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U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-29/82-10

Docket No. 50-29

License No. DPR-3

Priority \_\_\_\_\_

Category C

Licensee: Yankee Atomic Electric Company  
1671 Worcester Road  
Framingham, Massachusetts 01701

Facility Name: Yankee Nuclear Power Station

Inspection at: Rowe, Massachusetts

Inspection conducted: August 2 - September 30, 1982

Inspectors: *McCollum*  
S. J. Collins, Senior Resident Inspector

*rit*  
10/4/82  
date signed

Approved by: *Robert M. Gallo*  
R. M. Gallo, Chief, Reactor Projects  
Section 1A

date signed  
10/7/82  
date signed

Inspection Summary:

Inspection on: August 2 - September 30, 1982

Areas Inspected: Routine, onsite regular and backshift inspection by the resident inspector (159 hours). Areas inspected included previous inspection items; reviews of plant operation; plant maintenance observation; review of plant events; review of licensee event reports (LERs); review of licensee plant information reports (PIRs); review of periodic and special reports; on-site review committee actions; licensee organization and administration changes; and preparations for refueling.

Results: No violations were identified.

## DETAILS

### 1. Persons Contacted Plant Operations

- \*H. Autio, Plant Superintendent
- E. Begiebing, Maintenance Supervisor
- W. Billings, Chemistry Manager
- \*R. Boutwell, Technical Services Supervisor
- E. Chatfield, Training Manager
- \*B. Drawbridge, Technical Director
- L. French, Plant Engineer
- T. Henderson, Reactor Engineering Manager
- K. Jurentkuff, Assistant Plant Operations Manager
- P. Laird, Plant Maintenance Manager
- W. Loomis, Instrument and Control Supervisor
- R. Sedgwick, Security Supervisor
- \*N. St. Laurent, Assistant Plant Superintendent
- J. Trego, Radiation Protection Manager
- D. Vassar, Plant Operations Manager

The inspector also interviewed other licensee employees during the inspection, including members of the Operations, Health Physics, Instrument and Control, Maintenance, Reactor Engineering, Security and General Office Staffs.

#### Quality Assurance

- L. Reed, Operational Quality Assurance Coordinator

#### Yankee Atomic Electric Company

- J. Kay, Senior Engineer Licensing

\*Denotes those present at exit interview on September 30, 1982.

2. Licensee Action on Previous Inspection Findings

- a. (closed) Unresolved Item (29/75-14-06): Local Leak Rate Test Requirements for Containment Isolation Check Valves. By letter dated September 2, 1982 to the licensee the Commission issued an Exemption from certain requirements of 10 CFR 50.54 (o) and Appendix J for Yankee NPS. The licensee is now required to submit a revision to Technical Specifications which incorporates Appendix J requirements taking into consideration the above noted exemption. This item is closed.
- b. (closed) Follow Item (29/79-08-04): Review of Maintenance and Calibration Histories of Effluent Monitoring (solid state) Instrumentation. The inspector periodically sampled portable survey instruments during facility tours and reviewed the operating history of technical specification related radiation monitoring instrumentation. No adverse maintenance or calibration trends were noted with the exception of a recognized repetitive primary vent stack monitor failure history which is being addressed by the licensee. This item is closed.
- c. (closed) Unresolved Item (29/81-06-02): Procedures for Reconstitution of Fuel. The inspectors review of this item determined that IR 50-29/81-14 section 3.b.(4) completed a subsequent review of Core XV Reconstituted Fuel activities including procedures. This item is closed.
- d. (closed) Follow Item(29/81-11-01): Control Rod Bending Corrective Actions. The licensee has purchased an instrument that will determine the straightness of a control rod with a significantly more accurate measurement than the method that the licensee used during the previous refueling for determination of Control Rod Bending. The instrument is on site and procedures are being developed for its use. This item is closed.
- e. (closed) Unresolved Item (29/81-14-01): OP-7202, Fuel Sipping, Provisions for Form OPF-7202.1 Review. The inspector reviewed OP-7202, Rev. 2 and noted that page 1 of OPF-7202.1, Fuel Sipping, provides a signature block for data final review by SNM Custodian. The procedure Discussion section and Final Conditions also requires that upon completion of the procedure it be reviewed to assure compliance with established requirements. This item is closed.
- f. (closed) Follow Item (50-29/81-14-03): Review of Control Rod Drop Tests. The procedure OP-4703 was revised to incorporate the inspectors concerns. This item is closed.
- g. (closed) Follow Item (50-29/81-14-04): OP-2103 Revision. OP-2103 has been revised to incorporate critical Boron Concentration data during Reactor startup. This item is closed.
- h. (closed) Unresolved Item (50-29/81-16-02): Incorporate New Method of Drawing Control into AP-0225. The inspector reviewed the revised edition of AP-0225, Plant Drawings, Rev. 9 and determined that the procedure adequately encompasses a method which will keep the control room drawings up to date in a timely manner. This item is closed.

