	5.3.10	6.5;6.0
5.2.10	6.9		
5.2.11	10.0		

APPENDIX B

QAD Documents Review Requirements

QAD shall selectively review documents which prescribe methods to implement activities within the scope of this Plan or provide the quality and/or technical requirements for items, parts, materials and activities that are within the scope of this Plan. The purpose of such reviews is to verify that such documents are consistent with the requirements of this plan. The minimum content of a QA document review, as appropriate to the document reviewed, is provided in Subsections 3.1.2, 4.3.3, 5.1.2.3.(e) and 6.2.2.2.(b) of this Plan.

The types of documents typically reviewed include plans, procedures and instructions, procurement documents; work authorizing documents, and changes; etc. Refer to Section 3.2.2.1 for specific types of documents which will periodically be verified by QA document review.

QA review of documents within the scope of this plan may be conducted before or after the documents have been approved for use. Furthermore, QA may review all or a sample of specific types of documents within the scope of this plan. The timing and scope of the QA reviews shall be based on the technical and administrative adequacy of the documents produced without QA review for concurrence.

A QA Department procedure approved by the Director, Quality Assurance, shall prescribe the process for measuring the adequacy of documents produced without QA review for concurrence. This measure shall be based on the comment types and rates resulting from QA reviews of such documents. The procedure shall include requirements for maintaining a database sufficient to provide for the measurement of adequacy. The procedure shall also prescribe periodic adjustments in the timing and scope of QA reviews of specific types of documents based on their measured technical and administrative adequacy.

This procedure(s) will also ensure that QA reviews of documents be consistent with the following:

- Some plans, procedures and/or instructions are required by this OQA plan to be "reviewed for concurrence" by the Director of QA. Such documents and changes shall be reviewed by QA prior to implementing approval. Other plans, procedures, and/or instruc- tions and changes thereto may be reviewed for concurrence by Quality Assurance. These documents shall be identified on the GPUN Review and Approval Matrix.

- Changes to the quality classification procedure(s) and the GPUN Review and Approval Matrix shall be reviewed for concurrence by the Director-QA prior to implementation of the change.

- Procurement, maintenance and installation documents and changes shall be reviewed as appropriate by QA prior to authorization for use to provide for the inclusion of inspection hold and witness points.

APPENDIX C

QUALITY ASSURANCE PROGRAM
NRC REGULATORY GUIDE
COMMITMENTS
AND
EXCEPTIONS

This Appendix identifies those Regulatory Guides which contain Quality Assurance Program requirements and identifies the GPUN positions relative to compliance. Part I of the Appendix is a tabulation of the Regulatory Guides the corresponding ANSI Standard and Remarks. Alternatives or clarifications are detailed in Part 2 of the Appendix.

Compliance with these Regulatory Guides will apply to modifications, additions and activities performed after issue of this QA Plan and does not imply backfitting and/or retroactive compliance. It is also to be recognized that existing plant conditions, may prevent or preclude the satisfaction of all requirements of a specific Regulatory Guide. These conditions will be documented and, along with the justification, will be approved by the Director - Quality Assurance.

APPENDIX C, PART I

CONSITMENT TO QUALITY ASSURANCE REGULATORY GUIDES FOR GPUN

REG. GUIDE			ANSI STD.		DEGREE OF COMPLIANCE	REMARKS
1.8	5/77, Rev. 1-R	Personnel Selection and Training	N18.1	1971	Modified	See attached comments.
1.26	2/76, Rev. 3	QA Classifications and Standards for Water Stream and Radioactive Waste Containing Components of Nuclear Power Plants			Modified	See attached comments.
1.28	2/79, Rev. 2	Quality Assurance Program Requirements (Design and Construction)	N45.2	1977	Full	Comply with Regulatory Position.
1.29	9/78, Rev. 3	Seismic Design Classification			Modified	Same comment as for Reg. Guide 1.26
1.30	8/11/72	QA Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment	N45.2.4	1972	Modified	See attached comments.
1.31	4/78, Rev. 3	Control of Ferrite Content in Stainless Steel Weld Metal			Full	Comply with Regulatory Position.
1.33	2/78, Rev. 2	Quality Assurance Program Requirements (Operation)	N18.7	1976	Modified	See attached comments.
1.37	3/16/73	QA Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Power Plants	N45.2.1	1973	Modified	See attached comments.
1.38	5/77, Rev. 2	QA Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water Cooled Nuclear Power Plants	N45.2.2	1972	Modified	See attached comments.
1.39	9/77, Rev. 2	Housekeeping Requirements for Water Cooled Nuclear Power Plants	N45.2.3	1973	Modified	See attached comments.
1.56	6/73	QA Requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants	101.4	1972	Modified	See attached comments.
1.58	9/80, Rev. 1	Qualifications of Nuclear Power Plant Inspection, Examination and Testing Personnel	N45.2.6	1978	Modified	See attached comments.

