Indian Point 3
Nuclear Power Plant
P.O. Box 215
Buchanan, New York 10511
914 736.8001

NewYorkPower Authority

L. M. Hill
Resident Manager

June 8, 1994
IPN-94-069

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop PI-137
Washington, DC 20555

SUBJECT: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
License No. DPR-64
Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29, and 93-81

REFERENCE: 1) NRC Letter, T. Martin to W. Josiger, dated April 26, 1994, "Notice of Violation (NRC Inspection Report Nos. 50-286/93-22, 27, 29, and 81)."

Dear Sir:

This letter provides the Authority's response to the subject Notice of Violation. The Authority's response to each specific violation is included in Attachment I to this letter. In some cases, the reply in Attachment I updates or replaces that provided during the enforcement conference associated with these issues, or in past correspondence.

The Authority agrees with the violations set forth in Reference 1. The Authority understands the severity of the violations, and is committed to preventing future violations by taking steps to improve the overall performance of the IP3 Nuclear Power Plant.

The Authority recognizes that past efforts to improve performance at IP3 have not been fully effective. Past problems in plant programs and processes are being addressed in part by changes in plant management personnel. The Authority is also reevaluating ongoing problem areas and increasing the involvement of the plant staff in meeting management's high expectations for quality work. The Authority has developed a comprehensive program to address unit restart and has designated it the Restart and Continuous Improvement Plan (RCIP). The program includes action plans which will resolve the broad-based problems of procedural compliance and

JE01

work control. The RCIP will improve the design control process in terms of interfaces, responsibilities, accountabilities, and timely engineering support of operations. Management is committed to supporting the RCIP and assuring that our past problems are resolved.

The Authority requested an extension to June 9, 1994, for submittal of this response to the subject violation. The request was conveyed by Indian Point 3 (IP3) Licensing Coordinator, Mr. D. Celentano, to the IP3 NRC Senior Resident Inspector, Mr. G. Tracy. The submittal extension was verbally approved by the NRC Director, Division of Reactor Projects, Region I on May 26, 1994.

The specific causes of the violations cited in Reference 1 are being addressed. Major areas of weakness that caused or contributed to the violations are discussed below.

Design Control

The Authority has taken and is continuing to take action to improve its design control process. In 1990, the Authority implemented a modification and design control program that strengthened the design process. This process includes a number of recent improvements such as a setpoint control program, a design change process, and a software quality assurance program. The existing design control process provides controls for plant systems as required by 10 CFR 50, Appendix B, Criterion III.

The IP3 Restart and Continuous Improvement Plan (RCIP) will provide corporate-wide focus on design control improvements. The RCIP action plans for Work Control, Corrective Action and Procedure Adherence will provide for a stronger design control process.

The Authority has an effort underway to further enhance the design control and modification processes for both plants. This effort was initiated in August 1992 under the Configuration Management Strategic Plan and included self-assessments. These enhancement efforts include additional controls over work processes, improvements for installation and testing, and enhancing the process for replacing components.

Specific procedural improvements have been developed, approved, and implemented for "Small Modifications" and "Engineering Change Notices" (Field Changes), and are being completed for "Modification Turnover and Closeout".

These enhancements (along with others) have provided improvements to design integrity, clarity, modification closeout, ease of use, and simplification of the design process and procedures.

The Authority has an ongoing design basis program to supplement the design control process. The design basis program provides consolidated design basis information to support the design control process. This will support the change control process by making applicable regulatory requirements and design bases readily identifiable. In addition, the design basis program identifies deficiencies in the documentation that supports the design. Tracking and resolving these deficiencies enhances the ability to identify design deficiencies that occurred during the initial design or prior to the enhanced design control process.

Procedure Adequacy/Adherence

During the current outage, failure to follow procedures has been a recurring problem. The Authority's initial approach to this problem involved strict measures designed to address deep rooted management and performance deficiencies as well as the plant staff's resistance to change. These measures included weekly station wide meetings to convey management's expectations for procedural adherence and the intent to take disciplinary actions where warranted.

Recurrence of the problem indicated that this approach would not fully address the issue. The new management team has initiated a strategic approach to foster ownership of procedural adherence problems and the necessary teamwork to address the problem. The disciplinary actions were downplayed to emphasize that management wants workers to identify problems. And, where appropriate, the new management rescinded disciplinary actions in order to promote a more positive outlook towards improving procedure adherence.

When another significant incident of failure to follow procedures occurred, the Resident Manager issued a memorandum to all IP3 employees (dated April 18, 1994), containing the following directive, "There is no individual at Indian Point 3 that is exempt from our procedures; nothing less than complete compliance is acceptable at Indian Point 3." The Resident Manager also emphasized in the referenced memorandum that, "Our procedures provide the instructions and requirements necessary to ensure that our activities are accomplished in an orderly manner with a safe, predictable and successful outcome."

In addition to the memorandum, an emergency meeting was called for all managers and supervisors to evaluate the incident. The objective of the meeting was to decide how to bring ownership of the procedural adherence problem down to the worker level, and to solicit feedback from all levels on how to resolve the problem.

Management recognized that treating events as an isolated issue was not effective and initiated a global Procedural Adherence Root Cause Analysis to look for the underlying cause or causes. The Procedural Adherence action plan is part of the Restart and Continuous Improvement Plan.

To accomplish this, management assembled a team from a cross section of departments to analyze the feedback obtained, perform root cause determination and validation, and identify corrective actions.

A summary of the commitments made in this letter is included in Attachment II.

If you have any questions, please contact Mr. K. Peters at (914) 736-8029.

Very truly yours,

J. M. Hill
Resident Manager
Indian Point 3 Nuclear Power Plant

See next page for statement of affirmation

STATE OF NEW YORK

COUNTY OF WESTCHESTER

L. M. Hill, being duly sworn, deposes and says:

I am the Resident Manager of the Indian Point 3 Nuclear Power Plant of which the Power Authority of the State of New York is the owner and operator under Facility Operating License DPR-64; I have read the foregoing "Reply to Notice of Violation Associated with Inspection Report Numbers 93-22, 93-27, 93-29, and 93-81" and know the contents thereof; and that the statements and matters set forth therein are true and correct to the best of my knowledge, information and belief.

L. M. Hill
Resident Manager
Indian Point 3 Nuclear Power Plant

Subscribed and sworn to
before me this 8th day
of June, 1994.

Notary Public

BEVERLEY WILLIAMS
Notary Public, State of New York
No. 24-01WI 4855981
Qualified in Kings County
Commission Expires April 7, 1996

cc: Mr. Thomas T. Martin
Regional Administrator
Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
Indian Point 3 Nuclear Power Plant

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Violation I - Violation that Occurred Prior to the Current Outage

"10 CFR Part 50, Appendix B, Criterion III, 'Design Control' requires that measures be established to assure that applicable regulatory requirements and the design bases as specified in the license application for those structures, systems and components to which the appendix applies, are correctly translated into specifications, drawings, procedures, and instructions. Further, these measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled.

Contrary to the above, measures were not established that included provisions to assure that deviations from appropriate quality standards that reflect the applicable regulatory requirements and the design bases (as specified in the license application for those structures, systems and components to which the appendix applies) were controlled. Specifically, on several occasions, as reflected in the following examples, operable systems in the plant were discovered to be outside their design bases for an extended period of time and involved conditions that were deviations from the design standard that were not controlled, because the deviations were not reviewed, approved and documented:"

Design Control

NYPA agrees with this violation.

The cause of this violation was an inadequate design change control process in effect prior to 1990. The existing design control process provides controls for plant systems as required by 10 CFR 50, Appendix B Criterion III. The IP3 Restart and Continuous Improvement Plant (RCIP) will provide corporate-wide focus on design control improvements. The RCIP action plans for Work Control, Corrective Action, and Procedure Adherence will provide for a stronger design control process. These improvements will be further enhanced by continuing planned upgrades in the design control process described in the following paragraphs.

The Nuclear Engineering organization has undertaken a number of initiatives to improve the timeliness, thoroughness and quality of the resolution of engineering issues. These efforts include the development of an engineering work management system, clarification of engineering roles and responsibilities, the implementation of a prioritization system for engineering work and the improvement of the engineering and design change process.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Each of these efforts have commenced and will greatly improve the ability of the engineering organizations to clearly identify the work to be done, who should be doing the work, provide an easy process to control the work, and develop performance indicators to measure our effectiveness. The work management effort will include the planning, scheduling and resource loading of engineering work.

The design control deficiencies that have been identified are being addressed as follows:

Some of the conditions identified in the Notice of Violation (NOV) existed in the original design of the plant. The Authority has implemented a design basis program to consolidate the design basis of the plant and validate and reconstitute where necessary. This includes obtaining all original design information and implementing a process for resolving open items in a timely manner. In fact, several of the design control examples in this NOV were items self-identified through the design basis program.

Some of the conditions identified in the NOV were a result of the change control process in effect prior to 1990. In 1990, the Authority implemented a modification and design control program that strengthened the design process. This included a number of recent improvements such as a setpoint control program, the Type I design change process, and a software quality assurance program.

A number of efforts were undertaken to ensure that no other significant issues are outstanding. This included a review of all open Requests for Engineering Services, a review of open Design Document Open Items, system walkdowns, and other component walkdowns.

New engineering issues are prioritized through the work control center. These items are then tracked through the work control system.