- i. (closed) Unresolved Item (50-29/81-21-02): VC Penetration Surveillance Procedure. OP-4203 has been revised to incorporate all Vapor Container penetration boundary valves. This item is closed.
- j. (closed) Follow Item (29/82-01-01): NRR to Determine Adequacy of IEB 80-08. The licensee's response WYR 80-73, dated June 25, 1980 remains under NRC review at this time. This item will be tracked as open under IEB 80-08, the redundant IFI 82-01-01 item is closed.

### 3. Review of Plant Operations

- A. Daily Inspection - The inspector verified the following by direct observation of activities, tours of the facility, discussions with plant personnel, independent verification, and facility record review:
  1. Control room activities were observed to verify proper manning and access control; adherence to approved procedures; adherence to Limiting Conditions for Operation (LCO's), ESF status and selected value confirmation using a unit specific checklist; selected instrument and recorder trace review; control room board annunciator status and followup action review; nuclear instrumentation (N/I) and reactor protection system (RPS) operability verification; conformance with shutdown margin limits; verification of containment status; primary vent stack trace review and release followup; verification of onsite and offsite emergency power source availability; control room documents, including operator logs, maintenance and surveillance documentation and operating orders were reviewed to note trends, apparent anomalies, routine operations, and establish items requiring inspector followup.
  2. During daily entry and egress from the protected area (PA) security activities were observed to verify access controls in conformance with the security plan for personnel, packages, vehicles, guard manning and conduct; selected PA barriers, and gates were examined; isolation zone conditions were observed; and licensee monitoring for radioactive materials prior to personnel, materials and equipment release for unrestricted use was monitored during egress from the PA. These checks were performed on the following dates: 8/9, 8/11, 8/13, 8/16, 8/26, 8/27, 9/2, 9/3, 9/6, 9/8, 9/10, 9/13, 9/14, 9/16, 9/20, 9/22, 9/24, 9/27, 9/29, and 9/30.

No inadequacies were identified.

#### B. Weekly System Alignment Inspection

Operating confirmation was made of selected piping system trains. Accessible valve positions in the flow path were verified correct. Proper power supply and breaker alignment was verified. Visual inspections of major components were performed. Operability of instruments essential to system performance was verified. The following systems were checked by inspector observation or licensee document review:

- Lineup and operation of the Shutdown Cooling System per OP. 2162, Operation of the Shutdown Cooling System, Rev. 9, following system modification and testing on 9/13/82.
- Operability of plant fire system per OP -4210, Fire System Operability Test, Rev. 11, pursuant to Technical Specification (TS.) section 4.7.10.1.1.a, weekly check on 9/24/82 and T.S. sections 4.7.10.1.2.a.2 and 4.7.10.1.2.c.2 weekly check on 9/24/82.
- Supplemental Locked Valve List, OP- 4241 Rev. 4, to prevent inadvertent reduction of the main coolant boron concentration while the plant is in Mode 5 or 6 pursuant to T.S. sections 4.9.1.2, 4.1.1.3.2, 4.4.2.2 and 4.4.2.3 performed on 9/23/82.