APPENDIX C, PART I

REG. GUIDE		ANSI STD.		DEGREE OF COMPLIANCE	REMARKS
1.64	6/76, Rev. 2	Quality Assurance Requirements for the Design of Nuclear Power Plants	N45.2.11	1974	Modified	See attached comments.
1.74	2/74	Quality Assurance Terms and Definitions	N45.2.10	1973	Full	Comply with Regulatory Position.
1.88	10/76, Rev. 2	Collection Storage and Maintenance of Nuclear Power Plant Quality Assurance Records	N45.2.9	1974	Modified	See attached comments.
1.94	4/76, Rev. 1	QA Requirements for Installation, Inspection and Testing of Structural Concrete & Steel during Nuclear Power Plant Construction	N45.2.5	1974	Modified	See attached comments.
1.116	5/77, Rev. 0-R	QA Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems	N45.2.8	1975	Modified	See attached comments.
1.123	7/77, Rev.1	QA Requirements for Control of Procurement of Items and Services for Nuclear Power Plants	N45.2.13	1976	Modified	See attached comments.
1.142	10/81, Rev. 1	Safety-Related Concrete Structures for Nuclear Power Plants (Other than Reactor Vessels and Containments)	N45.2.5 ANSI6.4 ACI318	1974 1977 1977	Modified	See attached comments.
1.143	10/79, Rev. 1	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants			Modified	See attached comments.
1.144	1/79	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants	N45.2.12	1977	Modified	See attached comments.
1.146	8/80	Qualification of Quality Assurance Program Auditors for Nuclear Power Plants	N45.2.23	1978	Full	Comply with Regulatory Position.

APPENDIX C - PART 2

NRC Regulatory Guide 1.8, Rev. 1-R, May 1977

Personnel Selection and Training

1. Guidelines have long been established in the company with respect to awarding jobs to plant maintenance, operations, and other bargaining unit personnel who may be involved in testing, examination and inspection activities. Personnel are qualified in accordance with the Job Description Manual. GPUN believes that the requirements specified in the Job Description Manual meet the intent, and in many cases, exceed the requirements of ANSI N18.1. In certain specific cases, we envision that there may be individuals in the future who will be qualified by GPUN because it feels the individual is capable of performing a job even though the individual does not meet the detailed guidance contained in ANSI N18.1 with respect to length of experience and formal training.

   The unit staffs and the corporate organizations have been upgraded to meet ANSI/ANS 3.1-1978 except as otherwise noted in the Technical Specifications.

2. For the NRC licensed positions of Reactor Operator (RO) and Senior Reactor Operator (SRO), the experience requirements of ANSI/ANS 3.1-1981 will be utilized to determine if candidates meet NRC licensing eligibility requirements, until the applicable site's simulator has been certified in accordance with 10CFR55.45(b). GPUN may accept RO and SRO candidates into the training programs who do not meet the detailed guidance contained in ANSI/ANS 3.1-1981 provided the programs are INPO-accredited and utilize a plant-referenced simulator certified in accordance with 10CFR55.45(b).

NRC Regulatory Guide 1.26, Rev. 3, February 1976

Quality Group Classification and Standard for Water, Steam and Radioactive Waste Containing Components of Nuclear Power Plants

Since the original design and construction of TMI-1 and Oyster Creek was to different classification criteria than contained in this guide; GPUN will comply with the regulatory position of this guide with the following clarifications:

1. For modification to existing plant systems, items will be classified by Technical Functions according to the original design basis or this guide. This classification will not degrade the safety of the system being modified.

2. Additions to existing plant systems will be made to the same code, standard and technical requirements which were originally applied to the system to which the addition is to be made or more recent versions of these codes, standards and technical requirements. The add will not degrade the safety of the system being added to.

3. For construction, the latest applicable code will be utilized unless such utilization would result in hardship or unusual difficulty without providing an equivalent level of safety.

NRC Regulatory Guide 1.30, August 1972

Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment

GPUN shall comply with the Regulatory Position established in this Regulatory Guide in that QA programmatic/administrative requirements included therein shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications shall be the original technical requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

Sections 5.2 and 6.2 of ANSI N45.2.4 list tests which are to be conducted during the construction phase. In lieu of this, GPUN utilizes its Engineering and/or Maintenance organizations to establish the need for specific tests or test procedures during the operational phase.

NRC Regulatory Guide 1.33, Rev. 2, February 1978

Quality Assurance Program Requirements (Operation)

The GPUN QA Program complies with the regulatory position of this guide with the following clarifications:

1. Regulatory Position C.4 of the regulatory guide

   The frequency of performance and the minimum topical coverage of internal audits will be consistent with Section 6 of the nuclear units' Technical Specifications. Paragraph C.4.a is interpreted to mean audits will be conducted once each 6 months to verify that the nonconformance and corrective action program is properly implemented and documented, particularly as related to actions taken to correct deficiencies that affect items classified as nuclear safety related or regulatory required.

APPENDIX C - PART 2

2. Paragraph 5.1 of ANSI N18.7-1976 titled "Program Description"

This paragraph refers to the compilation of a "summary document" to identify the sources, index the source documents to the requirements of this standard and to provide a consolidated base for the description of the program. For the purpose of clarity, this "Operational Quality Assurance Plan for Three Mile Island Unit 1 and Oyster Creek" is the "summary" document required. Appendix A correlates the sections of this Plan to ANSI 18.7-1976. Section 2.0 provides the "consolidated" base and description for the program. Implementing documents are identified in Section 3.0, are required to be consistent with this Plan and Appendix C of this Plan, and are marked as stated in Section 3.0.

3. Paragraph 5.2.2 of ANSI N18.7-1976 titled "Procedure Adherence"

In accordance with Section 6.8.3 of both the Oyster Creek and TMI-1 Technical Specifications, temporary changes shall be approved by two members of GPUNC Management Staff qualified as Responsible Technical Reviewers and knowledgeable in the area affected by the procedure. For changes which may affect the operational status of facility systems or equipment, at least one of these individuals shall be a member of facility management or supervision holding a Senior Reactor Operator's License on the facility.

