

SUPPLEMENT NO. 1

TO

AEC REGULATORY STAFF SAFETY EVALUATION

IN THE MATTER OF

CONSOLIDATED EDISON COMPANY

INDIAN POINT NUCLEAR GENERATING PLANT UNIT 2

DOCKET NO. 50-247

November 20, 1970

Prepared by

Division of Compliance  
U. S. Atomic Energy Commission

811140217 701120  
PDR ADOCK 05000247  
E PDR

## I. INTRODUCTION

This supplements the Safety Evaluation dated November 16, 1970, prepared by the Division of Reactor Licensing of the Atomic Energy Commission (Commission or AEC) in connection with its review of the application of the Consolidated Edison Company (applicant) for an operating license for Unit 2 of the Indian Point Nuclear Generating Station located in the village of Buchanan, in Westchester County, New York.

The AEC regulatory program is founded in the Atomic Energy Act of 1954, as amended, and on implementing regulations and policies adopted by the Commission. The Congress of the United States has established a system of licensing privately owned and operated nuclear facilities. Inherent in the concept of private activities subject to licensing and regulation by a Government agency is the fact that the licensee is held responsible for meeting the objective of the licensing and regulatory system under the provisions of the Atomic Energy Act of 1954, as amended. The objective of the AEC program is to assure that licensed activities will not be inimical to the health and safety of the public or to the common defense and security.

The Division of Compliance, as an integral part of the Commission's regulatory staff, is responsible for conducting the field inspections of AEC licensees to assure that

licensed activities are in compliance with the provisions of AEC licenses; the Atomic Energy Act of 1954, as amended; and the rules and regulations of the Commission. Division of Compliance inspections of nuclear power reactors under construction pursuant to an AEC construction permit provide the principal basis for findings as to the status of completion of facility construction and the conformity of that construction to the requirements noted above.

The Division of Compliance inspection program is conducted from five regional offices with each office having responsibility for the inspection of all AEC licensed activities within an assigned geographical area. The inspection program at Indian Point Unit 2 is the responsibility of the Division of Compliance, Region I office located in Newark, New Jersey. A senior reactor inspector, who reports to the Regional Director, is responsible for supervising the inspection program carried out by the various reactor inspectors. Technical direction of the inspection program is provided by the Division of Compliance Headquarters staff which gives direction to the region with respect to the conduct of inspection activities, gives technical support to the region when required, keeps the region informed concerning inspection experiences in other regions, evaluates adequacy of inspections and inspection

results, and maintains liaison with other divisions of the AEC regulatory staff on matters which affect the inspection program.

The program for the inspection of the construction of Indian Point Unit 2 has been carried out primarily by Region I inspectors but, in addition, by Division of Compliance Headquarters staff, by other divisions of the AEC regulatory staff, and by consultants to the AEC. The principal activity of the inspectors has involved periodic inspections at the construction site. These site inspections were conducted at non-regular intervals with the inspection frequency dependent on the activities which were in progress at the site. In addition to site inspections, there were inspections at the shops of major equipment suppliers (vendors). There were also inspections at the offices of the applicant and at its contractors for the purpose of inspecting construction records and procedures and engineering reports related to construction matters.

Division of Compliance inspection personnel are experienced and knowledgeable in the practical aspects of construction and operation of nuclear reactors. In addition to the inspectors, specialists in appropriate fields of engineering and technology, who are assigned to the Division of Compliance Headquarters staff and to other divisions of the regulatory staff, are utilized to assist

in special inspections. Further, consultants to the AEC also provide assistance as required. The experience and technical competence of inspection personnel are important factors in the effectiveness of the inspection program.