No inadequacies were identified.

### C. Biweekly Inspection

1. Portions of the following selected ESF and refueling related surveillances were observed to verify: that test instrumentation was calibrated; redundant system operability; approved procedures used; work performed by qualified personnel; and acceptance criteria was met:
  - OP-4226, Testing of Fuel Handling Equipment with the Dummy Fuel Assembly, Rev. 10, performed 9/21/82, and 9/27/82 following repairs to the manipulator crane.
  - OP-4231, Waste and Cover Gas System Leakage Check, Rev. 8, Part A, Monthly Leak Check, performed 6/7/82, 6/11/82, 7/5/82, 8/3/82, and 8/30/82; and Part B, Extensive Leak Check, performed 6/11/82 and 8/31/82.

Except for the following the inspector had no further questions.

The inspector noted that in conjunction with OP-4231 performance, actions were taken on 6/11/82 and 8/31/82 to correct indicated leakage from the waste gas system. These actions and a further discussion of the system leakage are discussed in section 6.B. of this report.

2. The inspector independently examined the following tagouts to verify that the valve, breaker or switch was correctly positioned, that the tag was properly attached to the correct component, that the licensee's procedure, AP-0017, Switching and Tagging of Plant Equipment, was adhered to, and that equipment removed from service conformed to T/S LCO requirements.
  - YAEC No. 82 463, Emergency Feed Orifices, July 2, 1982.
  - YAEC No. 8200899, Post Accident H<sub>2</sub> Sample System, September 29, 1982.

No inadequacies were identified.

3. A review of the licensee's sampling program was conducted by monitoring results of liquid and gaseous samples during the period to verify conformance with regulatory requirements; and boric acid tank (BAT) level and sample results were reviewed to conformance with technical specifications on the following dates:

-- 8/9/82, BAMT - 12.21% Boric Acid, 7.15 ft. level

-- 9/1/82, BAMT - 12.29% Boric Acid  
SIT - 2292 ppm Boron

-- 9/15/82, BAMT - 12.08% Boric Acid, 7.1 ft. level  
SIT - 2340 pp, Boron  
Primary Coolant - 2120 ppm Boron  
Shutdown Cooling - 2135 ppm Boron

-- 9/29/82, BAMT - 12.12% Boric Acid, 7.45 ft. level  
SIT - 2246 ppm Boron  
Primary Coolant - 2297 ppm Boron

No inadequacies were identified.

4. Accessible facility areas were toured to make an independent assessment of plant and equipment. On a sampling basis the following items were observed or verified: condition of selected vital and access controlled barriers; radiation work permit completion and use; protective clothing and where applicable, proper respirator use; personnel monitoring practices; operational status of selected personnel monitors, area radiation monitors and air monitors; equipment tagout sample to verify LCO compliance for equipment out of service; plant housekeeping and cleanliness conformance with approved programs, and communication system operability.

Inspector tours included the following areas:  
Control room, turbine building, auxiliary boiler room, switchgear room, screenwell house, spent fuel pit, primary auxiliary building, safety injection building, vapor container, pump and heat exchanger cubicles and radwaste handling complex.

No inadequacies were identified.

#### 4. Plant Maintenance Observation

The inspector monitored portions of the activity noted below to ascertain that maintenance of safety-related systems and components are being conducted per approved procedures, TS and appropriate codes and standards. Observations and reviews of records were utilized to verify conformance with LOC's; compliance with administrative and tagout procedures; use of maintenance procedures and qualified personnel; use of certified replacement parts; adherence to radiological controls, housekeeping requirements, and equipment return to service.

- Shutdown Cooling System (SCS) modification performed per OP-2000.105, Replacement and Testing of SC-V-611 and Radiation Work Permit 561. The inspector also observed portions of the hydrostatic test of the replacement SCS pump discharge valve, SC-V-611.

No inadequacies were identified.