4. Paragraph 5.2.8 of ANSI N18.7 - 1976 titled "Surveillance Testing and Inspection"

In lieu of a "master surveillance" schedule, a technical specification surveillance testing schedule shall be established reflecting the status of all inplant surveillance tests and inspections required by technical specifications.

5. Paragraph 5.2.15 of ANSI N13.7 - 1976 titled "Review, Approval and Control of Procedures"

The third sentence of the third paragraph is interpreted to mean applicable procedures shall be reviewed following a reportable incident such as an accident, an unexpected transient, significant operator error, or equipment malfunction.

6. Paragraph 5.2.17 of ANSI N18.7 - 1976 titled "Inspections"

Not all inspections will require a separate inspection report. Inspection requirements may be integrated into appropriate procedures or other documents with the procedures or documents serving as the record; however, records of inspections will be identified and retrievable.

APPENDIX C - PART 2

NRC Regulatory Guide 1.37, March 16, 1973

Quality Assurance Requirements for Cleaning Fluids Systems and Associated Components of Water Cooled Nuclear Power Plants

The GPUN Quality Assurance Program complies with the regulatory position of this guide with the following clarifications:

1. The second sentence of paragraph C.3 should be amended to read:

   "The water quality for final flushes of fluid systems and associated components shall be at least equivalent to the quality required for normal operation. This requirement does not apply to disolved oxygen or nitrogen limits nor does it infer that chromates or other additives normally in the system water will be added to the flush water."

2. Paragraph C.4 should be amended to add:

   Material such as inks, temperature indicating crayons, labels, wrapping materials (other than polyethylene), water soluble materials, lubricants, NDT penetrant materials and couplants, which contact stainless steel or nickle alloy material surfaces shall contain no more than trace elements of lead, zinc, copper, mercury or other low melting alloys or compounds. Maximum allowable levels of water leachable chloride ions, total halogens and sulfur compounds shall be defined and imposed on the aforementioned materials.

3. Section 2.1 of ANSI N45.2.1-1973 states that required planning is frequently performed on a generic basis for application to many installations on one or more projects. This results in standard procedures or plans for installation and inspection and testing which meet the requirements of the Standard. Individual plans for each item or system are not normally prepared unless the work operations are unique. However, standard procedures or plans will be reviewed for applicability in each case. Installation plans or procedures are also limited in scope to those actions or activities which are essential to maintain or achieve required quality. This is consistent with Section 11 Paragraphs 2 and 3 of ANSI N45.2-1977 which provides for examination, measurement or testing to assure quality or indirect control by monitoring of processing methods. However, final cleaning or flushing activities will be performed in accordance with procedures specific to the system.

APPENDIX C - PART 2

4. GPUN intends to conform to the Cleanness requirements of Section 3.1 of ANSI N45.2.1-1973 with the exception of permissable particle sizes for cleanness Classes B and D. In these cases, GPUN will conform to the requirements of ANSI N45.2.1-1980, Section 3.2.2.1(b) which states, "These shall be no particles larger then 1/32 in. by 1/16 in. long (0.8 mm by 1.6 mm)" for cleanness Class B and Section 3.2.4.4 which states, "Particles no larger than 1/16 in. by 1/8 in. long (1.6 mm by 3.2 mm) on a 14-mesh (1.4 mm, ASTM E-11, Specification for Wire Cloth Sieves for Testing Purposes) or finer filter, or the equivalent." for cleanness Class D.

5. Section 3.1.2.1 of ANSI N45.2.1-1973 states that surfaces shall be examined without magnification under a lighting level (background plus supplementary lighting) of at least 100 foot candles. GPUN intends to permit the use of neutral 18% gray card with a 1/32" black line for determining acceptability of illumination in lieu of the 100 foot candles.

6. Section 4.0 of ANSI N45.2.1-1973 states that items are not to be delivered to the point of installation sooner than necessary unless the installation location is considered a better storage area. The strategy for the storage of items is based on many factors, one of which is to not adversely affect the item's acceptability while in storage. If other factors make it desirable to store an item at the installation site, and the location is acceptable from a quality standpoint, it is not our intention to eliminate that site as a potential storage area. As an alternate to this requirement, items may be delivered to the installation site sooner than absolutely necessary when determined to be advantageous for other considerations. Example - reduced handling or easier access, thereby reducing susceptibility to handling damage. In all such cases, equipment stored in place will be protected in accordance with Section 5 of ANSI N45.2.1-1973.

7. Section 6.0 of ANSI N45.2.1-1973 states that where environmental contamination causes degradation of quality, seals are installed and the item is tagged with identifications and instructions for seal removal. GPUN utilizes procedural controls which specify the authorization requirements for seal removal. "Tags" are not normally utilized.

8. Section 7.2 of ANSI N45.2.1-1973 allows piping systems to be flushed only with water. A water flush of piping systems using other fluids can lead to contamination and/or other problems which would affect the reliability of these systems. ANSI N45.2.1-1980 provides requirements and recommendations for flushed using fluids other than water. For flushing of hydraulic instrument, control, lubrication and other non- water systems, GPUN intends to conform to Sections 3.4.2, 3.4.3, 3.4.4, and the guidance of Table 3.3 from ANSI N45.2.1-1980. Specifications and procedures for flushes utilizing this exception must specify, as applicable: particulate contaminate levels; water content; water soluble contaminate levels; organic contaminate levels, flush time, flush pressure/flow/amount; type of fluid to be used; and, the restrictions identified in Sections 3.4.2, 3.4.3, and 3.4.4.