The Division of Compliance inspection activities were directed toward verifying, on a planned sampling basis, that the licensee carries out his safety responsibilities and that the completed facility would conform to AEC regulatory requirements. Systems and components of the facility were selected for inspection on the basis of the regulatory staff's determination as to their importance to the safe operation of the facility. These inspection activities included the following:

1. Review of the applicant's overall quality assurance and quality control programs and their implementation.
2. Inspection of quality control records such as concrete strength test data, material test reports for plate and piping, supplier certifications for piping, valves and fittings, and nondestructive test records for welding.
3. Observation of construction work in progress; e.g., concrete placement, welding associated with vessel construction or piping installation, equipment alignment and installation, and non-destructive testing.
4. Review of construction procedures; e.g., welding procedures and nondestructive testing procedures.

5. Witnessing the performance of major construction tests such as hydrostatic tests of piping and the pressure test of primary containment.
6. Review of program for functional testing of systems and equipment, including the tests planned, the test procedures, and the test results.
7. Review of preparations for facility operations, including such areas as organization and staffing plans and their implementation, program and procedures for fuel loading and power testing, development of routine operating procedures, maintenance procedures, radiation protection procedures, and emergency procedures.
8. Review of component vendor work in progress, quality control activities and records, and fabrication procedures.

The licensee is required to develop and carry out a comprehensive preoperational testing program. The procedures developed under this program are reviewed by Compliance inspectors and comments are directed to the licensee. The performance of selected preoperational tests are witnessed by Compliance inspectors. The results of the tests and the licensee's evaluations are reviewed by the inspectors. This testing of the plant, to the extent possible prior to the loading of fuel, demonstrates whether plant systems and components are capable of performing their intended functions under both normal and abnormal conditions. These tests

also serve to demonstrate the adequacy of plant design and operating procedures. Satisfactory completion of the pre-operational testing program is an important part of the basis for our findings of plant completion.

## II. RESULTS OF CONSTRUCTION INSPECTIONS

Since the issuance of Provisional Construction Permit No. CPPR-21 to the applicant authorizing construction of Indian Point Unit 2, inspections by the Division of Compliance have been conducted at the construction site, at vendor shops, and at the applicant's offices. A chronology of these inspections is attached as Appendix A. The results of the inspection of Unit 2, conducted through October 14, 1970, are discussed by systems in the same order as presented in the Safety Evaluation dated November 16, 1970, prepared by the Division of Reactor Licensing.

### A. Reactor Coolant System

#### 1. Reactor Coolant Pressure Piping

The reactor coolant pressure piping includes the four primary recirculation loops, the pressurizer lines and portions of the following systems: Chemical and Volume Control; Emergency Core Cooling (ECCS), Shutdown Cooling, Safety and Relief Valves, and Reactor Coolant Vent and Drain.

Our inspection program was directed primarily toward auditing fabrication, erection, and nondestructive testing of the reactor coolant pressure boundary components and piping. The effort included site and vendor inspections utilizing our staff specialists. The hydrostatic test of the reactor coolant boundary at 125% of design pressure, which is required by the American Society of Mechanical Engineers (ASME) Code, has been conducted. Portions of this test were reviewed and witnessed by Division of Compliance inspectors and records of test results were examined to assure compliance with the code. In addition to the normal quality control inspections, a special quality control inspection was performed, under the direction of the assigned inspector, by a team of staff specialists, a specialist from the Division of Reactor Licensing, and a consultant. Segments of the reactor coolant system and emergency core cooling system (ECCS) were selected for inspection and review. Material certifications for selected portions of the reactor coolant system components were examined.

Onsite quality control records for the reactor coolant and ECCS systems were examined and visual inspections of these systems were performed. Followup inspections have been made to the site to complete the record review, and at the vendor shop which fabricated the ECCS piping.

The applicant and his contractor performed a review of quality control records for all pipe, valves, and fittings within the reactor coolant pressure boundary. This review confirmed the Division of Compliance findings that the reactor coolant system piping had not received the full hydrostatic test required by the applicable American Society for Testing Materials (ASTM) Code prior to leaving the manufacturer's shop and that certain cast valve discs (7) had not been radiographed. The subsequent performance of a field hydrostatic test of the system is considered to fulfill the code requirements. The necessity for radiographing the discs of the seven valves which do not perform a primary isolation function is being evaluated by the Division

of Compliance and the Division of Reactor Licensing.