The Authority has an effort underway to further enhance the design control and modification processes for both plants. This effort was initiated in August 1992 under the Configuration Management Strategic Plan and was identified by self-assessments. These enhancement efforts include additional controls over work processes, improvements for installation and testing, and enhancing the process for replacing components.

Specific procedural improvements were developed, approved and implemented for "Small Modifications", "Engineering Change Notices" (Field Changes), and are being completed for "Modification Turnover and Closeout".

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

These enhancements (along with others) will provide continuing improvements to design integrity, clarity, closeout, ease of use, and simplification of the process and procedures.

The following sections discuss the cause and corrective actions to prevent recurrence for the violation examples:

Example I.1 - CCR Ventilation System Design Temperature

"The central control room (CCR) ventilation design, as described in FSAR Section 9.9.1, is to maintain 75 degrees F dry bulb and 50% relative humidity under normal operating conditions. FSAR Section 9.9.2 states that the design will maintain "functional capability," keeping room temperatures less than 120 degrees F at all times, including the period during a station blackout or design basis accident. However, the CCR ventilation system design was unable to maintain temperature below 75 degrees F under normal operations when outside temperatures were above 75 degrees F. In addition, NYPA calculations show that, the CCR temperature would exceed 120 degrees F within one hour during a design basis loss of coolant accident with loss of offsite power."

Response to Example I.1

NYPA agrees with the example except for the last sentence.

The Authority has performed a transient calculation for the current as-built heat loading conditions during a postulated design basis loss of coolant accident with loss of offsite power, and determined that the design temperature would not be exceeded. The calculation assumes that other CCR design deficiencies are corrected.

The event was initially caused by personnel error of an indeterminate origin during the original system design. The architect engineer made an error in the original heat load calculation. This event was compounded by personnel error, inattention to detail. When additional components were added to the CCR, inadequate attention was paid to the effect of the additional heat load on the air conditioning system.

The following actions were taken prior to the identification of this event. However, they serve to prevent recurrence of the event.

> The Authority's Modification Control Manual (MCM) increases the scope of the reviews in the design change process. This includes a comprehensive review of work performed by consultants. Consideration of the effects on other systems is required by the MCM process checklists. The MCM serves to address the design control issue.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Authority's Design Basis Documentation (DBD) program increases the retrievability of design basis documents and information for review during modifications. This information supports the MCM program. The DBD program identified the CCR HVAC issue as a design document open item.

The Authority is taking or has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

The Authority is currently defining and implementing a modification to maintain the cooling capacity of the CCR HVAC system within design bases. This modification is scheduled for completion prior to start up. (This repeats commitment IPN-93-145-01.)

The Authority has evaluated the existing CCR HVAC system for modifications to assure compliance with design bases and licensing commitments. The evaluation determined whether the modification to add cooling capacity is sufficient for long term operation. (This closes commitment IPN-93-145-02.)

The Authority will be in full compliance prior to startup in that the CCR HVAC will be operable and able to maintain system design basis cooling capacity.

Example I.2 - CCR Ventilation System Design - Seismic Mounting

"The CCR ventilation system design, as described in FSAR Section 9.9.1 states, in part, that the system will sustain seismic events. However, on September 15, 1993, NYPA determined that the CCR ventilation system is not designed to sustain seismic events as the mountings for dampers A, B, C, D1, D2, F1, and F2 are not seismically mounted and the dampers C, F1, and F2 were not seismically qualified, conditions that have existed since initial plant startup."

Response to Example I.2

NYPA agrees with this example.

This event was caused by personnel error due to inadequate design control during initial installation of the dampers. The dampers were required by specification to satisfy seismic design criteria. However, this requirement was not met in the installation. Whether this was due to a design or installation error can not be determined because installation drawings are not available.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Authority's Modification Control Manual (MCM) procedures require the responsible engineering department specify installation requirements. These procedures also require the incorporation of seismic design criteria and walkdown of installations prior to system acceptance. The MCM program was not in place at the time of this event. Adherence to this MCM program assures that this event will not occur in the future.

The following corrective actions have been performed in order to address the deficiencies identified during the investigation of this event.

> The Authority has completed a modification to seismically mount the appropriate CCR HVAC damper actuators. (This closes commitment IPN-93-123-02.)
>
> The Technical Services department conducted a search to locate the documentation showing the seismic qualification of the actuators. The search was unsuccessful. However, the actuator was shown to be seismically qualified through testing. (This closes commitment IPN-93-123-01.)

The Authority is in full compliance in that the damper actuators are seismically qualified and mounted.

Example I.3 - CCR Ventilation System Design - Loss of Instrument Air

"The CCR air conditioning system, as stated in FSAR Section 9.9.2, was designed so that the functional capacity of the control room is maintained at all times. The design condition for maintaining functional capacity of the control room dictated that the ambient temperature for safety equipment located in this room shall not exceed 120 degrees F for short term operation associated with a loss of one air conditioning unit. However, on October 23, 1993, the licensee identified that upon loss of instrument air to the CCR ventilation system, various dampers fail in undesirable positions rendering the CCR HVAC system incapable of performing its design function of maintaining its functional capacity, a condition that has existed since initial plant startup."

Response to Example I.3

NYPA agrees with the example.

The event was caused by personnel error of an indeterminate origin during the system design. The architect engineer did not evaluate this failure mode during initial design or when upgrading the CCR HVAC system from a non safety system to a safety system prior to initial operation.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Authority's Modification Control Manual (MCM) program procedures require the failure modes for equipment to be analyzed. The MCM program was not in place at the time of this design and installation. Adherence to this MCM program assures that this event will not occur in future modifications.

The Authority will take additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

> Prior to startup, the Authority will install a backup gas supply to operate the damper actuators, for a minimum of 24 hours, in the event of a loss of Instrument Air to the Control Room Ventilation System's Damper Actuators. (This repeats commitment IPN-94-007-01.)
>
> Prior to startup, the Authority will revise the System Operating Procedures (SOPs) and Emergency Operating Procedures (EOPs) related to the Control Room Ventilation System to guide the operator on the failure position of the damper actuator and the possible corrective actions (manual damper positioning) that they can perform. (This repeats commitment IPN-94-007-02.)

The Authority will be in full compliance prior to startup. The installed backup gas supply will allow damper actuators to be operated as required in the event of a loss of Instrument Air.

Example I.4 - Control Building Ventilation System Electrical Supply

"Two control building fans supply cooling for all of the stations safety-related 480 volt switchgear. The electrical system equipment, described in FSAR Section 8.2.3, is arranged so that no single contingency can deactivate enough safeguards equipment to jeopardize the plant safety. However, the two control building fans are supplied from a single motor control center (MCC) on bus 5A, and NYPA calculations show that, under worst case conditions, loss of cooling would cause the switchgear to overheat in approximately eight minutes. This condition has existed since initial plant startup."

Response to Example I.4

NYPA agrees with this example.

This event was caused by personnel errors during the initial design process. These errors involved inadequate design review during the initial plant design, inattention to detail and failure to recognize the importance of support systems in fulfilling the functional requirements of the safety related systems.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Following this event, corrective actions were or will be performed to prevent recurrence of this incident. The specific corrective actions are presented below.

Operations Department Night Order 93-311 was issued on October 7, 1993. This order was subsequently replaced with Night Order 93-318 to alert the operators of the postulated effects of high ambient temperatures in the CB 15' elevation switchgear room. The Night Order provides for mitigating responses as well as the resetting of safety related circuit breakers.

Operations will develop an Alarm Response Procedure (ARP) to identify responses for increasing CB 15' elevation switchgear room ambient temperatures in order to maintain the temperatures below the design values. This procedure will be developed prior to plant startup. (This repeats commitment IPN-94-033-03.) Note: Once the ARP is implemented, this will supersede Night Order 93-318.

Nuclear Engineering issued Modifications 93-03-257 480V and 93-03-429 480V to relocate power to the switchgear room exhaust fans 33 and 34 from MCC-39 to MCC-36A and MCC-36C. MCC-36A and MCC-36C are supplied by emergency diesel generators. These modifications will be installed prior to plant startup. (This repeats commitment IPN-94-033-02.)

Technical Services will upgrade Exhaust fans 33 and 34 control components to QA Category I. (This repeats commitment IPN-93-152-06.)

Site Engineering is processing Design Change DC 94-03-055 CBHV to provide the Control Room with an alarm upon detection of a high ambient temperature condition at the 15' elevation of the CB. Safety related temperature indicators will also be mounted in the room to provide local indication of the room temperature. These modifications will be installed prior to plant startup. (This repeats commitment IPN-94-033-01.)

The Authority is taking additional corrective actions to prevent further violations of this type. These corrective actions are presented below.

Training on Administrative Procedure AP-8, "Reportability Manual," was provided to WPO corporate personnel involved in the modification or review of the design of IP3. (This closes commitment IPN-93-152-07.)

Technical Services will review Priority I and II Design Document Open Items (DDOI) for the Control Building (CB) HVAC system prior to plant startup to determine their safety significance. (This repeats commitment IPN-93-152-05.)

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The White Plains Office (WPO) Reactor Engineering group will complete the Individual Plant Examination (IPE) level 1 analysis by June 30, 1994. (This repeats commitment IPN-94-033-04.)

Further engineering analysis is required to establish the compensatory measures required to mitigate the consequences of the failure of the HVAC systems for the CB 15' elevation. WPO Nuclear Electrical Department (NED) and Technical Services will complete this analysis and establish the required compensatory measures prior to plant startup. (This repeats commitment IPN-94-033-05.)

The Authority will be in full compliance prior to startup.