NRC Regulatory Guide 1.38, Rev. 2, May 1977

Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water Cooled Nuclear Power Plants

The GPUN Quality Assurance Program complies with the regulatory position of this guide with the following modifications or clarifications to ANSI N45.2.2-1972:

1. Section 2.4, Personnel Qualifications. As a point of clarification, personnel who perform the audit(s) described in Section 2.4. will not be qualified in accordance with ANSI N45.2.6. Such personnel are qualified in accordance with Regulatory Guide 1.146, dated 8/80.

2. Section 2.7, Classification of Items. The four-level classification system for storage of items will be followed, however, the designated classification level may not be explicitly identified on the item. The classification level will, however, be traceable through the pro- curement documents. Classification differing from Section 2.7 will be considered acceptable provided no degradation is assured; for example, electric motors designed for outside service may be stored in a level C area rather than a level B.

3. Section 3.2, Levels of Packaging. The four level classification systemfor packaging of items may not be used explicitly. For commercial grade items standard commercial grade packaging requirements may be specified.

4. Section 3.6 concerns prevention of halogenated materials from con- tacting stainless steel or nickel alloy materials. The clarifications applicable to Regulatory Guide 1.37, identified previously, also apply to this section of ANSI N45.2.2.

5. Section 3.7.1 Cleated, sheathed boxes will be used up to 1000 lbs. rather than 500 lbs. as specified. This type of box is safe for, and has been tested for, loads up to 1000 lbs. Other material standards (i.e., FED Spec. PPP-8-601) allow this. Special qualification testing shall be required for loads in excess of 1000 lbs.

APPENDIX C - PART 2

6. Section 5.5, Correction of Nonconformances. This section provides for "rework" and "use as is" dispositions for nonconforming items. As an alternate, the "repair" disposition (as defined in ANSI N45.2.10-1973) will also be used.

7. Section 6.2.1 For storage of level D items access will be controlled and limited by posting. Other positive controls such as fencing or posting of guards will be provided for higher storage levels.

8. Section 7.4 states that a system should be established to indicate acceptability of all equipment and rigging after each inspection, specify control of nonconforming lifting equipment, and supplement periodic inspections with special visual and nondestructive examinations and dynamic load tests. In lieu of this, GPUN does perform dynamic load tests on new equipment, preventive maintenance on cranes, nondestructive examination of lifting hooks annually, and a visual inspection of lifting equipment prior to use.

9. Appendix A.3.4.1 The last sentence of A.3.4.1(4) and (5) should be corrected as follows:

   (4) "However, preservatives for inaccessible inside surfaces of pumps, valves and pipe systems containing, reactor coolant water shall be the water flushable type."

   (5) "The name of the preservative used shall be indicated to facilitate touch up."

10. Appendix A 3.4.2, Inert Gas Blankets. There may be cases involving large or complex shapes for which an inert or dry air purge flow is provided rather than static gas blanket in order to provide adequate protection due to difficulty of providing a leak proof barrier. In these cases a positive pressure purge flow may be utilized as an alternate to leak proof barrier.

11. Appendix A.3.5.2 Tapes will meet a sulphur limit of 0.30% by weight instead of 0.10% as specified in A.3.5.2(1)(a).

    This limit is reasonable based upon the chemical content of commercially available tapes. Tapes will be of a contrasting color rather than "Brightly Colored" as required by A.3.5.1(3).

12. Appendix A.3.7.1 In lieu of A.3.7.1(3) and (4), the following will be imposed: Fiberboard boxes shall be securely closed either with a water resistant adhesive applied to the entire area of contact between the flaps, or all seams and joints shall be sealed with not less than 2-inch wide, water resistant tape.

APPENDIX C - PART 2

NRC Regulatory Guide 1.39, Rev. 2, September 1977

Housekeeping Requirements for Water Cooled Nuclear Power Plants Endorses ANSI N45.2.3 - 1973

The GPUN Quality Assurance Program complies with this guide with the following clarification to ANSI N45.2.3-1973.

1. Sections 2.1 and 3.2 The Nuclear Stations will not utilize the five level zone designation system referenced in ANSI N45.2.3, but will utilize standard janitorial and work practices to maintain a level of cleanliness commensurate with company policy in the areas of housekeeping, plant and personnel safety, and fire protection.

   Cleanliness will be maintained, consistent with the work being performed, so as to prevent the entry of foreign material into systems within the scope of this plan. This will include as a minimum documented cleanliness inspections which will be performed immediately prior to system closure. Control of personnel, tools, equipment, and supplies will be established when major portions of the reactor system are opened for inspection, maintenance or repair.

   Additional housekeeping requirements will be implemented as required for control of radioactive contamination.

2. Section 3.2.3 discusses fire protection. Except for the quality assurance aspects of fire protection, no specific commitments are made in this Plan. As part of other activities, GPUN has established positions or commitments relating to fire safety or protection.

NRC Regulatory Guide 1.54, June 1973

Quality Assurance Requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants

The GPUN Quality Assurance Program complies with this guide with the following clarification:

1. GPUN will comply with the Regulatory Position established in this Regulatory Guide in that QA programmatic/administrative requirements included therein shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements) shall be the original requirements or better.

APPENDIX C - PART 2

2. The quality assurance program for protective coatings includes the planned and systematic actions necessary to provide adequate confidence that shop or field coating work for nuclear facilities will perform satisfactorily in service.

   All protective coatings, except those noted in 3 below, applied to surfaces within containment are tested to demonstrate that they can withstand LOCA conditions. These tests are performed in accordance with Section 4 of ANSI N101.2, Protective Coatings (Paints) for Light Water Nuclear Reactor Containment Facilities, under LOCA conditions which equal or exceed those described in the FSAR.