Completion Status: Construction of the primary coolant piping is essentially complete. Some installation of insulation and pipe hangers remains.

2. Reactor Vessel

The reactor pressure vessel was fabricated at the shops of Combustion Engineering, Inc., in Chattanooga, Tennessee.

The Division of Compliance performed inspections at the shops during which fabrication practices were observed, material quality records were examined, and nondestructive testing methods were reviewed. We have followed the placement of the vessel and fitup of the reactor core internals and installation of the internals vibration detection instrumentation. No deficiencies were identified.

Completion Status: Construction of the reactor pressure vessel and core internals has been satisfactorily completed.

3. Steam Generators

Compliance performed a vendor inspection at the steam generator manufacturer's plant.

This inspection included a review of quality control programs and related essential documentation. The inspection disclosed records which indicated that insulation nut plate welds on the channel heads of the steam generators had not been magnetic particle tested. Subsequent magnetic particle testing of the welds was performed in the field. The Division of Compliance reviewed fitup and girth welding of the steam generators in the field. This activity included a review of welding procedures, welder qualifications, and weld material certification.

Completion Status: Construction of the four steam generators has been satisfactorily completed.

4. Reactor Coolant Pumps

The reactor coolant pumps have been installed and have received an initial operation checkout. We verified the pump materials and nondestructive testing performance for the reactor coolant pumps during the special quality control inspection referred to in paragraph II. A. 1. of this report.

Completion Status: Construction of the reactor coolant pumps has been satisfactorily completed.

5. Pressurizer

The pressurizer has been installed. We reviewed installation of the vessel and verified that the code stamp indicated construction to applicable codes and regulatory requirements. During pre-service ultrasonic testing of the pressurizer welds, nonmetallic inclusions in the base plate material were detected. The applicant conducted additional nondestructive testing and technical reviews pertaining to the existing condition and concluded that a series of nonmetallic inclusions exist within the base plate material and that lamina defects beyond that allowed by the ASME Section III code do not exist. The applicant has submitted a report on this subject to the Division of Reactor Licensing. The acceptability of these nonmetallic inclusions is under evaluation by the Division of Compliance and the Division of Reactor Licensing. This issue will be resolved prior to licensing.

Completion Status: Construction of the pressurizer has been completed; however, satisfactory resolution of the above base plate material question will be required prior to licensing.

6. Pressure Relief and Safety Valves

We have verified that the pressure relief and safety valves were installed and were set at the vendor shop to relieve at the designated pressure.

Completion Status: Installation of these valves has been satisfactorily completed.

Conclusions: Based on the results of previous inspections and corrective actions taken by the applicant and contractor to date, we conclude that there is reasonable assurance that the reactor coolant system will be completed in accordance with AEC regulatory requirements.

B. Containment and Class I Structures

1. Primary Containment

The primary containment is a steel-lined reinforced concrete structure which houses the reactor coolant system. Our inspection program included selective examination of field

fabrication procedures, observation of field fabrication activities, observation of non-destructive testing, and selective examination of onsite quality control records.

Problems identified by the applicant during construction of the primary containment included:

- a. A marked reduction in cadweld yield strengths was encountered.
- b. The nominal diameter of the liner exceeded tolerance limits in some instances.
- c. Documentation on pipe penetration bellows materials and weldment quality is only partially traceable.

The applicant and his contractors investigated and resolved to our satisfaction problem a. and b. described above, and have initiated programs for correcting item c. Division of Compliance inspectors followed the progress of the completed investigations during inspections by the applicant at the site, and will follow those that are continuing for item c.

Completion Status: The system will be considered complete following concrete closure of one construction access opening, resclusion of

the penetration bellows question, completion of the integrated leak rate test, and installation of the reactor coolant system leak detection equipment.

