



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

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file

JUL 25 1985

The Honorable Nicholas J. Costello
Massachusetts Senate
Boston, Massachusetts 02133

Dear Mr. Costello:

I have been asked to respond to your letter to Chairman Palladino of the Nuclear Regulatory Commission dated June 11, 1985, requesting an investigation into the quality of construction at Seabrook Station. In your letter you cited two specific issues of concern to you.

The first issue involves the recent indictment of a former Seabrook Station employee by the United States Department of Justice (DOJ) for submitting falsified reports in a matter within the jurisdiction of the Nuclear Regulatory Commission (NRC). You express concerns that questionable workmanship may exist at the facility, that further information may not come forward due to an anticipated prolonged court case, and that rumors and claims of construction irregularities have been reported by workers since its beginnings. Regarding your request that a thorough investigation be made, we believe that this has already been substantially accomplished. It should be noted that the DOJ indictment to which you refer resulted from actions initiated by the NRC Office of Investigations (OI). The NRC has concluded its investigation of this matter and has referred its findings to the United States Attorney's Office for the District of New Hampshire, and pending completion of the criminal investigation, the OI report is being withheld from public disclosure at the direction of DOJ.

However, separate from and concurrent with the NRC OI investigative actions, Region I has completed technical inspections and evaluations of this matter with results documented and available for public review. These documents as listed below are enclosed with this letter, not only to provide for you a basis for the review of the comprehensive approach to the problem taken by the licensee, but also to indicate the completeness with which the NRC has overseen licensee corrective measures and also to document our own independent inspection results pertaining to this issue to date:

- NRC Region I Combined Inspection Report Nos. 50-443/83-06 and 50-444/83-06, paragraph 4, listing planned licensee corrective measures, which were monitored by the NRC as they progressed.
- NRC Region I Combined Meeting Report Nos. 50-443/83-10 and 50-444/83-07, discussing the status of licensee investigation and reporting, under Title 10, Code of Federal Regulations, Part 50.55(e), (i.e.: 10 CFR 50.55(e)) with respect to the questionable nondestructive examinations.

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PDR COMMS NRCC
CORRESPONDENCE PDR

- NRC Region I Combined Inspection Report Nos. 50-443/83-18 and 50-444/83-14, paragraph 4 and Attachment 1, documenting independent measurements performed by NRC inspectors to confirm the adequacy of the licensee re-examination/re-evaluation program on a sample of the suspect welds.
- Public Service Company of New Hampshire (PSNH) 10 CFR 50.55(e) Reports to the NRC Region I, dated June 3, July 5, August 4, August 16, September 9, October 12, December 2, and December 21, 1983 on the suspect nondestructive examinations. (These reports are required by the PSNH Construction Permit as a means to inform the NRC of potential design and construction deficiencies.)

The final PSNH 10 CFR 50.55(e) Report, dated December 21, 1983, lists the final status of all 2,399 suspect examinations. It should be noted that although about two-thirds of the suspect items were not related to components having a direct impact on the health and safety of the public, all of the suspect items/welds have been evaluated and/or re-inspected, as appropriate, and all rejectable items were repaired.

In order to verify the completeness of PSNH actions NRC Region I has scheduled an on site independent measurements inspection of additional samples of the suspect welds which were re-examined, repaired and finally accepted by the licensee. Upon completion of this additional inspection, final review and analysis of the licensee records on this matter and resolution of any outstanding concerns, it is our intention to close the technical aspects to this issue and document the results in a subsequent Region I Inspection Report.

In regard to your additional concern on rumors and claims of construction irregularities at Seabrook, this office has a formal program for receiving, investigating, tracking, and documenting all allegations involving activities within NRC jurisdiction. This program has been implemented for all concerns raised by not only plant workers, but other members of the public. We have even solicited such concerns and potential allegations from certain public interest groups who we felt might have received such information. I can assure you that each such allegation or concern, directed to us, has received a thorough investigation and also that the quality assurance/quality control program being implemented at Seabrook has been and is being routinely inspected and evaluated by NRC inspection personnel to confirm construction consistent with quality standards.