Example I.5 - Fuel Oil Storage Tank Usable Capacity

"FSAR Section 8.2.3 and Technical Specification 3.7.A.5 specify three emergency diesel generator fuel oil storage tanks, with each tank containing a total volume of 5,676 gallons. The design capacity is based on the assumption that only two tanks are available, each with 5,238 gallons of usable fuel, providing sufficient fuel for at least 48 hours of diesel generator operation supplying the minimum safeguards equipment. However, on July 11, 1992, NYPA performed a modification that decreased the usable capacity of the fuel oil storage tanks by 489 gallons and did not increase the total volume required by the TS and FSAR to compensate for this decrease. As a result, the 5,238 gallons assumed in the design basis were not available, based on recorded EDG fuel oil storage tank levels, from December 4 to 24, 1992."

Response to Example I.5

NYPA agrees with this example.

The failure to change Technical Specification Section 3.7.A.5 is attributed to personnel error on the part of the engineer performing calculation IP3-CALC-EG-00217, and by the engineers responsible for preparing and reviewing Minor Modification Package (MMP) 90-3-116 EDG. The nuclear safety evaluation in MMP 90-3-116 EDG (Section 8.0) incorrectly indicates that a change to the Technical Specifications is not required. The conclusion that an amendment to the plant's Technical Specifications was not required was arrived at through a misinterpretation of the setpoint calculation, which was viewed as only adding an additional margin of safety and not as a recalculation of the minimum allowable fuel volume. Furthermore, there was inadequate training/knowledge by mechanical engineers for comprehensively evaluating Instrumentation & Control setpoints.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Following this event, corrective actions were performed to improve attention to detail and establish better setpoint control. These specific corrective actions are presented below.

Site Engineering has preliminarily revised MMP 90-3-116 EDG to indicate that a Technical Specification change is required and to include the latest volume setpoints for the Fuel Oil Tanks. The revised modification will be issued prior to plant startup. (This repeats commitment IPN-93-117-04.)

The EDG fuel oil storage tank level indicator calibration procedures have been revised to ensure that the proper underground fuel oil storage tank penetration is used for sounding the tanks. (This closes commitment IPN-93-117-07.)

Operations and I&C personnel have been trained to use the proper sounding penetration when sounding the tanks. (This closes commitment IPN-93-117-08.)

Weekly surveillance test 3PT-W1, "Emergency Support Systems Inspection," Alarm Response Procedure ARP-11, "Panel SHF - Electrical," and System Operating Procedure SOP-EL-9, "Filling Diesel Fuel Oil Storage Tanks" were revised to reflect the minimum required fuel level as calculated in IP3-CALC-EG-00217 plus an allowance for the uncertainty of the level indication method used to determine actual level in the tanks. (This closes commitment IPN-93-117-01.)

Modification Control Manual procedure MCM-8, "Setpoint Control", has been issued to establish a method for controlling, revising, adding, analyzing and documenting setpoint changes made to equipment at IP3 and FitzPatrick (JAF).

The lessons learned from the event have been discussed between management and engineering staff to reinforce the necessity for attention to detail. (This closes commitment IPN-93-117-05.)

The Authority is taking additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

Site Engineering is reviewing a sample of modification packages where setpoints were changed and the 10CFR50.59 review indicated that a change to Technical Specifications was not required. The review and evaluation will be completed prior to plant startup. (This repeats commitment IPN-93-117-03.)

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

White Plains Office Licensing has drafted a request for an amendment to IP3's Technical Specification, Sections 3.7.A.5 and 3.7.F.4, to reflect the minimum required fuel level as calculated in calculation IP3-CALC-EG-00217. The request will be submitted prior to plant startup. (This repeats commitment IPN-93-117-02.)

The Authority will be in full compliance with Technical Specification, Section 3.7.A.5, in that 5238 usable gallons of fuel will be required, prior to startup.

Example I.6 -Appendix R Surveillance Testing

"Reevaluation of Appendix R, Section III.G, Requirements for Indian Point Nuclear Power Plant Unit 3 (a document referenced in the FSAR Update Section 1.3.1), Section 3.6.6, states that power from the alternative 480VAC, MCC-312A can also be supplied to the 32 component cooling water (CCW) pump to ensure availability of at least one CCW pump for safe shutdown in the event that the normal power supply is disabled by fire. However, on September 28, 1993, during a surveillance test, the alternate 480V MCC-312A was not capable of supplying power to the 32 CCW pump because the control power fuses were missing from the remote shutdown breaker in MCC-312A. The capability to provide alternate power as required by the design had not been demonstrated since post installation testing in 1983."

Response to Example I.6

NYPA agrees with this example.

The exact cause of the fuses not being in place was personnel error of indeterminate origin. Due to inadequate surveillance of 10CFR50, Appendix R alternate safe shutdown power supplies, the missing control fuse was not detected.

Following this event, corrective actions were performed to install missing fuses and test equipment operability and to strengthen control of fuses in the plant. The specific corrective actions are presented below.

The Operations department installed fuses into the control power circuit for 32 CCW pump's alternate power supply breaker and performed a successful test of the alternate feed (3PT-R150).

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

IP3 has recently strengthened control of fuses including implementing a Master Fuse List (MFL) and the Procurement Engineering Group has upgraded inventory/availability of fuses at the station. (Reference Design Control Manual Procedure, DCM-26, "Fuse Control (IP3)")

The Authority is taking additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

The Fire and Safety department will verify that 10CFR50, Appendix R components not currently being tested for operability are operable prior to the plant exceeding cold shutdown. These components will be entered into the IP3 Surveillance Program for future testing. (This repeats commitment IPN-94-005-01.)

The Authority is in full compliance, in that CCW pump 32 was tested operable using its 10CFR50, Appendix R alternate safe shutdown power supply. The Authority will take the above corrective actions to prevent recurrence of this event.

Example I.7 - Gas Stripper and Boric Acid Evaporator Package Removal

"The gas stripper and boric acid evaporator package was designed to remove nitrogen, hydrogen, and fission gases from the liquid discharge to the waste monitor tanks. The waste monitor tanks are vented to the environment and are not monitored for gaseous effluent. FSAR Section 11.1.1 states that the facility design shall include those means necessary to maintain control over the plant radioactive effluent, whether gaseous, liquid or solid. However, the gas stripper was intentionally bypassed in 1980 and subsequently removed in 1987 without adequate review of the applicable design requirements. Subsequently, discharge from the chemical and volume control system holdup tanks was vented to the environment through the waste monitor tanks without processing the gaseous radioactive effluent through a gas stripper."

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Response to Example I.7

NYPA agrees with this violation.

The cause of this event is personnel error due to inattention to detail. The procedure for waste treatment process operation was modified in 1980 without a nuclear safety evaluation (NSE). Operations and Radiological and Environmental Services (RES) personnel intentionally bypassed the CVCS gas stripper - boric acid evaporators without adequately reviewing the impact on radioactive gas and hydrogen releases. In addition, plant personnel did not adequately evaluate the gas stripper removal design change and its impact on the waste gas disposal system in a nuclear safety evaluation in 1987.

Following these events, corrective actions were performed to ensure the current safe operation of the waste treatment system through evaluations and establishing controls for system design changes. The specific corrective actions are presented below.

RES and Technical Services performed a Reasonable Assurance of Safety (RAS), RAS 93-03-346, evaluation to ensure the current safe operation of the waste treatment system until nuclear safety evaluation, NSE 86-03-122 CVCS, could be revised. The RAS determined that processing of the waste holdup tanks could continue since the CVCS gas stripper did not process this liquid.

RES and Site Engineering have revised NSE 86-03-122 CVCS to properly evaluate the removal of the CVCS gas stripper. The resultant change to the waste gas system was documented in an evaluation required by the Radiological Environmental Technical Specifications (RETS). These evaluations concluded that the removal of the gas stripper was acceptable provided that noble gas releases were quantified and administratively controlled.

RES evaluated the impact of releases of previous operations (TID 93-005). The releases of noble gases from 1980 to 1993 were estimated and adjustments to the previous release reports have been submitted in the third and fourth quarter 1993 Semi-Annual Radiological Effluent Release Report. (This closes commitment IPN-93-132-02.)

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

Engineering has established a Modification Control Manual which requires engineering personnel to perform a more detailed review of the design basis prior to the modification of a system.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Design Basis Documents (DBD) now provide a readily available source of design criteria that did not exist at the time of this event, especially the DBD for the Chemical and Volume Control System.

RES updated the Offsite Dose Calculation Manual (ODCM) to establish the administrative controls required by NSE 86-03-122 CVCS. The controls established require the quantification of noble gases from the monitor tank vent when the inlet gas exceeds the original design basis. These controls are implemented through plant procedures.

The Authority is currently in compliance with the radiological effluent design basis and has taken the above corrective actions to prevent further violations of control over plant radioactive effluent.

Example I.8 - Air Operated Solenoid Valve Design Control

"Operation of solenoid operated valves (SOVs) 1276 and 1276A are required for actuation of air operated emergency diesel generator (EDG) service water flow control valves FCV-1176 and 1176A, which allow cooling water flow to the EDG jacket water and lubrication oil coolers, as specified in the service water system design basis in FSAR Section 9.6.1. Air pressure provided to the solenoids was above the design (nameplate) pressure rating of the SOVs. No air regulator setpoints or setpoint controls existed, and system drawings did not specify air pressures. NYPA failed to establish or adequately maintain the specifications, drawings and procedures necessary to ensure the SOVs were operated within their design, and failed to identify and resolve this deviation since initial plant startup."