2. Other Class I Structures

Other Class I (seismic) structures at Unit 2 include the primary auxiliary building, the control room, the fuel storage pool, diesel generator building, and the service water intake structure. Vacuum testing revealed leakage at the welds of the fuel storage pool liner. The applicant and contractors have taken appropriate corrective actions. We have inspected the construction of the other Class I structures from the standpoint of construction practices and concrete quality. No problems were identified.

Completion Status: Construction of the other Class I structures is nearing completion.

Items to be completed prior to licensing are:

- a. Additional reinforcement of the Unit 1 superheater building (required because of Unit 2 considerations) and the Unit 2 turbine building.

- b. Installation of a second completely independent turbine overspeed control.
- c. Provisions for alternate charging pump cooling water.
- d. Added missile protection for the auxiliary feedwater lines.

Conclusions: Based on our inspections to date, we conclude that there is reasonable assurance that the containment and other Class I structures will be completed in accordance with AEC regulatory requirements.

C. Engineered Safety Features

1. Emergency Core Cooling System (ECCS)

The emergency core cooling system is comprised of a high pressure system, a residual heat removal system, a recirculation system, boron injection tanks, and pressurized safety injection accumulators. We have inspected the construction and examined quality control records for the ECCS during our normal inspections and the special quality control inspection. Results of our inspection included the following:

- a. Welding quality control records incomplete.

- b. Visual inspection indicated a weakness in first line quality control; i.e., weld splatter, arc strikes, and excessive grinding.
- c. Accumulator check valves which were not manufactured to Westinghouse specifications.

The applicant and contractor initiated corrective actions for these items and resolution of each is nearing completion. These items will be reviewed by the Division of Compliance to assure satisfactory resolution prior to licensing.

The applicant and his contractor performed a review of quality records for all pipe, valves, and fittings included in the reactor coolant pressure boundary, as described in paragraph II. A. 1. above. In addition, the applicant has reviewed quality control records for the remainder of the piping included in the ECCS system. The Division of Compliance has audited the results of this review and considers the findings to be acceptable.

Completion Status: Construction of the ECCS system is essentially complete. Remaining work

to be accomplished includes: (1) finish surface cleanup, (2) completion of hanger and support installation, and (3) resolution of items listed above.

2. Containment Spray and Fan Cooling Systems

The containment spray system is comprised of two spray pumps and chemical additive devices. We have inspected the construction and examined quality control records for this system in conjunction with the ECCS.

The containment fan cooling system is located within the containment. The Division of Compliance plans to complete inspection of this system during functional testing and filter testing prior to licensing.

Completion Status: Construction of the containment spray and fan coolers is nearing completion. Work remaining includes filter testing and functional testing.

3. Post Accident Hydrogen Control System

The post accident hydrogen control system has not been installed. Installation of this system will be verified when completed.

Completion Status: Installation of the hydrogen control system will be completed prior to licensing of Unit 2.

Conclusions: Based on the results of our inspections to date, we conclude that there is reasonable assurance that the construction of the Engineered Safety Features will be completed in accordance with AEC regulatory requirements.

D. Instrumentation, Control, and Power Systems

These systems include the reactor protective, control, safety, and nuclear instrumentation and normal and emergency power. We have inspected the quality of the electrical and instrumentation installation, the separation and protection of key safety-related circuits, and the loading of cable trays and wireways during the course of our normal inspection and, also, during the special quality control inspection. Our inspection observations included the following:

1. Independent cable design review had not been performed.
2. Independent quality control of cable installation was lacking.

3. Some redundant cables were not properly separated.
4. Items which required additional design analyses.

The applicant and contractor initiated responsive actions to correct the conditions noted above. Compliance has verified that their actions included a 100% design audit relative to the separation of power and control electrical cabling for redundant engineered safety feature and a design review on associated instrument cabling in excess of 95%. We have verified that work on the remaining items listed above is nearing completion. These areas will require additional Compliance inspection effort to assure satisfactory completion prior to licensing.