Your letter includes a second issue of concern related to discrepancies in the evacuation time estimates (ETEs) for the Seabrook Station as identified in correspondence to you from the Amesbury Radiological Response Plan Advisory Committee dated May 21, 1985.

The development of ETEs for the permanent residents, transients and persons in special facilities under both normal and adverse weather conditions is

an important part of the emergency planning process for nuclear power plants and is given close review by both the NRC and the Federal Emergency Management Agency (FEMA). As you may know, the NRC is primarily responsible for assessing the adequacy of onsite emergency plans developed by nuclear power plant licensees/applicants. FEMA, by Presidential directive, has been assigned the responsibility of assessing the adequacy of offsite emergency plans for the area surrounding a nuclear plant.

The July 1983 and March 1984 ETE studies referred to in the Amesbury letter are part of the offsite emergency planning effort. As indicated in a May 31, 1985 response from FEMA Region I to William Lord, Chairman of the Amesbury committee, FEMA is in the process of performing a review of the ETEs for Seabrook as part of FEMA's review and evaluation of offsite emergency plans and preparedness for Seabrook. The NRC will assist and support FEMA in the review of the Seabrook ETEs.

The ETE development process, in accordance with FEMA/NRC guidance (NUREG-0654/FEMA-REP-1, Revision 1), recommends the submittal of a draft version of the study to State and local emergency response organizations for their review and comment. The objective of this effort is to identify any discrepancies or errors in the study by knowledgeable State and local officials so that the final report will represent a reasonably precise and accurate estimate of the evacuation times for use by emergency planners and decision makers in the event of an emergency. It is our understanding that the July 1983 study referred to by Amesbury was in fact a draft, and that as a result of comments made by local officials, revisions were made. FEMA has indicated in their response that they will review the apparent inconsistency cited in the Amesbury letter. It should be noted that while the July 1983 ETE study was filed with the NRC, the March 1984 study has not yet been submitted to the NRC.

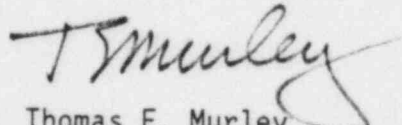
Both the NRC and FEMA have been, and continue to be, very much involved in the development and evaluation of ETEs for Seabrook. We are confident that the review process, including the continued input by State and local officials, will result in accurate and consistent ETEs for the Seabrook area, and that any discrepancies in the ETEs will be recognized and resolved prior to the licensing of the facility.

In conclusion, we believe that the steps we have previously taken in addition to our commitments to complete resolution of the technical issues are sufficiently comprehensive to confirm acceptable hardware installation at Seabrook, to assure responsive licensee corrective measures, and to verify an orderly process in the development and evaluation of ETEs for Seabrook. I believe that the actions, facts, and public documents referenced in this letter are responsive to your concerns. The NRC will continue to perform inspections and conduct investigations as necessary to determine whether Seabrook construction is proceeding in accordance with regulatory requirements and appropriate

industry practices, that the management and quality control programs are effective, and that the review process for licensing the facility is comprehensive and accurate.

If I can be of further assistance, please do not hesitate to contact me.

Sincerely,


Thomas E. Murley
Regional Administrator

Enclosures: As Stated

Distribution

EDO 000742

W. Dircks

EDO Reading File

SECY (No. 85-491)

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Docket No. 50-443

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FEMA Region I - Boston

COMMENTS REQUESTED FROM:

PAO

SLO

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
601 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos. 50-443 ✓
50-444 ✓

JUN 08 1983

License Nos. CPPR-135
CPPR-136

Public Service Company of New Hampshire
ATTN: Mr. Robert J. Harrison
President and Chief Executive Officer
P.O. Box 330
Manchester, New Hampshire 03103

Gentlemen:

Subject: Combined Inspection Nos. 50-443/83-06; 50-444/83-06

This refers to the routine safety inspection conducted by Mr. A. Cerne of this office on April 11 - May 23, 1983 at the Seabrook Station Units 1 and 2, Seabrook, New Hampshire of activities authorized by NRC License Nos. CPPR-135 and CPPR-136 and to the discussions of our findings held by Mr. Gramm with Messrs. Beckley, Herrin, McDonald and others of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the NRC Region I Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, no violations were observed.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1). The telephone notification of your intent to request withholding, or any request for an extension of the 10 day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely, Original Signed By:

2PP
8306230399
R. R. Kuning
Richard W. Starostecki, Director
Division of Project and Resident
Programs

Public Service Company of New Hampshire 2 JUN 08 1983

Enclosure: Combined NRC Region I Inspection Report Number 50-443/83-06;
50-444/83-06

cc w/encl:

John DeVincentis, Project Manager
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New Hampshire

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-443/83-06
50-444/83-06
50-443

Docket No. 50-444
CPPR-135

License No. CPPR-136

Priority --

Category A

Licensee: Public Service Company of New Hampshire

1000 Elm Street

Manchester, New Hampshire 03105

Facility Name: Seabrook Station, Units 1 and 2

Inspection at: Seabrook, New Hampshire

Inspection conducted: April 11 - May 23, 1983

Inspectors: AC Cerne
A.C.Cerne, Sr. Resident Inspector

6/1/83

date signed

R.A. Gramm
R.A.Gramm, Resident Inspector

6/1/83

date signed

Approved by: Robert M. Gallo
R.M.Gallo, Chief, Projects Section 1A,
Division of Project and Resident Programs

date signed

6/7/83

date signed

Inspection Summary:

Unit 1 Inspection on April 11 - May 23, 1983 (Report No. 50-443/83-06)

Areas Inspected: Routine inspection by the resident inspectors of work activities, procedures and records relative to pipe, pipe support and electrical raceway installation. The inspectors also reviewed licensee action on previously identified items and performed plant inspection tours. The inspection involved 132 inspector-hours including fourteen off-shift hours by the two NRC resident inspectors.

Results: No violations were identified.

Unit 2 Inspection on April 11 - May 23, 1983 (Report No. 50-444/83-06)

Areas Inspected: Routine inspection by the resident inspectors of work activities, procedures and records relative to licensee action on previously identified items and plant inspection tours. The inspection involved 23 inspector-hours by the two NRC resident inspectors.

Results: No violations were identified.

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DETAILS

1. Persons Contacted

Yankee Atomic Electric Company (YAEC)

F. W. Bean, Lead Electrical QA Engineer
B. B. Beckley, Manager Nuclear Projects (PSNH)
D. L. Covill, Lead Civil QA Engineer
*W. N. Fadden, Engineer (Framingham)
R. E. Guillette, Sr., QA Engineer (Framingham)
J. H. Herrin, Site Manager (PSNH)
G. F. McDonald, Jr., QA Manager (Framingham)
J. F. Nay, Jr., Lead Mechanical QA Engineer
J. A. Philbrick, Senior Project Engineer (PSNH)
S. B. Sadosky, Lead Start-up/Test QA Engineer
J. W. Singleton, Field QA Manager
R. P. Tamm, Engineer (Framingham)
R. Tucker, Engineer (Framingham)

United Engineers and Constructors (UE&C)

R. H. Beaumont, QA Engineer
R. H. Bryans, Site Engineering Manager
J. J. Carrabba, Preventive Maintenance Supervisor
P. A. Giansiracusa, Lead Engineer, Construction Design Group
J. A. Grusetskie, Engineering Manager Assistant
B. J. Huselton, Power Discipline Engineering Manager
D. C. Lambert, Field Superintendent of QA
C. R. Pletcher, Electrical Start-up Supervisor
D. C. Turnquist, Supervisory Pipe Support Engineer
T. P. Vassallo, Jr., Quality Assurance Lead Engineer