## 5. Inspector Review of Plant Events

### A. Coastdown Operations

From August 2 - September 11, 1982 the plant operated continually in Mode 1 coastdown. During this period preparations were made by the licensee for Cycle XV-XVI refueling. Inspector observations are noted below:

- On September 2, 1982 a check valve gasket failed in the plants fire protection system water piping. The licensee isolated the system for repairs and took action per T.S. 3.7.10.2 requirements. The inspector verified by reviewing plant Flow Diagrams YR-E-75-001-4 and YR-E-70-003-0 that the system isolation effected the Auxiliary Boiler Room sprinkler system and verified that proper compensatory measures were taken by the licensee. YAEC Tagging Order No. 82-00665 was verified as correctly implemented and effective for isolating the repair area. Maintenance Request 82-649 was issued and repairs were completed within the T.S. action statement allowed time. The inspector subsequently verified system return to normal and fire protection system operability.

### B. Cycle XV-XVI Refueling Operations

At 7:48 a.m. on September 11, 1982 the reactor was subcritical and plant refueling outage operations commenced. Inspector observations are noted below:

- During plant component inspections on September 11, 1982 licensee personnel noted a missing bonnet flange bolt on 1½" motor operated valve PS-MOV-191 (Pressurizer Spray Valve). Five of the required six bolts were in place and intact. The inspector reviewed the component history for PS-MOV-191 and noted that the valve was re-built in 1975 due to a damaged operator and subsequently inspected in 1977, 1978 and 1981. The licensee is researching the circumstances surrounding this event and intends to document their findings in a report. This item will be followed by the NRC (Follow Item 50-29/82-10-01).
- On September 22, 1982 the inspector observed refueling operations conducted per OP-1507, lifting of the reactor head to storage position.
- On September 23, 1982 an unplanned gaseous release occurred for a duration of approximately 15 minutes (2:45 p.m. to 3:00 p.m.). The cause of the release was a temporary blow-out of the waste gas header water loop seal due to failure of # 2 Waste Gas Compressor (WGC) to load and subsequent failure of # 1 WGC to start on backup. The inspector observed operator demonstration of the equipment failure and subsequent satisfactory operation of # 1 WGC in the Lead mode. The total release was monitored by the primary vent stack radiation instruments. The inspector reviewed the circumstances surrounding

the event and noted that operator response to the equipment failure and subsequent alarm indications was proper and the required notifications were made to the NRC. The inspector will follow licensee backup analysis of release concentrations and repair of # 2 WGC per MR 82-727 (Follow Item 50-29/82-10-02).

- At 6:00 a.m. on September 25, 1982 the licensee commenced Cycle XVI Reactor Refueling and Component Inspection per OP-1700, these operations continue through the end of the report period.





6. Review of Licensee Event Reports (LERs)

- A. LERs submitted to NRC:RI were reviewed to verify that the details were clearly reported, including accuracy of the description of cause and adequacy of corrective action. The inspector determined whether further information was required from the licensee, whether generic implications were indicated, and whether the event warranted onsite followup. The following LERs were reviewed:

<u>LER No.</u>	<u>Date of Event</u>	<u>Date of Report</u>	<u>Subject</u>
50-29/82-10	5/14/82	6/11/82	Zone II Sprinkler System Alarm Check Valve Failure
50-29/82-11	5/21/82	6/18/82	No. 4 Steam Generator Blow-down Radiation Monitor Failure
50-29/82-16	6/11/82	7/9/82	Inside and Outside VC Air Particulate Monitor Out-Of-Service
50-29/82-21	7/12/82	8/11/82	Fire Detection System Charging Pump Cubicles and Charcoal Filter's Zones Failures due to Rainwater Grounds.
50-29/82-22	7/13/82	8/12/82	Safety Injection Accumulator Isolation Valve Failure due to Rainwater Grounding.
50-29/82-23	8/2/82	9/1/82	Fire Protection CO <sub>2</sub> System Taken Out of Service
*50-29/82-25	8/31/82	9/30/82	Defective Weld on Waste Gas Decay Drum Safety Valve Line
*50-29/82-28	9/3/82	9/3/82 9/17/82	Nonconservative Valve used for the Moderator Defect After a Main Steam Line Break and a Resultant Primary Plant Cooldown.