Completion Status: Construction of the electrical and instrumentation systems is 95% complete. Items remaining to be completed include:

1. Installation of remainder of separation barriers and fire stops.
2. Completion of cable installation surveillance program.
3. Installation of transite barriers at the single penetration area.

4. Installation of redundant power cables for the tunnel fans.

Conclusions: Based on the results of previous inspections and corrective actions taken by the applicant and contractor to date, we conclude that there is reasonable assurance that the instrumentation, control, and power systems will be completed in accordance with AEC regulatory requirements.

E. Radioactive Waste Control

The radioactive waste control system includes facilities for processing and minimizing releases of liquid and gaseous effluents to the environment. We have inspected the installation of the major components of these systems. The radiation monitoring instrumentation has not been installed and will be inspected for acceptable installation prior to licensing.

Completion Status: The radioactive waste control systems are essentially complete with the exception of the radiation monitoring instrumentation and controls.

Conclusions: Based on inspections to date and the applicant's planned actions, we conclude that there is reasonable assurance that the radioactive waste

disposal system will be completed in accordance with AEC regulatory requirements.

F. Auxiliary Systems

Auxiliary systems include chemical and volume control, residual heat removal, component cooling service water, and spent fuel storage.

Completion Status: Construction is essentially complete. Work to be accomplished includes installation of some insulation, hangers and supports.

Conclusions: Based on the results of inspections to date, we conclude that there is reasonable assurance that the auxiliary systems will be completed in accordance with AEC regulatory requirements.

G. Conduct of Operation

Conduct of operation as used here includes organization and staffing, preparation and review of procedures, and the administrative directives which the applicant has developed to conduct the functional testing program and subsequent operation of the Unit 2 facility. We have verified that the applicant has established operational review and audit committees which are actively engaged in activities relating to plant startup. We have verified that the applicant has developed a program

for functional testing of equipment and systems and we have examined the available test procedures on a selective basis. We have also selectively examined the results of tests which have been completed. We have initiated our review of the program and procedures for fuel loading, power ascension testing, and plant operation. We plan to examine these procedures on a selective basis when their preparation has been completed.

Completion Status: Sixty percent of the preoperational test procedures have been approved for use by the applicant. System functional testing is in the initial stages. Preoperational testing, including hot functional testing is scheduled to be completed prior to licensing.

Conclusions: Based on the results of our inspection to date and responsive action taken by the applicant previously, we conclude that the administrative organization is in conformance with the application and that testing will be completed in accordance with AEC regulatory requirements.

### III. CONCLUSIONS

Based on the results of inspections of the Indian Point Unit 2 facility, we conclude that construction of

the facility has been substantially completed in conformity with the construction permit and the application as amended, the provisions of the Act, and the rules and regulations of the Commission.

APPENDIX A

CHRONOLOGY OF COMPLIANCE DIVISION INSPECTIONS  
CONSOLIDATED EDISON COMPANY  
INDIAN POINT NUCLEAR GENERATING STATION UNIT 2