   The quality assurance program is applied for Protective Coatings consistent with the nature and scope of work specified in the technical specifications. The following elements are included:

   (a) Preparation of coatings specification and procedures for generic coating materials/systems.

   (b) Review and evaluation of coating manufacturers' demonstration test data and quality assurance measures for control of manufacture, identification, and performance verification of applied coating systems.

   (c) Review and evaluation of supplier quality assurance measures to control storage and handling, surface preparation, application, touch-up, repair, curing and inspection of the coating systems.

   (d) Training and qualification of inspection personnel in coatings inspection requirements.

   (e) Supplier surveillance inspection.

   The coatings qualification program and the associated quality assurance requirements are necessary only for coatings whose failure or failure mechanism would have a significant effect on safety.

3. Regulatory Guide 1.54 is not imposed for:

   (a) Surfaces to be insulated.

   (b) Surfaces "contained" within a cabinet or enclosure (for example, the interior surfaces of ducts).

(c) Field repair on any Q-class coated item less than 30 square inches of surface area such as:

- o Cut ends or otherwise damaged galvanizing.
- o Bolt heads, nuts, and miscellaneous fasteners.
- o Damage resulting from spot, tack, or stud welding.

Field touch-up and repair of larger areas shall be in accordance with item (1).

(d) Small "production line" items such as small motors, handwheels, electrical cabinets, control panels, lounspeakers, etc. where special painting requirements would be inpracticable.

(e) Stainless steel or galvanized surfaces.

(f) Coating used for the banding of piping.

(g) Strippable coatings used for cleanup.

4. Quality Assurance documentation may not be similar to records and documents listed in Section 7.4 through 7.8 of ANSI N101.4 but will be evaluated to assure that they provide at least the same degree of documentation as required by this standard..

NRC Regulatory Guide 1.58, Rev. 1, September 1980

Qualifications of Nuclear Power Plant Inspection, Examination, and Testing Personnel

The GPUN Quality Assurance Program complies with this guide with the followinc clarification:

1. The guidance of Regulatory Guide 1.58 shall be followed as it pertains to the qualifications of QA inspection personnel who verify conformance of work activities to quality requirements. The qualification of other QA personnel shall be in accordance with GPUN established requirements. The qualifications of plant operation personnel concerned with day-to-day operation, maintenance, and certain technical services shall conform to Regulatory Guide 1.8.

   The qualification of nondestructive testing personnel shall be in accordance with the requirements and recommendations of ASNT Recommended Practice No. SNT-TC-1A, 1980 Edition. In addition, SNT-TC-1A shall be used in conjunction with the additional provisions of the applicable ASME Boiler and Pressure Vessel Code. Later editions of SNT-TC-1A may be utilized as referenced in Section XI of the Code provided that the edition of the Code has been incorporated by reference into Title 10 of the Code of Federal Regulations, Part 50.55a.

Recertification of NDE Level III personnel shall be at an interval of every 5 years as noted by ASME Code Case N-341 and N-356 rather than the 3 year interval recommended by SNT-TC-1A, 1980.

2. Plant operation personnel may be utilized to perform the visual leakage examinations required by the edition of ASME Section IX and related codes currently committed to for the conducted of inservice inspections. Such personnel shall be qualified consistent with these ASME code requirements. The selection and qualification of such personnel shall be prescribed by a procedure(s) which is reviewed and concurred with by the Quality Assurance Department.

3. Not all personnel who:

   A. Review and approve inspection and testing procedures,

   B. Evaluate the adequacy of activities to accomplish the inspection and test objectives,

   C. Evaluate the adequacy of specific programs used to train and test inspection and test personnel,

   D. Certify Level III individuals in specific categories or classes,

   will be certified as meeting the Level III capability requirements of ANSI N45.2.6 - 1978. Rather these personnel will be determined by management through evaluation of their education, experience, and training to be fully qualified and competent to perform these functions. The basis for the determination will be documented.

NRC Regulatory Guide 1.64, Rev. 2, June 1976

Quality Assurance Requirements for the Design of Nuclear Power Plants

GPUN will comply with the Regulatory Position established in this Regulatory Guide in that QA programmatic/administrative requirements included therein shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements) associated with maintenance and modifications shall be the original requirements or better.

The Quality Assurance Program complies with this guide with the following clarifications:

APPENDIX C - PART 2

1. Regulatory Position C.2(1) of the Regulatory Guide:

   If the designer's immediate Supervisor is the only technically qualified individual available, this review can be conducted by the Supervisor, providing that: (a) the other provisions of the Regulatory Guide are satisfied, and (b) the justification is individually documented and approved in advance by the Supervisor's management, and (c) quality assurance audits cover frequency and effectiveness of use of Supervisors as design verifiers to guard against abuse.

2. Sections 6.2, 7.2 and 8.0 of ANSI N45.2.11-1974

   Each of the above sections reiterate the need to apply design control provisions equivalent to original or previously verified designs. Design control provisions include revision, review, and approval of the design document(s) affected and design verification.

   The last sentence of Paragraph 6.2 could be read to imply that two separate reviews are required for "field changes" to previously approved designs: (1) the review of field changes for the effect on overall design and (2) design verification. As a point of clarification with regard to "field changes," the effect of the field change will be independently evaluated and the need for design verification of the specific field change will be determined. If the review determines that the field change has no effect on the previously approved design then that review constitutes a design verification of that field change. If the review determines that the field change does have an effect on the previously approved design then a design verification of the resolution of that specific field change will be conducted.