Response to Example I.8

NYPA agrees with this example.

The cause was personnel error, inattention to detail in that the original design of the facility did not account for this failure mode and subsequent opportunities to correct the problem based on regulatory feedback were deficient.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Following this event, corrective actions were performed to establish and maintain appropriate design of SOVs, as well as improve attention to detail with regards to failure modes and effects. The specific corrective actions are presented below.

The Technical Services and Instrumentation & Control departments checked the Air Regulator settings and, where necessary, adjusted the settings to within allowable Maximum Operating Pressure Difference (MOPD) ratings of the SOV.

The Maintenance department, under the general guidance of the Technical Services department, replaced SOV-1276 and SOV-1276A on December 2, 1993 using solenoid valves with a MOPD greater than or equal to 125 psig (this value exceeds the 120 psig nominal pressure of station service air, the instrument air backup supply). The modification prevents potential overpressurization with air regulator failure. No modification or alternative corrective action is required for SOV-1274 and SOV-1275. These SOVs are part of the normal controls for the EDG service water supply but are not fully qualified for EDG support. They can fail in any position without affecting the capability of the service water supply to cool the EDG. (This closes commitment IPN-93-159-02.)

The orientation of the existing 109 SOVs was reviewed to ensure they were installed in the proper flow configuration. No additional deficiencies were found. (This closes commitment IPN-94-017-03.)

The Authority has taken or is planning to take additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

LER 93-050-01 was written to document this incident. Department managers will review this LER with staff personnel who respond to Information Notices, to stress the requirements that evaluation of industry experience and its applicability to IP3 must be broad scoped and comprehensive. This task will be performed prior to startup. (This repeats commitment IPN-94-017-05.)

Maintenance has completed an action plan to address Generic Letter 91-15. Corrective actions required to address the Generic Letter are scheduled for completion in this plan. (This closes commitment IPN-93-159-01.)

Nuclear Licensing Guideline (NLG) 21 prevents recurrence of the failure to review Generic Letters when a response is not required. NLG 21 requires screening and, where appropriate, evaluation of Generic Letters that do not require a response.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Recurrence of the incorrect valve installation is prevented by the corrective actions identified in LER 93-50-00 and maintenance procedure SOV-001-ELC which governs solenoid installations. Procedure SOV-001-ELC requires that manufacturers' installation instructions be followed and requires these instructions to be attached to work packages.

Technical Services will evaluate extent of condition for inadequate Information Notice (IN) evaluations by taking a representative sample of INs for re-evaluation to ensure the original evaluations were broad scoped and comprehensive. This task will be performed prior to startup. (This repeats commitment IPN-94-017-06.)

The Authority is in full compliance since SOV-1276 and SOV-1276A have been replaced and setpoints and setpoint control have been formally established.

Example I.9 - Nitrogen to Weld Channel and Containment Penetration Pressurization System

"The weld channel and containment penetration pressurization system (WCCPPS) provides continuous pressurization of containment penetrations and weld channels. Technical Specification (TS) 3.3.D.1.a requires WCCPPS be pressurized above 43 psig when the plant is above cold shutdown. FSAR Section 6.6.2 states that the nitrogen backup will maintain the required system pressure for 24-hours, assuming a total leakage rate from the pressurization system of 0.2% of the containment free volume in 24-hours. However, calculations indicate that the nitrogen bank is not capable of providing the 24-hour backup supply described in the FSAR, at the design basis leak rate of 0.2% of free volume. This condition has existed since initial plant startup."

Response to Example I.9

NYPA agrees with the example, except with the next to last sentence.

Calculations have shown that the backup nitrogen supply is capable of maintaining system pressure for 24 hours provided an initial pressure of 2150 psig is available in the nitrogen tanks. The problem is that this value is impractical to maintain and was never formally established. Previous values (1600 and 1200-2200 psig), formerly established in nuclear logsheets, not only have no documented basis, but have also been repeatedly violated.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The cause of this event is personnel error of an indeterminate nature. The personnel error was that a calculation to determine the minimum WCCPP N_2 backup pressure required to meet design basis was never performed. Furthermore, the logsheet minimum pressure was not validated by a formal calculation. Early revisions of the nuclear logsheet reflect that a minimum value of 1600 psig N_2 backup pressure was required. Subsequently, the logsheets were revised in the 1983-1985 timeframe to the values of 1200-2200 psig for normal WCCPP N_2 pressure. However, no documentation existed for the original or revised WCCPP N_2 pressure logsheet values.

A contributing factor to this event was that the operators did not appreciate the significance of the reduced WCCPP N_2 pressure. Therefore, when WCCPP N_2 pressure fell below the logsheet range, the operators did not take corrective actions required to address an outside design basis condition.

Following this event, corrective actions were performed to formally establish the design basis WCCPP N_2 backup pressure, as well as improve logkeeping practices. The specific corrective actions are presented below.

Operations department personnel have been counselled on the importance of immediately addressing logsheet readings that are outside the parameter limits. Operations management strongly communicated its expectation that operators evaluate, report and correct degraded conditions indicated by logsheet trends. (This closes commitment IPN-93-045-01.)

The Technical Services department has completed calculations necessary to reconstitute the parameter for the WCCPP N_2 backup pressure necessary to meet the plant's design basis. The Operations department has revised the appropriate logsheet based on the new calculations for WCCPP N_2 backup pressure. (This closes commitments IPN-93-045-05 and IPN-93-045-06.)

Operations management made an entry into the Night Order book (93-175) to apprise all Operations personnel that minimum/maximum log parameters shall not be exceeded and the appropriate action is taken if they are. This action is in accordance with Operations Directive OD-5, "Log Keeping." (This, in addition to the above, closes commitment IPN-93-045-01.)

The Operations department has revised their logsheets such that parameters that monitor design basis requirements are clearly identified. (This closes commitment IPN-93-045-04.)

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Operations department has completed a design basis document containing the basis for each parameter in the logsheets. (This closes commitments IPN-93-045-02 and IPN-93-045-03.)

The Authority is planning to take additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

Technical Services has identified two significant and eight minor leaks in the WCCPP N_2 backup system. Repairs to leaks are on-going and will be completed prior to startup. (This repeats commitment IPN-93-045-07.)

Recently, concerns have arisen with regard to instrumentation response to the reconstituted WCCPPS N_2 backup pressure design basis parameter and revision to the calculations and log sheets may be required. Technical Services will implement any required revisions prior to startup.

The Authority will be in full compliance prior to plant startup.

II - Violations that Occurred During the Current Outage

Violation II.A - Failure to Follow Procedures

"IP3 TS 6.8.1, in part, requires that written procedures shall be established, implemented and maintained covering the activities referenced in Appendix A of Regulatory Guide 1.33, 'Quality Assurance Program Requirements (Operation)', November 1972, and for surveillance and test activities of safety-related equipment. Section A of Appendix A to Regulatory Guide 1.33 requires procedures for equipment control, safe operation, and the review and control of plant procedures. Section I of Appendix A to Regulatory Guide 1.33 requires procedures for the performance of maintenance on safety related equipment."

Procedure Adequacy/Adherence

NYPA agrees with the violation.

During the current outage, failure to follow procedures has been a recurring problem. The Authority's initial approach to this problem involved strict measures designed to address deep rooted management and performance deficiencies as well as the plant staff's resistance to change. These measures included weekly station-wide meetings to convey management's expectations for procedural adherence and the intent to take disciplinary actions where warranted.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Strict measures were taken for procedure violations, but the problem was still recurring, indicating that this approach would not fully address the issue. The new management team, which started in March 1994, initiated a strategic approach to foster ownership of procedural adherence problems and the necessary teamwork to address the problem. This approach emphasizes worker openness to identify underlying problems. And, where appropriate, the new management rescinded disciplinary actions in order to promote a more positive outlook towards improving procedure adherence.

When another significant incident of failure to follow procedures occurred (specifically an inadequate step signoff), the Resident Manager issued a memorandum to all IP3 employees (dated April 18, 1994), containing the following directive, "There is no individual at Indian Point 3 that is exempt from our procedures; nothing less than complete compliance is acceptable at Indian Point 3." The Resident Manager also emphasized in the referenced memorandum that, "Our procedures provide the instructions and requirements necessary to ensure that our activities are accomplished in an orderly manner with a safe, predictable and successful outcome."

In addition to the memorandum, an emergency meeting was called for all managers and supervisors to evaluate the incident. The objective of the meeting was to decide how to bring ownership of the procedural adherence problem down to the worker level, and to solicit feedback from all levels on how to resolve the problem.

The emergency meeting and subsequent department meetings resulted in the following:

1. The station had a work standdown in order to identify that the problem still existed, not to punish anyone.

2. Managers met with their departments to discuss who can signoff procedures and the significance of a signature.

3. Managers also met with their departments to encourage feedback and suggestions for improving procedure compliance.

4. The Resident Manager met with all employees to encourage suggestions and feedback, and to report on the status of the procedure compliance program.

5. Management recognized that studying each event as an isolated issue was not effective, and initiated a global Procedural Adherence Root Cause Analysis to look for the underlying cause or causes.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

To achieve this, a team consisting of a cross section of departments and including supervisors, union staff, and engineers was assembled to analyze the feedback obtained through several projects such as departmental meetings, employee questionnaires, the IP3 Management Survey, event investigation interviews following procedural adherence problems, Restart Projects, and Performance Improvement Program Projects.