No inadequacies were identified.

- B. For the LERS selected for onsite review (denoted by asterisks above), the inspector verified that appropriate corrective action was taken or responsibility assigned and that continued operation of the facility was conducted in accordance with Technical Specifications and did not constitute an unreviewed safety question as defined in 10 CFR 50.59. Report accuracy, compliance with current reporting requirements and applicability to other site systems and components were also reviewed.

A summary of the inspectors review findings follows or is documented elsewhere as noted below.

- 50-29/82-25, Defective Weld on Waste Gas Decay Drum Safety Valve Line. During normal power operation a gas leak developed in a weld joining the safety valve (SV-307) drain line to the valve body on No. 2 Waste Gas Decay Drum (TK-37-2) safety valve. The No. 2 Decay Drum safety valve relieves to a common waste gas header line which is normally pressurized to maintain a cover gas on the various holdup and collecting tanks in the radioactive waste disposal system. The drain line which developed a leak in its welded coupling is located on the discharge side of the 1½ in. Crosby Safety Valve and thus subject to waste gas header pressure. The calculated release rate was approximately 10 cc's/sec. (0.003 microcuries/sec.) Based on licensee waste gas/cover gas inventory calculations the leak duration was estimated as 6/28/82 - 8/31/82. The inspector reviewed a summary of the offsite dose calculation performed by the Radiological Engineering Group of YNSD (REG 134/82, dated September 15, 1982) and actions taken by the licensee which included: Immediate action to isolate the SV-307 valve from the waste gas header, notify the NRC (see section 7. of this report) and calculate off-site release activity. Followup actions included repair of the drain line coupling leak and tagging shut the common decay tank safety valve discharge line isolation valve (WD-V-679) to isolate the decay tanks from waste gas header pressure since the tanks are not utilized at this time.

The inspector reviewed licensee surveillance records, OP-4231, Waste and Cover Gas System Leakage Check, and determined that the monthly leak checks had been completed on 6/11/82, 7/5/82, 8/3/82, and 8/30/82 with appropriate corrective action taken to identify and correct system discrepancies.

No inadequacies were identified.

- 50-29/82-28, Nonconservative Valve used for the Moderator Defect After a Main Steam Line Break and a Resultant Primary Plant Cool-down. During plant coastdown operations on September 3, 1982 the licensee onsite management was notified by the corporate staff that an error in the assumptions used in the Core 15 accident analysis could have permitted operation in a manner less conservative than originally assumed. Specifically a less conservative assumption of moderator temperature defect was found in the analysis of the transient theoretically associated with a rupture of a Main Steam Line (MSL) at the time of a cooldown, (Mode 3) with automatic Emergency Core Cooling System (ECCS) blocked and a control rod stuck. The inspector was notified by the licensee and participated in discussions between the licensee and NRC staff on September 3, 1982. The licensee imposed administrative restrictions on plant operations which were sufficient to guarantee adequate shutdown margin during the remainder of Core 15 to account for conditions of largest positive reactivity. A subsequent licensee review of plant operating records indicated that the plant had not operated in a Mode 3 condition described in the analysis as resulting in insufficient shutdown margin. The licensee operated under the revised administrative requirements for the remainder of Mode 1 coastdown

until plant shutdown for Core 15-16 refueling on September 11, 1982. Discussions with licensee corporate staff indicated that the original Core 15 analysis had utilized a  $\frac{1}{4}$  core model with 1 stuck rod in each quadrant. The Core 16 analysis was performed using a full core model with 1 stuck rod and the results were more conservative. Re-analysis of the Core 15 steam line break with the appropriate worst case moderator defect. (All Rods In less 1 stuck rod) would not assure sub-criticality in the conditions described above. The inspector reviewed licensee long term corrective actions as described in LER 50-29/82-28-01T and noted that corporate actions for procedure documentation of core analysis assumptions are planned. The inspector concluded that licensee immediate corrective actions were adequate and long term actions are assigned. The inspector notes that a review of corporate (YNSD) methods to assure quality in plant analysis operations may be conducted in the future to verify adequate controls are being implemented.