   Also, field changes that are "minor" as described in paragraph 7.2 of the standard will not be design verified. Procedural requirements shall be provided to identify when such field changes are "minor" in the context of paragraph 7.2 of the standard.

NRC Regulatory Guide 1.88, Rev. 2, October, 1976

Collection, Storage, and Maintenance of Nuclear Power Plant Availability Assurance Records

GPUN will comply with the intent of this regulatory guide by compliance with the requirements of ANSI/ASME NQA-1-1979, Supplement 17S-1 and Appendix 17A-1 including Appendix 17-1, NQA-1A-1981.

APPENDIX C - PART 2

NRC Regulatory Guide 1.94, Rev. 1, April 1976

Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel during the Construction Phase of Nuclear Power Plants

The GPUN Quality Assurance Program complies with this guide with the following clarification(s):

(1) QA programmatic/administrative requirements included in the Regulatory Guide shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications shall be the original requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

(2) Section 5.4 of ANSI N45.2.5-1974 specifies the calibration frequency and method of automatic cut-off impact wrenches used to make up and inspect high strength bolted connections; and, the calibration frequency of hand held torque wrenches used to inspect high strength bolted connections. Section 5.2.6 of ANSI 18.7 as well as 6.6 of this plan also specify controls for measuring and test equipment. Sections 5.2.6 of ANSI 18.7-1976 in conjunction with 6.6 of this Plan shall be used in lieu of 5.4 of ANSI N45.2.5 to control the frequency of calibration of automatic cut-off impact wrenches and hand held torque wrenches used to make up and/or inspect high strength bolted connections. The method of calibration will be consistent with the manufacturer's recommendation(s).

NRC Regulatory Guide 1.116, Rev. 0-R, May 1977

Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems

The GPUN Quality Assurance Program complies with this guide with the following clarification:

QA programmatic/administrative requirements included in the Regulatory Guide shall apply to maintenance and modification activities even though such requirements were not in effect originally. Technical requirements associated with maintenance and modifications, shall be the original requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

Much of N45.2.8 applies to construction and pre-operational testing. As a result, many of the listed tests are not appropriate in an operational plant. In lieu of this, GPUN utilizes its Engineering and/or Maintenance organizations to establish the need for specific tests or test procedures during the operational phase.

APPENDIX C - PART 2

NRC Regulatory Guide 1.123, Rev. 1, July 1977

Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants

The GPUN Quality Assurance Program complies with this guide with the following clarification:

1. Section C.3. A corrective action system may, depending upon complexity and/or importance to safety of the item or service provided, be imposed upon the supplier. When a corrective action is imposed on a supplier, the applicable elements of Section 9.0 of the standard will be included and its implementation will be verified.

2. Section C.4. Applicable information concerning the method(s) of acceptance of an item or service will be made available to receiving inspection personnel.

3. Section 4.2.a of ANSI N45.2.13-1976. When evaluation of a supplier is based solely on historical supplier data, these data will primarily include records that have been accumulated in connection with previous procurement actions. Data that includes experience of users of identical or similar products of the prospective supplier and product operating experience will be used if available.

4. Section 4.2 of ANSI N45.2.13-1976. In the special case of "commercial grade items" the supplier does not have to be evaluated by one of the methods identified; however, the procurement documents shall contain requirements specific to the item being procured.

5. Section 7.5. As a point of clarification, personnel who perform the audit(s) as described in Section 12.0 will not be qualified in accordance with ANSI N45.2.6. Such personnel are qualified in accordance with Regulatory Guide 1.146, dated 8/80.

6. Section 10.2.d of ANSI N45.2.13-1976. The requirements of this section are interpreted as follows: The person attesting to a certificate shall be an authorized and responsible employee of the supplier and shall be identified by the supplier.

7. Section 10.2.1, Verification of the Validity of Supplier Certificates and the Effectiveness of the Certification System, is as follows: The verification of the validity of supplier certificates and the effectiveness of the certification system are accomplished as an integral part of the total supplier control and product acceptance program, and no separate GPUN system exists that addresses itself solely to such verification. The degree of verification required will depend upon the type of item or service and their safety

importance. The means of verification may include source witness/hold points, source audits, and document reviews; independent inspections at the time of material receipt; user tests on selected commodities, such as concrete components; and tests after installation on selected components and systems. All of these means verify whether or not a supplier has fulfilled procurement document requirements and whether or not a certification system is effective.

NRC Regulatory Guide 1.142, October 1981

Safety-Related Concrete Structures for Nuclear Power Plants (Other Than Reactor Vessels and Containments)

GPUN shall comply with the Regulatory Position established in this Regulatory Guide as augmented by ANSI N45.2.5, ANSI/ANS 6.4-1977 and ANSI/ACI 318-77 for the design and construction of new Nuclear Safety Related or Regulatory Required structures and additions to existing Nuclear Safety Related or Regulatory Required structures. Inspectors will be qualified according to either ANSI N45.2.6 or Appendix VII of Section III, Division 2, of the ASME Boiler and Pressure Vessel Code.

NRC Regulatory Guide 1.143, October 1979

Design Guidance for Radioactive Waste Management Systems, Structures and Components Installed in Light-Water-Cooled Nuclear Power Plants

Since the original design and construction of TMI-1 and Oyster Creek was to different classification criteria than contained in this guide; GPUN will comply with the regulatory position of this guide with the following clarifications:

1. For modification to existing plant systems, items will be classified by Technical Functions according to the original design basis or this guide. This classification will not degrade the safety of the system being modified.