The root cause analysis and follow-up actions for this project will have eight distinct phases:

- Investigation Phase - will define the project's scope.
- Data Collection Phase - will gather background on IP3 and industry information. This effort will include previous efforts at addressing procedure adherence at IP3, JAF, and other facilities.
- Interview Phase - will focus on fact finding and not fault finding. This phase will touch everyone at IP3 and will include individual interviews, departmental meetings, and surveys.
- Root Cause Determination Phase - will sort through the data to systematically identify the root cause(s).
- Root Cause Validation Phase - will determine that the problem would not have occurred if the Root Cause did not exist.
- Corrective Action Development/Validation Phase - will determine if properly applied corrective actions: 1) will prevent recurrence, 2) are within the capabilities of IP3 to implement, and 3) are consistent with IP3's primary objective of safe and reliable electrical generation. This phase will include individual interviews, departmental meetings, and surveys.
- Reporting Phase - will communicate the root cause analysis results, including the corrective action plan, with IP3 management and staff.
- Follow-Up Phase - will determine if the corrective actions have been effective. This will be done monthly for the first six months and will be done quarterly thereafter.

The Procedural Adherence action plan is part of the IP3 Restart and Continuous Improvement Plan (RCIP).

The following sections discuss the cause and corrective actions to prevent recurrence for the violation examples:

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Example II.A.1 - Release of 32 Liquid Radwaste Monitor Tank

"IP3 Administrative Procedure (AP) AP-21, 'Conduct of Operations,' Rev. 25, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step III.A.1.m, specifies that operators have the responsibility to operate plant systems or equipment in accordance with approved procedures. Approved procedure SOP-WDS-6, 'Liquid Waste Disposal System Operation', Rev. 10, Section 4.1, specifies actions required to properly recirculate, sample, and discharge liquid radwaste monitor tanks.

Contrary to the above, on September 14, 1993, operators failed to use SOP-WDS-6, leading to the inadvertent recirculation and release of the 32 liquid radwaste monitor tank when the 31 monitor tank contents were intended to be released."

Response to Example II.A.1

NYPA agrees with this example.

The cause of this event was personnel error, inattention to detail in that the procedure was not followed for the recirculation and release of the monitor tanks.

Following this event, corrective actions were performed to reestablish management's expectations of procedure adherence and to improve operating procedures associated with waste sampling and release. The specific corrective actions are presented below.

The Operations Manager held a meeting with the Shift Supervisor, Senior Reactor Operator, and the Nuclear Plant Operator (NPO) involved to discuss the importance of strict procedural adherence, attention to detail, and the recurrence of significant events in the Operations Department.

The Operations Manager suspended the Senior Reactor Operator for one day.

The importance of procedural adherence was emphasized to all operators by the Operations Manager and the Assistance Operations Manager at operations meetings, and through Night Order 93-338 and Standing Order 6.

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

SOP-WDS-14, "Waste Release Permits," has been revised to require re-verification of valve line-up prior to release of Monitor Tanks.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

SOP-WDS-6, "Liquid Waste Discharge," has been revised to require re-verification of valve line-up prior to release of Monitor Tanks and to include signoffs.

A "Lesson Learned" summary was placed in the "Required Reading" book. Operations Directive OD-26 requires that this book be read by all Operations Personnel. One of the lessons learned included in that summary is that whenever plant evolutions are commenced, the NPO shall immediately verify the plant response is as expected.

The Authority is currently in full compliance with procedure AP-21 and has taken the above corrective actions to prevent further violations of the procedure.

Example II.A.2 - Unapproved Use of Temporary Procedure Changes

"IP3 Administrative Procedure AP-3, 'Procedure Preparation, Review and Approval,' Rev. 24, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step 3.5.2, states that temporary procedure changes (TPCs) shall not be used if an intent change to the procedure will result. AP-3, Step 3.1.6, requires that all major procedure revisions shall be given the same level of review as the original procedure.

Contrary to the above, on July 3 and September 17, 1993, the licensee implemented TPCs to an existing operating procedure, SOP-CVCS-8, that involved a change of intent. The TPCs were major revisions involving changes to procedural steps, but the same level of review as the original procedure was not given in that the original procedure required prior Plant Operations Review Committee (PORC) approval but the TPC was not given prior PORC approval."

Response to Example II.A.2

NYPA agrees with this example.

The cause of this event was personnel error, inattention to detail in that the procedure, AP-3, "Procedure Preparation, Review and Approval", was not followed for temporary procedure changes. Also SOP-CVCS-8 was not followed during the boric acid tank transfer.

Reply to Notice of Violation Associated with Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81

Following this event, corrective actions were performed to ensure the proper usage of TPCs so the intent of procedures would not be changed. The specific corrective actions are presented below.

The Assistant Operations Manager held a meeting with the Shift Supervisor, Senior Reactor Operator, Watch Engineer and the NPO involved to discuss the importance of strict procedural adherence, attention to detail and the recurrence of procedural non-compliance in the Operations Department.

The Operations Manager removed the Shift Supervisor involved from the watch.

The Operations Manager required the Shift Supervisors to perform more in-depth briefings for significant evolutions to be performed during their shift.

The Operations Manager and the Assistant Operations Manager discussed procedure adherence with all operators.

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

Night Order 93-299 was written to reemphasize the proper usage of TPCs with regard to avoiding violations of intent changes in procedures.

Operations extensively revised Operating Procedure SOP-CVCS-8 to allow activities involving boric acid to be performed in strict accordance with this procedure.

The Authority is currently in full compliance with Administrative Procedure AP-3 and Operating Procedure SOP-CVCS-8 and has taken the above corrective actions to prevent further violations of the procedure.

Example II.A.3 - EDG Fuel Oil Day Tank Level Data to Shift Supervisor

"IP3 Operations Directive OD-5, 'Logkeeping and Rounds,' Rev. 3, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step IV.B.1.c, requires that operators inform the shift supervisor if logged readings do not respond appropriately to plant conditions.

Contrary to the above, during the period from September 2 to September 4, 1993, operators logged the No. 31 EDG fuel oil day tank level using a deficiency-tagged level indicator that did not respond appropriately to changing tank level, and the operators did not inform the shift supervisor of the questionable data recorded in the plant logs."

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Response to Example II.A.3

NYPA agrees with this example.

The cause was personnel error, inattention to detail in that the procedure was not followed for log keeping.

Following these events, corrective actions were performed to ensure procedure adherence to Operations Directive OD-5, and proper courses of action are taken when equipment is found to be inoperable/deficient. The specific corrective actions are presented below.

The Assistant Operations Manager held a meeting with the NPOs to discuss the importance of diligently taking log readings. Particular emphasis was placed on the effect of a Problem Identification (PID) tag being present on instrumentation indications.

The Assistant Operations Manager held meetings with the Shift Supervisors to discuss the importance of correctly reviewing all logs, particularly those required by Technical Specifications. The importance of taking proper compensatory actions when a piece of equipment is found to be inoperable was discussed. Finally, the significance of conducting proper shift turnovers was addressed.

All watchstanders read and signed for full understanding of OD-5. (This closes commitment IPN-93-114-01.)

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

3PT-W1, "Emergency Diesel Support Systems Inspection" was revised to give guidance on corrective actions if a level indicator for the emergency diesel becomes inoperable.

A system of identifying log keeping errors by operations watchstanders, whereby they will be held accountable, has been initiated.

Operability procedures, AP-57, "Resolution of Degraded and Nonconformance Conditions", and OD-31, "Operability Determinations", have been prepared to aid the Shift Supervisor in making operability determinations.

The Authority is currently in full compliance with Operations Directive OD-5 and has taken the above corrective actions to prevent further violations of the procedures.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Example II.A.4 - Welder Qualification and Testing

"IP3 Procedure WLD-003-GEN, 'Performance Qualification of Welders,' Rev. 4, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, establishes the responsibilities and methods for performance-qualification testing of welders. Procedure WLD-002-GEN, "Welding Material Control," Rev. 0, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step 4, Note 4.2, and 4.3 requires validation of welder's qualifications during issuance of a weld metal requisition.

Contrary to the above, on August 19 and 20, 1993, welds for the minor modification package (93-3-137) on the EDG fuel oil day tank level indication system, were made by a welder who was not qualified or tested for the specific welding procedure required by minor modification package 93-3-137, and described by WLD-003-GEN. In addition, the weld metal requisition was filled without validation of the welder's qualifications as required by WLD-002-GEN."

Response to Example II.A.4

NYPA agrees with this example.

The cause of event was personnel error in that the supervisor failed to follow procedure due to perceived schedule pressure. The supervisor failed to follow procedure in that he directed a welder, whose qualification did not reflect being qualified to Weld Procedure Specification WPS-1G, but who was qualified to perform the weld process, to install the piping on MMP 93-3-137. The supervisor was aware, from reviewing the welder qualification matrix, that the welder was not qualified to WPS-1G and intended to change the procedure, but did not. The welder also failed to follow procedure in that he welded using a weld procedure (WPS-1G) for which he was not qualified.

The following corrective actions were taken in order to address this event:

The Maintenance Manager counselled the supervisor and welder responsible for this violation on the conduct of subject welding procedures.

The welder in question is qualified in accordance with other qualified welding procedures which include the process which was used. The welder has since been certified in accordance with requirements of WPS-1G which will minimize the possibility of recurrence.