No inadequacies were identified.

#### 7. Review of Events Requiring One Hour Notification to the NRC

The circumstances surrounding the following events requiring prompt NRC (one hour) notification via the dedicated telephone (ENS-line) were reviewed. A summary of the inspectors review findings follows or is documented elsewhere as noted below.

- About 12:50 p.m. on August 31, 1982, a cover gas system leak was discovered during surveillance, the NRC was notified via the ENS-line at 1:45 p.m. Circumstances surrounding this event are described in section 6.B. of this report.
- About 2:15 p.m. on September 3, 1982, the site notified the NRC via the ENS-line of a Core 15 accident analysis error in value used for moderator defect. Circumstances surrounding this event are described in section 6.B. of this report.
- About 2:20 p.m. on September 23, 1982, the NRC was notified via the ENS-line of elevated stack release which occurred when # 2 waste gas compressor (WGC) did not load and # 1 WGC failed to auto-start resulting in a momentary waste cover gas loop seal blowby. Circumstances surrounding this event are described in section 5. of this report.

#### 8. Review of Purge and Vent Valve Operation

Based on a request to validate a provision of the Interim Position of Multi-Plant Action (MPA) Item B.24 and TMI Action Item II.E.4.2., a review of the licensee's total actual purging and venting time during operation for safety-related reasons was conducted and forwarded to the NRC Region I staff.

The inspector reviewed operation of BV-4-1 and BV-4-2, 30-in. butterfly purge/vent valves for the calendar year 1981. The licensee controls position of the valves by OP-2478, Operation of the Vapor Container Purge System. The procedure requires that the valves be closed and locked when greater than 200°F and 300 psig in the primary plant. This is consistent with the licensee's estimate of zero estimated time open during operations as provided to the NRC.

No inadequacies were identified.

9. Plant Information Report (PIR) Reviews

The inspector reviewed PIRs prepared by the licensee per AP-0004, Plant Information Reports. The inspector determined whether the conditions were reportable as defined in the Licensee Event Reports reporting requirements section of the Technical Specifications (TS) and that the licensee's system of problem identification and corrective action is being effectively utilized. The following PIRs were reviewed.

<u>PIR No.</u>	<u>Occurrence Date</u>	<u>Report Date</u>	<u>Subject</u>
82-01	1/18/82	2/17/82	Minor Earth Tremor
82-02	2/1/82	3/3/82	Incore Instrumentation Thimble Leak
82-03	2/22/82	3/24/82	No. 1 Heater Drain Pump Failure
82-04	2/26/82	3/26/82	Vapor Container Wide Range Level Transmitters Improper Installation
82-05	6/25/82	7/7/82	Incorrect Trim in PZR Manual Spray Valve PR- HCV-205
82-06	6/29/82	8/5/82	Plant Trip From Power
82-07	7/12/82 7/13/82	7/29/82	Rain Water Flooding Affecting Safety Re- lated Equipment
82-08	7/31/82	8/30/82	Plant Trip from Power
82-09	8/3/82	8/23/82	Spurious Momentary Act- ivation of the Pressure Control and Relief System

Except for the following the inspector had no further comments.

- The inspector noted that PIR 82-06 events constituted a partial loss of offsite power which was reported by LER 50-29/82-19, issued 7/29/82 by the licensee.
- PIR 82-05 corrective actions provided for installation of new valve trim at first opportunity. The inspector verified that Maintenance Requests (MR) 82-241 and 82-381, Pressurizer Manual Spray Valve PR-HCV-205 Inadequate Capacity, are scheduled for completion during the present refueling outage.