2. Additions to existing plant systems will be made to the same code, standard and technical requirements which were originally applied to the system to which the addition is to be made or more recent versions of these codes, standards and technical requirements. The addition will not degrade the safety of the system being added to.

3. For new construction, the latest applicable code will be utilized unless such utilization would result in hardship or unusual difficulty without providing an equivalent level of safety.

APPENDIX C - PART 2

NRC Regulatory Guide 1.144, January 1979
Auditing of Quality Assurance Programs for Nuclear Power Plants

GPUN is in basic agreement with the position set forth in the Regulatory Guide subject to the following comments:

1. Sections C.3.a(1) and C.3.a(2)

   Minimum scheduling frequency and topical coverage of the GPUN internal audit program will be as defined in Section 6 of the nuclear units' Technical Specifications.

2. Section C.3.b(1). Source surveillance will be utilized in lieu of or in addition to receipt inspection. As permitted, external audits of such procurement actions will typically not be scheduled.

3. Section C.3.b(2)

   External audits of selected suppliers of services which are within the scope of this Plan will be scheduled and conducted at least once within the life of the activity or every three years. Refer also to 10.2.5 of this plan.

   An annual evaluation of suppliers of items, parts, materials and services will be conducted. These evaluations will be conducted utilizing the results of source surveillance, source inspection, receipt inspection and/or audits; and, other factors. These evaluations will determine the need to conduct audits of suppliers of items, parts or materials; or, increase the frequency of conducting audits of suppliers of services.

APPENDIX D

Terms and Definitions

This Appendix contains certain terms and their definitions that are important to a uniform understanding of the requirements of the GPUN Operational Quality Assurance Program. ANSI N45.2.10-1973, as endorsed by Regulatory Guide 1.74, and NQA-1a-1981 contain terms and definitions applicable to the nuclear industry. The terms and definitions found in these documents are applicable to the GPUN Operational Quality Assurance Program and, for convenience, are included, in part, herein. Those terms and definitions which are the same as listed in ANSI N45.2.10-1973 or NQA-1a-1981 are identified by footnote (1). Certain exceptions to the terms and definitions found in ANSI N45.2.10-1973 and NQA-1a-1981 have also been taken. These exceptions are identified by footnote (2).

ACCEPTANCE (as used in relation to acceptance of a document): Generally approved, believed or recognized. Does not require signature of person accepting.

ACCEPTANCE CRITERIA: Specified limits placed on characteristics of an item, process, or service defined in codes, standards, or other documents. (1)

ADMINISTRATIVE CONTROLS: Rules, orders, instructions, procedures, policies, practices and designations of authority and responsibility.

ALARA: (Acronym for As Low As Reasonably Achievable) - a method of analysis of the performance of activities in radiological areas to determine specific methods for reducing man-rem exposure.

APPROVAL: An act of endorsing and adding positive authorization (signature) to a document by the person(s) responsible for the document. (2)

ARCHITECT/ENGINEERING (A/E): A firm under contract to provide engineering or design services.

AS-BUILT DATA: Documented data that describes the condition accually achieved in a product. (1)

AUDIT: A formal, independent activity conducted with the intent to verify conformance with established requirements. This activity is performed in accordance with written procedures or checklists to verify, by examination and evaluation of objective evidence, that documents and activities within the scope of this Plan are consistent with requirements, are being effectively implemented and provide results which are consistent with technical requirements. The terms "source surveillance", "source inspection", "inspection" "surveillance/monitoring," and "survey" are not synonymous or equivalent to the term "audit." (2)

APPENDIX D

BASELINE ENGINEERING DOCUMENTS: Includes but is not limited to safety evaluation, design criteria documents, flow charts, System Design Descriptions, general arrangement drawings, single-line diagrams, and logic diagrams which show or define basic plant parameters. For instance, Control Panel, Layout and Control Room arrangement drawings are baseline documents.

BASIC COMPONENT: A term defined in 10CFR21, a "basic component" means a plant structure, system, component or part (including design analyses), necessary to assure (1) the integrity of the reactor coolant pressure boundary, (2) the capability to shutdown the reactor and maintain it in a safe shutdown, or (3) the capability to prevent or mitigate the consequences of accidents that could result in potential off-site exposures comparable to those referred to in 10CFR100.11.

CALIBRATION: Comparison of two instruments or measuring devices, one of which is a standard of known accuracy traceable to national standards, to detect, correlate, report, or eliminate by adjustment any discrepancy in accuracy of the instrument or measuring device being compared with the standard.

COMMERCIAL GRADE ITEM: An item that meets all of the following conditions:

- Is used in applications other than nuclear power plant facilities or activities;

- Is not subject to design or specification requirements unique to NRC requirements for nuclear power plants;

- May be ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (e.g., a catalog).

  NOTE: The technical requirements set forth in the published product description must match the requirements needed to satisfy the design function of the item. Commercial grade items, when used as a basic component, must be dedicated prior to operation.

CONCURRENCE: Written agreement that the provisions in a document for which review has been requested are acceptable for implementation within, or from the standpoint of, the reviewer's area of responsibility.

CONDITION ADVERSE TO QUALITY: An all inclusive term used in reference to any of the following: failures, malfunctions, deficiencies, defective items, and nonconformances. A significant condition adverse to quality is one which, if uncorrected, could have a serious effect on safety or operability.