Awareness training to reinforce attention to job responsibility and procedure adherence use was provided for NYPA and contractor welders as a result of this event.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The technique sheet has been changed from WPS-1G to WPS-1C in the work package documentation. This change is acceptable and is not a violation of the requirements of ASME Section IX for performance certification.

The welds were examined by Quality Control in accordance with the specified requirements for final visual and found to be acceptable.

The Authority is planning to take an additional corrective action to avoid further violations of this type. This corrective action is presented below.

The Maintenance department will revise welder qualification procedure, WLD-003-GEN, to include a statement which shall require that each welder be held responsible for understanding the welder qualification matrix and knowing the extent of his certification. Completion scheduled for July 15, 1994.

The Authority is currently in full compliance with Welding Procedures, WLD-002-GEN and WLD-003-GEN. The above corrective actions taken and planned serve to prevent further violation of the procedures.

Example II.A.5 - Retest Work Controls

"IP3 Administrative Procedure AP-9, 'Work Control,' Rev. 20, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step VI.E.1, requires performance engineering to determine post-work retest actions for component verification. Step VI.E.3.b of the above procedure requires a work request to be generated to direct the accomplishment of retest activities, and Step VI.E.3.b.(3) requires the retest to be performed in accordance with the retest work request.

Contrary to the above, on September 14, 1993, the licensee did not perform a retest of the 33 EDG prelubrication pump feed breaker following maintenance, as described in retest work request 93-01999-01, prior to declaring the EDG operable."

Response to Example II.A.5

NYPA agrees with this example.

The cause of the event was personnel error (i.e., inattention to detail) when the Operations department returned the EDG to operable status without ensuring all retests were completed.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Authority's corrective actions to avoid further violations of this type are presented below.

Night Order 93-352 was written to emphasize to the Shift Supervisor the importance of ensuring that all retests are complete prior to returning equipment to operable status.

The Shift Supervisors, Assistant Shift Supervisors, and Watch Engineers will be trained on how to query the ROME computer and how to obtain a list of work performed from the Finest Hour Scheduling Program for the work that has been done during the time frame the component was out of service. Therefore, when a piece of equipment is said to be ready for operability, the shift supervisor will be better able to review all work and outstanding work on the component to decide whether or not the component is ready for operability. The training will be completed prior to startup.

The Authority is currently in full compliance with Administrative Procedure AP-9.

Example II.A.6 - Field Verification or Validation of New Procedures

"IP3 Administrative Procedure AP-3, 'Procedure Preparation, Review and Approval', Rev. 24, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step 3.3.8, specifies field verification or validation for new procedures.

Contrary to the above, on August 31, 1993, NYPA used a newly written maintenance procedure, GNR-013-ELC, for the 31 EDG governor, that was in error and had not been validated or field verified."

Response to Example II.A.6

NYPA agrees with this example.

The cause of inadequate procedure, GNR-013-ELC, Rev. 0, was personnel error. Personnel preparing procedure GNR-013-ELC had inadequate knowledge of the Emergency Diesel Generator (EDG) governor speed control setting requirement when preparing and performing the procedure. The governor instruction manual from the vendor contributed to the cause because it did not contain adequate instructions (i.e., it did not instruct the user to set the speed control dial at low speed setting of (0.0)).

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Administrative Procedure AP-3, Rev. 23, became effective on July 28, 1993 for the inception of the requirement for validation or field verification of new procedures. The implementation guidance was approved with the procedure. The implementation period for this revision allowed the relaxation of the requirement until on or after September 1, 1993. Maintenance Procedure GNR-013-ELC, Rev. 0, was PORC approved during the implementation period on August 19, 1993. The intent of the implementation period was to allow procedures which had been initiated prior to the implementation of AP-3, Rev. 23, to be approved in accordance with AP-3, Rev. 22, without validation or field verification. AP-3, Rev. 24, was approved, effective August 24, 1994, with no implementation guidelines. The approval of AP-3, Rev. 24, occurred prior to the September 1 implementation date of AP-3, Rev. 23, and after the approval of maintenance procedure GNR-013-ELC and was the effective procedure when procedure GNR-013-ELC was first used on August 31, 1994. The Authority does recognize the advantages of procedure validation and validates procedures in accordance with AP-3, Rev. 23 or later revisions.

The Authority has taken the following corrective actions to avoid further violations of this type:

The Maintenance department initiated Temporary Procedure Change (TPC) 93-0657 to add steps to maintenance procedure GNR-013-ELC which resulted in adjusting the Governor Speed Control Dial to (0.0) prior to starting the engine. Later, maintenance procedure GNR-013-ELC was revised to incorporate the TPC.

The Alco manual AL-1 (#13-100000000) was updated through the Authority's document change program to include the proper setting of the governor speed dial.

Training for mechanics and supervisors was provided on the procedure to prevent future occurrences of this incident. At this time, the Maintenance Procedure was validated using a mark-up without operation of the diesel.

The Authority is currently in full compliance with Administrative Procedure AP-3, Rev. 24, and is taking the above corrective actions to prevent further violations of this type.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Example II.A.7 - Lack of Temporary Shielding Safety Evaluations

"IP3 Radiological and Environmental Services Procedure RE-ALA-02-03, 'Temporary Shielding Installation, Removal, and Accountability,' Rev. 4, Section 7.4.3.1, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, requires that if temporary shielding is to be installed, when the plant is above cold shutdown condition, near or on a system that is safety-related or is covered by technical specifications, then the proposed shielding shall be evaluated as per 10 CFR 50.59 as described in IP3 Administrative Procedure AP-25.2, 'Nuclear Safety Evaluations,' which requires a nuclear safety evaluation (NSE) to be performed.

Contrary to the above, on September 21, 1993, the licensee identified five temporary shieldings that were installed near or on a system that is safety-related or is covered by technical specifications, when the plant was previously above the cold shutdown condition, and were not evaluated in accordance with 10 CFR 50.59 as described in IP3 Administrative Procedure AP-25.2, 'Nuclear Safety Evaluations,' in that a NSE was not performed."

Response to Example II.A.7

NYPA agrees with this example.

The cause of this event was a personnel error, inattention to detail and misjudgment. Personnel were not paying attention to the procedural requirements for using AP-25.2 and were performing shielding assessments based on past experience.

Following this event, corrective actions were performed to emphasize the need to fully implement procedural requirements and to ensure the safety of five shielding installations. The specific corrective actions are presented below.

The Radiological and Environmental Services (RES) manager issued a memo to RES personnel to explain the significance of this event relative to the usage of procedural attachments. This memo emphasized the importance of verifying attachments against the body of its associated procedure to ensure that they agree.

RES and Site Engineering prepared a Nuclear Safety Evaluation (NSE 93-03-369 STR) to document the adequacy of the calculations for the five shielding installations with no NSE and the response to the 10 CFR 50.59 questions.

RES reviewed 56 RES Department procedures to determine whether the attachments fully implemented the procedural requirements. No significant procedural discrepancies were identified.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

RES revised procedure RE-ALA-2-03 to add a 10 CFR 50.59 checklist to be used to determine whether an additional evaluation, using the NSE as defined by AP-25.2, is required. The checklist addresses the questions of 10 CFR 50.59 and is required for all modes of plant operation when equipment required to be operable may be affected.

Compliance with Administrative Procedure AP-3 will ensure that there is no recurrence of this problem. This procedure controls the preparation, revision and approval of procedures. AP-3 was revised, effective September 1993, by Configuration Information Management to require a comparison between the attachments and the body of the procedure during each review.

The Authority is currently in full compliance with Administrative Procedures AP-3 and AP-25.2, and RES Procedure RE-ALA-2-03. The Authority is also taking the above corrective actions to prevent further violations of these procedures.

Example II.A.8 - Closeout of Temporary Modifications Contrary to Procedure

"IP3 Administrative Procedure AP-13, 'Temporary Modification Procedure,' Rev. 13, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Steps III.C.5 and III.C.8, require retest completion and shift supervisor acceptance on Temporary Modification (TM) Log Entry Forms at the conclusion of the TM removal process. AP-13, Steps III.B.6, III.B.8, and Attachment 1, Step XI, require that Plant Operating Review Committee (PORC) approval and extension approval for TMs be annotated on the TM Log Entry Form. In addition, AP-13, Step II.J, requires that TMs be implemented by the work control system.

Contrary to the above, during September 1993, required retest completion and shift supervisor acceptance signatures for closed out TM Nos. 92-3717-00, 93-5936-00, and 93-02376-17 were missing from the TM Log Entry Forms. Also, during the same time frame, PORC approval signatures or extension approvals were missing on TM Log Entry Forms for TM Nos. 92-3205-01, 1192, 1422, 92-2521-01, 92-3116-00, 92-3717-00, 92-3205-01, and 92-3884-00. In addition, during the same time frame, TM No. 1387 was not implemented by the work control system."

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Response to Example II.A.8

NYPA agrees with this example.

The event was caused by personnel error, inattention to detail and a lack of completion of the forms in the procedure. Additionally, the procedure was inadequate in providing specific direction.

The Authority has taken corrective actions to avoid further violations of this type. For corrective actions, the Technical Services department revised Administrative Procedure AP-13, "Temporary Modification Procedure," to enhance the human factor concerns which were identified for the following TM's:

> TM Nos. 92-3717-00, 93-5936-00 and 93-02376-17 (Listed as closed while still awaiting retests and SS acceptance) - The TM Log Entry Form has been revised.
>
> TM Nos. 1192, 1422, 92-2521-01, 92-3116-00, 92-3717-00, 92-3205-01 and 92-3884-00 (TM Log Entry Form not updated to reflect schedule extensions) - Procedure has been revised to assign specific update responsibility.
>
> TM No. 1387 (The space for the work request number on the form was not filled in. The work was performed via a Maintenance Work Request (MWR) and a procedure) - The TM procedure has been revised to require verification of data entry in the forms prior to approval.