Fischbach-Boulos-Manzi (FBM)

A. B. Caldwell, QC Supervisor
H. P. Patel, Project Engineer
R. F. Watt, Project QC Manager

Perini Power Constructors (PPC)

G. E. Meyers, Field QC Manager
G. O'Halloran, Chief Structural Inspector

Grinnell Fire Protection System Co. (GFP)

A. G. Sabourin, Project Manager

Pullman-Higgins (P-H)

R. G. Davis, Field QA Manager
R. R. Donald, Assistant QA Manager
D. B. Hunt, QA Records Supervisor

Royal Insurance

J. C. Anzivino, Authorized Nuclear Inspector

Frank W. Hake, Inc.

R. W. Ellis, QA Manager

USNRC

* D. Terao, Mechanical Engineering Branch, NRR

*indicates telephone communication

2. Plant Inspection Tours (Units 1 & 2)

The inspector observed work activities in-progress, completed work and plant status in several areas of the plant during general inspection of the plant. The inspector examined work for any obvious defects or noncompliance with regulatory requirements or license conditions. Particular note was taken of presence of quality control inspectors and quality control evidence such as inspection records, material identification, nonconforming material identification, housekeeping and equipment preservation. The inspector interviewed craft personnel, supervision, and quality inspection personnel as such personnel were available in the work areas.

Specifically, the inspector examined the installed condition of certain instrument air lines (tubing and supports) in the Emergency Feedwater (EFW) Pumphouse. He also spot-checked the in-process condition of some tubing installations on the motor-driven EFW pump and reviewed the UE&C foreign print drawings for the pump manufacturer's assembly details.

The mounting details for the Reactor Trip Switchgear (1-CP-CP-111) in the Unit 1 Control Building were checked against the Westinghouse drawing requirements (UE&C Foreign Print, FP30590) and other UE&C design drawings (F101698, F111341, and F111393). The inspector determined that welding of the switchgear cabinet to anchor channels had been specified, in lieu of the Westinghouse anchor bolting details, for the support arrangement of the cabinet perimeter. However, for the internal cabinet support attachment, 3/8" diameter threaded stud welds had been provided.

The inspector was aware of an Engineering Change Authorization (ECA 03/1544A) which prohibited the use of 3/8" diameter stud welds for conduit supports requiring seismic qualification, because of the amount of play provided these studs by the strut material hole configurations. Since the configuration of the holes in the reactor trip switchgear (0.56" by 1.12" slots) also allows for considerable play with regard to the specified 3/8" diameter studs, the inspector questioned the technical adequacy of this hold-down detail for seismic loading conditions.

Licensee and A/E engineering personnel are currently reviewing the seismic qualification data and calculations for the reactor trip switchgear to provide assurance that the use of the 3/8" diameter studs for a center support application is acceptable. Pending review of the results by the NRC, this item remains unresolved (443/83-06-01). Any generic applicability to other switchgear seismic mounting details will also be reviewed at that time.

During the course of the inspection, the following items were noted by the inspectors and resolved with no further questions:

- The hauling of the Unit 2 core barrel and upper internals from the Hampton Beach barge facility to the site was witnessed and verified to be in accordance with F.W.Hake procedure IP-SB-004.
- The Grinnell Fire Protection (GFP) nonconformance reporting and review procedure (FGCP-13) was reviewed and found to be consistent with FSAR

statements that fire protection system nonconformances will be handled in a manner commensurate with safety related systems.