- PIR 82-7 events were reported to the NRC as LERS 50-29/82-21 and 50-29/82-22 on 8/11/82 and 8/12/82 by the licensee.

No inadequacies were identified.

#### 10. Review of Periodic and Special Reports

Upon receipt, periodic and special reports submitted pursuant to Technical Specification 6.9 were reviewed. That review included the following: Inclusion of information required by the NRC; test results and/or supporting information consistency with design predictions and performance specifications; planned corrective action adequacy for resolution of problems; determination whether any information should be classified as an abnormal occurrence; and validity of reported information. The following periodic report was reviewed.

- Semiannual Effluent Release Report for January through June 1982 submitted per T.S. 6.9.5.b, FYR 82-91, dated September 1, 1982.
- July, 1982 Monthly Statistical Report, FYR 82-84, dated August 12, 1982.

No inadequacies were identified.

#### 11. Onsite Review Committee

On the following dates the inspector observed a meeting of the Yankee NPS onsite review committee to ascertain that the provisions of Technical Specification 6.5.1 were met.

- 9/14/82, 9/17/82, and 9/22/82

No inadequacies were identified.

#### 12. Preparations for Refueling

The inspector reviewed licensee preparations for refueling to ascertain that approved procedures will be available for fuel handling activities and that new fuel had been received and inspected in accordance with approved procedures. The following documents were reviewed.

##### A. Refueling Procedure Reviews

- OP-7200, Receiving, Unloading and Inspecting New Reactor Fuel, Rev. 5
- OP-7202, Fuel Sipping, Rev. 2
- OP-7107, Moving Fuel Within the Spent Fuel Pit, Rev. 6
- OP-1207, Exchange of Control Rod Drive Shafts, Rev. 7
- OP-1209, Operation of the V.C. Manipulator Crane Handling Fixtures and Transfer Equipment, Rev. 8
- OP-1210, Venting and Sampling of Gas from Under the Reactor Vessel Head, Rev. 6

- OP-1214, General Instructions for Component Movement Within the New Fuel Vault and Spent Fuel Pit, Rev. 9
- OP-1500, Relaxing Reactor Head Studs, Rev. 6
- OP-1502, Reactor Lower Core Support Structure, Removal and Replacement, Rev. 6
- OP-1503, Unitized Control Rod Shearing, Rev. 6
- OP-1507, Reactor Head-Removal, Handling and Storage, Rev. 6
- OP-1508, Handling and Storage of Reactor Head Studs, Rev. 6
- OP-1509, Installation of V.C. Manipulator Crane Universal Handling Tool, Rev. 5
- OP-1510, Reactor Upper Core Barrel and Plates Removal and Storage, Rev. 7
- OP-1516, Inspection of New Fuel Elevator, Rev. 5
- OP-1700, Cycle XVI Reactor Refueling and Component Inspection, Rev. 9
- OP-1100, Dismantling and Reassembly of the Reactor Systems for Core XVI Refueling, Rev. 7
- OP-4226, Testing of Fuel Handling with the Dummy Fuel Assembly, Rev. 10
- OP-4239, Setting V.C. Integrity and Operability Check of the V.C. and Spent Fuel Pool Ventilation Systems, Rev. 5
- OP-4505, Inspection and Testing of Fuel Handling Equipment, Rev. 7
- OP-1504, Movement of Control and Shim Rods to V.C. , Rev. 7
- OP-1505, Removal of Reactor Head Conoseals, Rev. 4

No inadequacies were identified.