APPENDIX D

CONTRACTOR: Any organization under contract for furnishing items or services. It includes the term Vendor, Supplier, Subcontractor, Fabricator and subcontractor levels, where appropriate. (1)

CONTROLLED DOCUMENT: A document which is assigned and distributed to an individual, organization or location and requires that individual or organization to be accountable for the document. The distributing agent is responsible for providing the recipients with current revisions to the document.

CORRECTIVE ACTION: Measures taken to rectify conditions adverse to quality and, where necessary, to preclude repetition. (1)

DEDICATION: The process by which a commercial grade item is designated for use in a nuclear safety-related application(s). It includes a point in time, typically after receipt, when the party designating the item assumes deficiency reporting responsibility associated with such use.

DESIGN BASES: That documented information which identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design.

DETAILED DESIGN DOCUMENTS: Engineering design documents derived from the Baseline Engineering Documents that provide the detail of design sufficient to fabricate, install and test a modification or system. This includes but is not limited to Procurement, Material, and/or Test Specifications, Installation Specifications, Fire Hazard Analyses, construction drawings, fabrication drawings, Bill of Materials, etc.

DOCUMENT: Any written, pictorial, graphical or other reproducible media information describing, defining, prescribing, specifying, reporting, or certifying activities, requirements, procedures or results. A document is not considered to be a record until it is completed and contains the required signatures. (2)

ENGINEERING (Engineer): This term refers to the technical responsibilities of Technical Functions, Plant Engineering or A/E's.

EXTERNAL ORGANIZATIONS: Any organization participating in the project which is not a part of GPUN. This term includes vendors, A/E's and contractors. This term is synonymous with the term supplier.

APPENDIX D

ITEM: Any structure, system, or component of a nuclear power plant including nuclear fuel and radwaste systems. This item also includes licensed radwaste shipping containers. Quality classification shall be performed for mechanical, electrical, and instrumentation items at the component level. Mechanical items shall include valves, equipment and specialty items. Electrical and instrumentation items shall include electrical, distribution, instrument and control panels, cabinets, switchgear, motor control centers, non-panel mounted instruments, transformers and motors. This term does not necessarily include parts of components.

LEAD AUDITOR: An individual qualified to organize and direct an audit, report audit results, and evaluate corrective actions. This term is not equivalent to the term "auditor." The term "audit team leader" is equivalent to the term "lead auditor."

MONITORING/SURVEILLANCE: An act of assuring compliance of activities to program requirements by direct observation or record review. Generally, monitoring is performed on site and surveillance is performed at a vendors's facility.

NUCLEAR SAFETY RELATED: Structures, systems and components designed to remain functional for all design basis conditions necessary to assure the following safety functions:

1) The integrity of the Reactor Coolant Pressure Boundary.

2) The capability to shutdown the reactor and maintain it in a safe (hot) shutdown condition; or

3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of 10CFR100.

PROCUREMENT DOCUMENT: Purchase requisitions, purchase orders, drawings, contracts, specifications or instructions used to define the quality and technical requirements for purchase. (1)

APPENDIX D

QA PLAN SCOPE: This term is a designator used on the coversheet of approved documents which prescribe the method of performance of activities or tasks identified in Section 2.2.2 of this Plan.

QUALIFICATION (Personnel): The characteristics or abilities gained through education, training or experience, as measured against established requirements, such as standards, or tests, that qualify an individual to perform a required function.(1)

QUALIFICATION (Procedures): An approved procedure that has been demonstrated to meet the specified requirements for its intended purpose. (1)

QUALITY CLASSIFICATION: A process for identifying the technical and quality requirements of structures, systems, and components based upon regulatory requirsments and commitments, safety function and/or reliability consideration.

QUALITY CLASSIFICATION LIST (QCL): The approved and controlled document used to record the identification of structures, systems and components that are within the scope of this Plan.

RECORD: A completed document wh'ch has been authenticated which furnishes evidence of the acceptability of an item, part, material, or activity, etc. within the scope of this Plan.

REGULATORY REQUIRED: Those items which are not nuclear safety related but which must meet NRC regulatory requirements or commitments. Sources of regulatory requirements and commitments, as a minimum, consist of those associated with expressed conditions of the unit operating license, FSAR, fire protection (Appendix R and BTP Appendix A), security, environmental qualification of electrical equipment, seismic response capabilities, licensed shipping containers to the extent committed by GPUN, generic letters, IE Bulletins, 10CFR50.54(f) correspondence, certain NUREG documents, etc.

REVIEW FOR CONCURRENCE. A review of a document conducted prior to that document being approved for use. A review conducted by someone other than the individuals who prepared; or, will approve the document for use.

SPECIAL PROCESS: A process, the results of which are highly dependent on the control of the process or the skill of the operators, or both, and in which the specified quality cannot be readily determined by inspection or test of the product. (1)

SUPPLIER: A firm which provides items, parts, materials or services from an offsite facility and operates under the requirements of their own QA program.

APPENDIX D

SUPPLIER QUALITY CLASSIFICATION LIST (SQCL): A approved and controlled list of Suppliers who have been evaluated by the GPUN Quality Assurance Department for their capabilities to produce or provide items or services or both within the scope of this Plan.

TRACEABILITY: The ability to trace the history, application, or location of an item and like items or activities by means of recorded information. (1)

TREND ANALYSIS: A quantitative method of collecting and analysing nonconformance/deviation events with the goal of systematically determining programmatic/procedural weaknesses.

VENDOR: A firm which manufactures items at offsite facility and operates under the requirements of their own qualit surance program.

VERIFICATION: An act of confirming, substantiating and assuring that an activity or condition has been implemented in conformance with the specified requirements. (1)