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
5/10-12/66	Shop Inspection - Combustion Engineer- ing, Chattanooga, Tennessee	Inspected shop facilities and discussed procedures for fab- ricating the reactor vessel.
11/2/66	"	Reviewed fabrication progress of reactor vessel. Observed work in progress and discussed fabrication techniques.
5/2/67	Site Inspection Management Meeting	Initial meeting with Con Ed management to discuss Division of Compliance inspection program during reactor construction.
5/24-26/67	Shop Inspection - Combustion Engineer- ing, Chattanooga, Tennessee	Reviewed fabrication progress, observed work in progress, and inspected records of welding, plate material properties and radiography.
8/1, 16, 22/67	Site Inspection	Reviewed construction organization responsibilities. Inspected con- tainment liner installation. Reviewed quality control program for concrete, reinforcement bar and containment liner activities. The program relating to blasting control was discussed.
11/29-30/67	Site Inspection	Reviewed corrective actions on containment liner bulge. Inspected records on containment liner plate and reinforcement bar materials. Reviewed cadweld splice quality control program and information relating to decrease in cadweld strengths. Inspected concrete compressive strength results. Reviewed blasting control program.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
2/27-28/68	Site Inspection	Reviewed quality control records on cadweld splicing, concrete, containment liner and blasting. Reviewed quality assurance program relative to procurement of off-site components.
4/22-24/68	Vendor Inspection - Combustion Engineering, Chattanooga, Tennessee	Reviewed records of reactor vessel fabrication. Witnessed initial closure of reactor vessel head and hydrostatic testing of the vessel.
3/14/68	Site Inspection	Reviewed quality assurance programs and availability of records for procured components.
6/17-18/68	Site Inspection	Inspected containment liner, cadweld splice, concrete, and blasting records. Reviewed the spent fuel storage liner installation. Inspected steam generator components and reviewed photographs of the steam generator movement from the barge to the site.
6/19/68	Site Inspection	Reviewed vendor inspection reports for procured components. Reviewed purchase specification for the steam generators and the safety injection accumulators.
7/8-9/68	Vendor Inspection Chicago Bridge & Iron, Greenville, Pennsylvania	Reviewed purchasing, quality control, production, and records control for fabrication of the containment liner.
9/27 and 30/68	Site Inspection	Reviewed records pertaining to the containment liner, cadweld splicing and concrete. Reviewed the material receipt inspection program and welding procedures for the safety injection system. Inspected component storage areas. Visually observed the conditions relating to the steam generators and reactor vessel. An initial review of training and preoperational testing was made.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
10/8/68	Site Inspection	Reviewed electrical design criteria relating to cable sizing and tray loading.
11/20-21/68	Site Inspection	Reviewed testing records for cad-weld splicing and concrete activities. Reviewed actions taken to resolve quality deficiencies in the conventional and safety injection system pipe. Inspected the reactor vessel, steam generators, and reactor coolant pumps for visible deficiencies.
1/7-9/69	Vendor Inspection - Dravo Corporation, Marietta, Ohio	Inspected fabrication and quality control records pertaining to pipe procured.
1/20 and 24/69	Site Inspection	Reviewed cadweld splicing and concrete test records. Inspected records and procedures pertaining to field fabrication of the reactor coolant system and the steam generator girth welding. Reviewed resolution status of identified conventional pipe deficiencies. Observed machining of the reactor vessel lower internal supports and electrical installation.
3/4-5/69	"	Reviewed records pertaining to cad-weld splicing and reactor coolant system welding. Inspected safety injection system weld records and field conditions. Observed steam generator fitup and girth welding and reviewed associated records. Inspected external storage of components.
3/18-21/69	Vendor Inspection - Westinghouse Electric Corporation, Lester, Pennsylvania	Reviewed quality control programs and essential documentation for the steam generators.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
4/22-23/69	Site Inspection	Reviewed pipe specifications, vendor assembly records, storage and installation as related to investigations of piping fabricators' practices.
4/17 and 5/15, 22, 23/69	"	Reviewed quality control records for cadweld splicing, reactor coolant system welding, safety injection system site erection, and the spent fuel pit liner. Reviewed actions taken relative to safety injection and conventional system pipe component deficiencies. Inspected revised steam generator girth weld procedures and records relating to this activity. Reviewed activities associated with pipe fabrication investigations.
6/17, 7/1-2/69	"	Inspected quality control records for cadweld splicing, concrete placement, and welding for the reactor coolant and safety injection systems. Reviewed electrical cable placement control programs and status of investigation relating to pipe procurement. Inspected pipe supports, component outside storage and code stamping of components.
7/23-24/69	Site Inspection	Reviewed progress relating to resolutions pertaining to pipe investigation. Inspected portions of the safety injection system mechanical components to determine proper physical arrangements. Reviewed welder and weld procedure qualification and welding performance for the control rod vessel head seal welds.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
8/26, 27, 29/69 and 9/10/69	Site Inspection	Reviewed the status of the pipe investigation and the proposed organizational changes relating to the establishment of the Wedco, Inc. subsidiary of Westinghouse. Observed reactor coolant system welding. Inspected the electrical cable placement and separations programs. Reviewed the physical layout and preoperational checkout of the fuel storage building. Reviewed procedures for fuel element receipt and storage.
9/30/69 and 10/1-2/69	"	Continued the review of the pipe investigation. Reviewed welding records for the reactor coolant and safety injection systems. Inspected electrical cable placement progress and conformance to separation criteria. Observed the initial receipt and handling of fuel assemblies. Reviewed records relating to containment liner installation at the construction access openings. Reviewed reactor vessel nozzle weld overlay procedures. Observed attachment of reactor vessel internals vibration detectors and control programs for the vessel internals.
12/9-19/69	Quality Control Audit at the site, Con Ed Engineering offices, and Westinghouse Electric Company at Monroeville and Cheswick, Pennsylvania.	Team inspection to evaluate quality control of preselected portions of the reactor coolant, safety injection, main steam, and electrical systems.
2/10/70	Management Meeting	Discussed results of quality control audit performed in December 1969.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
1/22/70 and 2/6 and 11/70	Site Inspection	Reviewed final status of pipe investigation. Inspected the general preoperational test program and initial portions of system flushing and hydrostatic testing procedures. Reviewed conformance to reactor pressure boundary criteria for installed components.
3/26-27/70	"	Continued inspection of preoperational testing program. Reviewed placement and surveillance activities for electrical cables, placement of cadwelds at the containment construction access openings, and status of resolution of items identified during the Quality Control Audit.
4/10, 21, 22/70	"	Continued inspection of the preoperational test program, electrical cable placement, and containment closure. Reviewed the proposed operating organization and status of operator training. Reviewed installation of vibrational detection instrumentation for the core internals.
5/6-8/70	"	Continued inspection of preoperation test program, electrical installation and containment closure. Reviewed status of mechanical surface cleanup.
5/22, 25, 26/70, 6/3, 11, 12, 15, 16/70	"	Continued inspection of the preoperational testing program, electrical installation control programs, mechanical systems cleanup review, and evaluation of reactor pressure boundary components. Made initial inspection of radiation monitoring and waste handling systems.