#### B. New Fuel Receipt

The inspector reviewed the results of new fuel receipt inspections performed by the licensee to verify that inspections had been performed in accordance with OP-7200, "Receiving, Unloading and Inspecting New Reactor Fuel". The inspection documentation for fuel shipment XN-5 of July 19 and July 23, 1982, consisting of 40 new assemblies was reviewed. Except as noted below the inspector had no further comments:

The licensee's record copy of OP-7200 notes that assemblies A649, A655, A656, B656, and B666 did not meet the acceptance criteria for instrumentation tube minimum diameter of 0.387 in. The five assemblies exhibited smaller diameters in the lower one to two inches of the tube. The fuel manufacturer,

Exxon Nuclear Company (ENC), had conducted a final tube bundle assembly inspection previous to shipment by sliding a probe the full length of the tube using a plug gage attached to a shaft and all assemblies were found acceptable. The on-site gaging at Yankee NPS was done with a plug gage attached to a flexible cable and the gage did not pass freely through the area which was reformed to eliminate chatter and fretting between the instrumentation tube and the lower tie plate. ENC's on-site inspector at Yankee was then advised to reinspect the restricted areas with a 0.375 in. plug gage which passed freely through the five instrumentation tubes to assure the passage of a 0.375 in. diameter flux monitor. ENC concluded that the discrepancy between ENC and on-site inspection was due to differences in inspection technique and not a deviating condition. The inspector reviewed applicable documentation and noted in ltr. CCG-80-61, R. T. Chin, YAEC to T. J. Hebling, ENC, dated April 15, 1980 that the diameter of the largest piece of equipment that was to be inserted into the fuel assembly instrument tube is the instrumentation thimble with a diameter of 0.375, +.002, -.000 in. The inspector questioned the licensee as to the revised acceptance criteria for instrumentation tube minimum diameter. It appeared that in order to assure the passage of the maximum diameter flux thimble a plug gage of 0.377 in. should be utilized in lieu of 0.375 in. The licensee acknowledged the inspector finding. Review of the licensee's disposition of the inspectors concern will be followed by the NRC (Follow Item 50-29/82-10-03).

The inspector reviewed the implementation of the revised instrumentation tube inner diameter and noted that although the procedure change had been PORC reviewed on September 14, 1982 at meeting 82-38 a formal procedure change by the methods described in AP-0001, Plant Procedures and Instructions had not been incorporated into the signed-off record copy of OP-7200. Proper documentation of procedure changes will be followed by the NRC (Follow Item 50-29/82-10-04).

### 13. Organization and Administration

During the inspection period the inspector reviewed changes to the licensee's staff or organization structure as described below. The review included: Verification that licensee's on-site organization structure is as described in the facility T.S. Verification that personnel qualification levels are in conformance with applicable codes or standards as described in the T.S. and verification that changes in organizational structure have been reported to the NRC as required by T.S.

- Effective August 30, 1982 the previous YAEC Manager of Operations for Yankee NSD transferred to Public Service of New Hampshire as Manager of Seabrook Station. The current Vice President of Operations assumed the title, Manager of Operations, as described in YNPS T.S. section 6.2.1. The licensee has submitted T.S. Proposed Change No. 175, Supplement No. 1, dated August 24, 1982 which combines the two off-site organization functions into a Vice President and Manager of Operations position. This proposed change is currently under review by the NRC.
- Effective September 1, 1982 the previous on-site Technical Services Manager transferred to YNSD organization and a replacement Technical Services Supervisor was appointed. The inspector reviewed the individuals qualifications pursuant to T.S. section 6.3.1 and

ANSI Standard 18.1 - 1971. The licensee has included the position title change into proposed T.S. Change No. 175, Supplement No. 1 noted above.

No inadequacies were identified.

14. Management Meetings

During the inspection period the following management meetings were conducted or attended by the inspector as noted below:

- The inspector attended an exit meeting held on August 27, 1982 by a region-based specialist at the conclusion of IR-50-29/82-11, Refueling-Health Physics, on-site inspection.
- An on-site management meeting was held on September 8, 1982 between Region I and Yankee Atomic Electric Company to discuss the results of the NRC Systematic Assessment of Licensee Performance review conducted for the period of June 30, 1981 through July 1, 1982. This assessment is documented in a separate report.
- At periodic intervals during the course of the 50-29/82-10 inspection period, meetings were held with senior facility management to discuss the inspection scope and preliminary findings of the resident inspector. A summary of findings was also provided to the licensee on October 1, 1982 (See Paragraph 1 for attendees).