The Authority is in full compliance with Administrative Procedure AP-13 and has taken the above corrective actions to prevent further violations of this procedure.

Example II.A.9 - Operating Orders Inadequate to Provide Protection

"IP3 Administrative Procedure AP-10, 'Clearances,' Rev. 17, written to comply with TS 6.8.1 and Appendix A to Regulatory Guide 1.33, at Step III.A.2, states that any clearances that require a hold-off shall have an operating order to control the tags as described in AP-10.1, and the operating order will reference all clearances issued against that operating order.

IP3 Administrative Procedure AP-10.1, 'Operating Orders and Control of Stop Tags, Do Not Operate Tags, and Locks,' Rev. 7, Steps 3.1.2 and 3.1.2.1, state that operating orders are used to tag items as required to provide personnel protection and equipment protection necessary to accomplish the work proposed under a clearance. When used in conjunction with a clearance, the operating order shall be suitably cross referenced.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Contrary to the above, on December 3, 1993, the licensee used clearance No. 014072 which required a hold-off for the opening, cleaning and inspection of fan cooler unit (FCU) coils, however, the operating order No. 005855 did not provide the personnel and equipment protection necessary to accomplish the work proposed. The remarks section of the clearance stated that 33 FCU was to be isolated and referenced operating order No. 005855. Operating order No. 005855 called for isolating the 33 FCU motor cooling coils but not the main cooling coils, resulting in a 250 gallon spill of service water in the containment building."

Response to Example II.A.9

NYPA agrees with this example.

The cause of this event was personnel error (i.e., inattention to detail by the preparer and issuer of the clearance) in that a discussion of protection provided for work to be done as per procedure AP-10 was performed unsatisfactorily.

Following this event, corrective actions were performed to ensure the proper use of clearances with respect to operating orders, through the use of checklists and an improved communication process. The specific corrective actions are presented below.

Operating Orders and Clearances written prior to this event were put through a checklist prior to re-commencing work.

The checklist was developed to ensure requirements defined in AP-10, "Clearances" were met prior to work.

A memorandum was written to clarify the communication process between the clearance receivers and issuers.

The preparer and issuer of the clearance were both suspended.

The Authority is currently in full compliance with Administrative Procedure AP-10 and has taken the above corrective actions to prevent further violations of the procedure.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

II - Violations that Occurred During the Current Outage

Violation II.B - Design Control Violation

"10 CFR Part 50, Appendix B, Criterion III, 'Design Control' requires, in part, that measures be established for the selection and review for suitability of application of materials, parts, equipment and processes that are essential to the safety-related functions of the structures, systems and components. The design control measures shall verify the adequacy of the design by activities including the performance of a suitable testing program.

Contrary to the above, during the period from September 20 to October 5, 1993, the licensee failed to establish adequate measures for the selection and review for suitability of application of materials, parts and equipment while modifying the EDG cell exhaust fan thermal overloads that are essential to the safety-related functions of the EDGs. Specifically, adequate measures were not established because the licensee failed to consider the size of the previously installed overloads, the degradation of the exhaust fan motors over time, and the existing amperage values in the selection and review for suitability of replacement overloads, prior to modification to the thermal overloads. In addition, the testing of the overloads was not suitable to verify the adequacy of the design in that sufficient time was not allowed for a test of the actual operability of the modified components."

Response to Violation II.B

NYPA agrees with this violation.

This event was caused by personnel error due to inadequate investigation prior to implementing a change of the overload heaters and inadequate testing specified in the Design Equivalent Modification (DEM) which was based upon a misunderstanding of the function of the motor protective scheme.

Following this event, corrective actions were performed to ensure adequate post-modification testing and to establish an effective preventive maintenance (PM) program. The specific corrective actions are presented below.

The Technical Services department has reverified DEM 93-3-244 by testing a sample of the loads per the incorporated testing requirements.

Technical Services reviewed a sample of DEMs to ensure lessons learned regarding the need for adequate testing. No indication of a repeat occurrence or the potential for one was identified.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The responsible Technical Services Engineer analyzed all overloads sized under DEM 93-3-244 480v and tested a sample of the loads. No discrepancies were identified.

The respective department managers communicated lessons learned relative to a questioning attitude and the need for adequate testing to Corporate and Site Engineering personnel.

Replacement motors for the remaining four exhaust fans have been installed by the Maintenance Department (314 and 317 were replaced prior to issuance of LER 93-042) since they were all found degraded. The replacements are the same horsepower, but have a better service factor. (Reference Work Requests 93-8459-10, -17, -18, 93-5647-00, 93-8459-20, -21 for motor replacements on Fans 314 through 319, respectively.)

The Maintenance department performed PM on the ventilation fans.

The Technical Services department coordinated testing of the EDG ventilation system by an independent ASHRAE certified consultant. The results of this testing indicated that the system is capable of meeting its design basis and is therefore restored to fully operational and reliable condition.

The Authority has taken or is planning to take additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

Generic DEMs are no longer issued. A specific modification is issued for each design change. Engineering replaced the DEM process with a modification ("Type 1") process which has enhanced controls. The Type 1 design change is controlled by MCM-14 and it identifies criteria for including testing requirements. Additionally, MCM-11, "Preparation of Modification Testing Requirements" is referred to in the text of MCM-14. Any revisions to existing DEMs are made with Engineering approval.

Technical Services revised the thermal overload sizing DEM 93-3-244 480v, with Engineering approval, to incorporate adequate testing requirements. (This closes commitment IPN-93-137-01.)

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Maintenance department is establishing a PM program for motors and is addressing evaluation of necessary parameters for trending as part of the program. NOTE: Although the PM program for plant motors is not yet complete, all EDG ventilation fan motors have been replaced. Additionally, the fans have received preventive maintenance as noted above. The fans are on an annual PM frequency and the motor PM will be incorporated into the PM program. The program will be established by December 1994. (This repeats commitment IPN-93-137-02.)

Engineering is revising the Modification Control Manual (MCM) to require that modifications identify the safety function of the equipment being worked on and that post-modification testing verifies the function. This will be accomplished prior to startup. (This repeats commitment IPN-93-137-04.)

Site Engineering has developed Administrative Directives for "Engineering and Modification Development' (SED-AD-3), and "Modification Acceptance Test Writer's Guide" (SED-AD-8). These directives are in use with the modification control process and both call out the requirements for post-modification testing.

The Authority will be in full compliance with proceduralized design control measures prior to startup and is taking the above corrective actions to prevent further violations of the procedure.

II - Violations that Occurred During the Current Outage

II.C - Technical Specification Violation

"IP3 TS 3.7.F requires a minimum of two EDGs to be operable when the plant is in the cold shutdown condition.

Contrary to the above, on December 2, 1993, while the plant was in cold shutdown, the licensee failed to maintain at least two EDGs operable for approximately 4.5 hours, due to uncontrolled and deficient maintenance. Specifically at the time, there was no EDG operable."

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Response to Violation II.C

NYPA agrees with this violation.

The event was caused by lack of procedure adherence. All three emergency diesel generators (EDG) were made inoperable when work was completed on solenoid operated valves (SOV) 1276 and 1276A (the pilot valves for EDG service water flow control valves (FCV) 1176 and 1176A). The work was performed without proper controls to ensure the plant configuration met the design basis functionality required of these valves. The barriers set in place to check errors were bypassed. The lack of procedural adherence was personnel error due to a cultural disposition to take shortcuts to procedural requirements in order to meet perceived schedule pressures. Contributing factors were procedural inadequacies (weaknesses in the management controls), miscommunications (inattention to detail in the interface between departments and within departments) and inadequate skills (a lack of understanding of performance standards).

Corrective actions to prevent recurrence were identified in LER 93-053-00. These corrective actions involved changes to an Administrative Procedure, new process controls (i.e., a three day freeze on scheduled work, monitoring of procedural conformance, night orders for operator guidance), training on correct work practice and meetings to identify management expectations. These corrective actions have been completed. The two actions identified below are the procedure enhancements made as a result of the event:

> Administrative Procedure AP-10, "Clearances" was revised to clarify that area clearances shall not be issued for intrusive work. (This closes commitment IPN-94-001-02.)
>
> Maintenance department directive 3-MD-23, "Use of Documented Instructions" was revised to change the step order compliance policy for departmental procedures. The revised procedure clearly states that maintaining step order compliance in all departmental documented instructions is a requirement unless otherwise specified in the controlling work document. (This closes commitment IPN-94-001-03.)

The following corrective actions, which were not identified in the LER, were also taken as a result of this event:

> The Maintenance supervisor, two maintenance mechanics, quality assurance inspector (contractor), operations shift supervisor, the planning and scheduling supervisor and an outage planner were disciplined (suspended for varying periods of time) as a result of this event.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Additional corrective actions are being taken to address the recurring procedure adherence problem. These actions are being handled under the IP3 Restart and Continuous Improvement Plan and are discussed in detail in the cover letter of this reply.

The Authority was in full compliance with Technical Specification 3.7.F approximately 4.5 hours after the event and continues to be in full compliance. The corrective actions above have been taken to prevent further violations of this type.