<u>Date</u>	<u>Type Inspection</u>	<u>Scope of Inspection</u>
6/26 and 29/70, 7/8-9/70	Site Inspection	Witnessed the reactor coolant system hydrostatic test. Continued inspection of preoperational test programs, electrical installation reviews, and previously identified and unresolved items. Made initial inspection of the operating procedure program and nuclear facility safety committee structure and involvement. Reviewed status of previously identified items requiring resolution.
7/30/70 8/4, 5, 19, 24, 25/70	"	Continued inspections of preoperational test programs. Reviewed status of electrical installation, mechanical systems cleanup, reactor pressure boundary, and containment closure activities. Reviewed conditions noted during preservice UT inspection of the pressurizer.
9/8, 23, 25/70	"	Continued inspection of preoperational test program, mechanical system cleanup & containment closure activities. Reviewed installation control programs for pipe supports. Examined ultrasonic test data for the pressurizer base plate material.
10/7, 8, 13, 14/70	"	Continued inspection of the preoperational testing program, mechanical system cleanup, containment closure, and pipe support installation. Reviewed pipe penetration bellows welding and materials documentation. Continued inspection relating to reactor pressure boundary components, electrical design reviews, and electrical cable placement surveillance. Reviewed organization and involvement of the Nuclear Safety Committee. Continued evaluation of the pressurizer base plate material. Reviewed status of previously identified items requiring resolution.