III - Other Violations Of NRC Requirements

"10 CFR Part 50, Appendix B, Criterion XV, Nonconforming Materials, Parts, and Components, requires, in part, that measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations.

Contrary to the above, during the period from August 27 to September 16, 1993, measures were not established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation in that three examples of nonconforming material, parts and components were found on safety-related equipment. These examples were: (1) an incorrect gasket installed on safety injection system valve SI-847, (2) three 0-rings were missing on an air start solenoid valve on 32 EDG, and (3) air start solenoid valves installed on the 32 EDG were reclassified to the Quality Assurance Category M instead of the required Category I."

Material Control

NYPA agrees with this violation.

Additional concerns related to these three examples have been identified regarding commercial grade dedicated materials, certification numbering schemes, and past procurement practices. Specifically, the following additional concerns have been identified.

Commercial grade dedicated items are not uniquely identified for use in systems or components for which they were dedicated.

Certification numbers prior to 1990 for Category I and Category M items are identical, making it impossible for field technicians to distinguish the category of the item.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Items purchased prior to 1990 were done so without technical reviews by engineering.

To resolve these additional concerns and further establish measures to control materials, Procurement Engineering, as of April 26, 1994, reviews Category I, Category M, and Non-Category I plant-related items that are to be issued from the warehouse for adequacy of documentation and classification. Specifically, Procurement Engineering reviews: 1) commercial grade dedicated items to ensure that they are released for installation in systems or components for which they were dedicated; 2) subcomponent classification to ensure that piece parts are the proper classification for their end use; and 3) Category I and Category M items purchased prior to 1990 to ensure compliance with applicable regulations and NYPA procedures in effect at the time of purchase.

The following sections discuss the cause and corrective actions to prevent recurrence for the violation examples.

Example III.(1) - An Incorrect Gasket Installed on Safety Injection System Valve SI-847

Response to Example III.(1)

NYPA agrees with this example.

The cause of the event was personnel error caused by inattention to detail (i.e., wrong material) in that the maintenance supervisor working the job assumed that the gasket that was being installed was of adequate size for the valve.

Following this event, corrective actions were performed to ensure that no other unauthorized material substitution of this type had occurred. The specific corrective actions are presented below.

The Maintenance department reassembled the valve using the correct size body to bonnet gasket. Work was completed using maintenance work request (MWR) 93-04000-00.

The Maintenance department performed a review of 251 completed work packages for unauthorized material substitution. The sampling procedure used was MIL-STD-105D, "Multiple Sampling Plan for Tightened Inspection" with an AQL of one (1).

The Maintenance department issued a warehouse stock requisition for replacement gaskets.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

Significant Occurrence Report SOR 93-487 and Non-Conformance Report NCR 93-077 were written to document the non-conformance.

The Maintenance Manager counselled the maintenance engineers, supervisors, and mechanics that unauthorized material substitutions is a violation of plant procedures. He stated that NYPA personnel must use the correct parts and must adhere to the correct design control of the plant. The counseling took place during daily departmental meetings.

The Authority is currently in full compliance with respect to material controls in that the correct gasket has been installed and a warehouse stock requisition was issued.

Example III.(2) - Three O-rings Were Missing on an Air Start Solenoid Valve on 32 EDG

Response to Example III.(2)

NYPA agrees with the example.

On June 8 and 9, 1993, the annual preventive maintenance was performed on 32 Emergency Diesel Generator (EDG). Under Maintenance Procedure GNR-002-ELC, Revision 4, the East and West Header Air Start Solenoid Valves were disassembled, inspected, and reassembled. Due to inadequate work practices, the O-rings in the East Header Air Start Solenoid Valve (DA-SOV-18-3) were omitted during reassembly. This constitutes a violation of Maintenance Directive 3-MD-36 Standards 3, "Conduct and Professionalism in Maintenance," and 7, "Self Assessment." The O-rings were discovered missing on September 6, 1993 during the performance of Work Request 93-6619-00.

The cause was due to personnel error which resulted from inadequate work practices on the part of the maintenance mechanic. The mechanic exhibited a lack of attention to detail which led to a failure to install the O-rings (there were two O-rings).

Following this event, corrective actions were performed to ensure that O-rings are properly installed in all Air Start Solenoid valves. The specific corrective actions are presented below.

Significant Occurrence Report SOR 93-495 and Non-Conformance Report NCR 93-079 were written to document the event.

Air Start Solenoid Valve (DA-SOV-18-3) was replaced under Maintenance Work Request No. 93-06619-04.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

The Maintenance manager provided counseling to the Maintenance mechanics and their supervisors to convey lessons learned.

The Authority is planning to take additional corrective action to avoid further violations of this type. These corrective actions are presented below.

The Maintenance department will revise Preventive Maintenance procedure GNR-002-ELC to provide greater detail. The procedure revision is only an enhancement to the procedure. The procedure is currently adequate. This will be completed by July 29, 1994.

The Authority is currently in full compliance in that the O-rings are properly installed in the Air Start Solenoid Valves and Maintenance Directive 3-MD-36 contains adequate instructions regarding proper work practices and is taking the above corrective actions to prevent further violations.

Example III.(3) - Air Start Solenoid Valves Installed on the 32 EDG Were Reclassified to the Quality Assurance Category M Instead of the Required Category I

Response to Example III.(3)

NYPA agrees with this example.

The cause of this event was personnel error. The misjudgment by Procurement Engineering occurred because of poor work practices and poor procedures. The decision to purchase the starting air solenoids was made in anticipation of an EDG starting air system reclassification being completed by the Technical Services Department. The reclassification did not include the solenoid valves and was not reviewed on subsequent re-orders.

Following these events, corrective actions have been performed to improve work practices and adhere to procedures. The specific corrective actions are presented below.

The installed EDG Starting Air Solenoid Operated Valves on EDGs 31 and 33 were reevaluated by Procurement Engineering and upgraded to Category I via Dedication Package DP-0102. (EDG 32 was out of service for maintenance at the time of discovery of the incident).

The Procurement Engineering Supervisor held a meeting with all Procurement Engineers to emphasize the significance of this incident and the importance of verifying each and every item on the Technical Evaluation Checklist for all requisitions.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

A review was conducted to determine the degree to which stock items were inappropriately classified. Twenty-five (25) cases were noted which warranted further review. Of these 25, 19 were either determined to be reclassified correctly or never released from the warehouse. The remaining six items were determined not to be safety significant.

100% of all QA Category M traveling stock requisitions have been reviewed for misclassification and corrective action was taken as required.

The Authority has taken additional corrective actions to avoid further violations of this type. These corrective actions are presented below.

NYPA Traveling Stock Requisition 01-63-902 has been upgraded from Category M to Category I (Commercial Grade Dedication) for future purchases. Other travelling stock requisitions identified during the review have been removed from the warehouse files to prevent recurrence or have been corrected to reflect the appropriate classification.

The Procurement Engineering Technical Evaluation Checklist was made into a Materials Management department directive (MTL-AD-2.02.01) which includes guidance on how to accomplish each step of the checklist. This will prevent recurrence or improper reclassification, provide for classification review on reorder, and formalize other requirements.

Additional concerns related to this event have been identified regarding commercial grade dedicated materials, certification numbering schemes, and past procurement practices. Specifically, the following additional concerns have been identified.

Commercial grade dedicated items are not uniquely identified for use in systems or components for which they were dedicated.

Certification numbers prior to 1990 for Category I and Category M items are identical, making it impossible for field technicians to distinguish the category of the item.

Items purchased prior to 1990 were done so without technical reviews by engineering.

**Reply to Notice of Violation Associated with
Inspection Report Numbers 93-22, 93-27, 93-29 and 93-81**

To resolve these additional concerns, Procurement Engineering currently reviews Category I, Category M, and Non-Category I plant-related items that are to be issued from the warehouse for adequacy of documentation and classification. Specifically, Procurement Engineering reviews:

commercial grade dedicated items to ensure that they are released for installation in systems or components for which they were dedicated;

classification and reclassification to ensure that piece parts are the proper classification for their end use; and

Category I and Category M items purchased prior to 1990 to ensure compliance with applicable regulations and NYPA procurement procedures in effect at the time of purchase.

The Authority is in full compliance as of April 26, 1994 and is taking the above corrective actions to prevent further violations of material control.

List of Commitments

Number	Commitment	Due Date
IPN-94-069-01	Recently, concerns have arisen with regard to instrumentation response to the reconstituted WCCPPS N_2 backup pressure design basis parameter and revision to the calculations and log sheets may be required. Technical Services will coordinate any required revisions prior to startup. (Example I.9)	Prior to startup
IPN-94-069-02	The Maintenance department will revise welder qualification procedure WLD-003-GEN to include a statement which shall require that each welder be held responsible for understanding the welder qualification matrix and knowing the extent of his certification. (Example II.A.4)	July 15, 1994
IPN-94-069-03	The Shift Supervisors, Assistant Shift Supervisors, and Watch Engineers will be trained on how to query the ROME computer and how to obtain a list of work performed from the Finest Hour Scheduling Program for the work that has been done during the time frame the component was out of service. Therefore, when a piece of equipment is said to be ready for operability, the shift supervisor will be better able to review all work and outstanding work on the component to decide whether or not the component is ready for operability. (Example II.A.5)	Prior to startup
IPN-94-069-04	The Maintenance department will revise Preventive Maintenance procedure GNR-002-ELC to provide greater detail. (Example III.(2))	July 29, 1994