- ECA 83/0026A was questioned relative to the completion of hydraulic calculations by GFP engineering prior to modifying a piping run configuration. The inspector was informed that a preliminary check had been performed and that as-built hydraulic calculations will be made at a later date.
- The Nondestructive Examination (NDE) of pipe support 202-RM-15 was questioned relative to ASME Section III NF requirements for Class 1 linear support welds. The weld examination was determined to be in accordance with NF-5212 for full fillet welds.
- UE&C drawing 805943 allows a specified weld to be placed on either side of a pipe support I - beam web, when the beam is cantilevered from an embedment plate. Licensee engineering confirmed that the weld would function equally well on either side of the web for the purpose of stabilizing the web during loaded conditions.
- UE&C procedure TP-4 identifies components that are neither seismically anchored nor isolated from other safety related equipment, in particular several crane and monorail assemblies. The inspector discussed with licensee engineering personnel the ongoing A/E review program and the justification for design decisions not to seismically upgrade these assemblies. He has no further questions at this time.

The inspector reviewed the following sources of information in regards to Class IE safety related radiation monitoring instrumentation -

- UE&C drawing F-500017
- UE&C specification 172-1
- FSAR sections 7.1.1.2 and 12.3.4.1.6

Throughout the above, references were made to a variety of Class IE radiation monitors and IE display equipment located within the control room. The only apparent route for the signals from the monitor was through a computer located within the Administration Building. The inspector received clarification that an independent Class IE system is provided for control room indication of radiation levels measured by the safety related instruments. A NRR Request for Additional Information (RAI) has questioned the potential for degradation of the IE portion of the system by failure of the non-IE bus. The inspector has no further questions regarding the radiation monitoring system design.

With regard to all of the above inspection items, no violations were identified.

3. Licensee Action on Previously Identified Items

a. Previous Inspection Findings

- 1) (Closed) Violation (443/82-02-04): Undersized fillet welds on pipe whip (PW) restraints. The inspector reviewed the following documents:

- Stearns-Roger Welding Procedure Qualification Test Records, AF-1 and AS-1.
- UE&C Memorandum from the Lead Pipe Support Engineer, dated 4/7/83.
- NRC Region IV, Vendor Programs Branch Inspection Report, 99900510/83-01.
- PSNH Letter to the NRC (SBN-148) dated 1/15/81.

During previous field inspections, the inspector had witnessed rework to existing undersized PW fillet welds to build them up to AWS code requirements. He also verified that UE&C had published and disseminated "Fillet Weld Size Criteria" in line with ASME, AWS and AISC Code Requirements.

During the inspection, the following corrective actions were confirmed:

- (1) Upgrade of all undersized pipe whip restraint welds or qualification of the inaccessible welds to the AWS waiver criteria.
- (2) Generic treatment of the undersized pipe support welds as one example of a design problem requiring formal design guidelines and checklists, retraining of engineering personnel, and the establishment of a pipe support design verification program employing ITT Grinnell to check approximately 1500 support designs.

These generic corrective actions were additionally reviewed by an NRC Vendor Program Branch inspector at the UE&C offices in Philadelphia.

The individual cases of undersized fillet welds have been either reworked or satisfactorily analyzed and qualified. The generic design problems have been adequately addressed by UE&C. The inspector has no further questions on this issue and considers this item to be closed.

- 2) (Closed) Unresolved item (443/82-04-03 and 444/82-04-01): Requirement for tracking questionable components to preclude procurement problems. The inspector reviewed UE&C Administrative Procedure, AP-49 which established guidelines for responding to NRC Bulletins, Circulars and Information Notices. He noted that a "Deficient Products List" has been established to identify and track any questionable items discussed in those NRC documents. Responsibility is assigned to various discipline engineers and project managers to assure that potentially deficient items are not in use for work under their purview and will not be procured without further review.

The inspector examined an example of a "Deficient Products List" and determined that in conjunction with the procedural requirements of AP-49, questionable components are now being adequately tracked. The inspector has no further concerns regarding future construction procurement in this regard and considers this item to be closed.

- 3) (Closed) Unresolved Item (443 and 444/82-09-01): FSAR revision noting the use of high-slump concrete. Amendment 47 to the Seabrook Station FSAR has been issued and accepted, which documents the use of "Special High Slump Concrete" (up to 6" slump) and the use of superplasticizer concrete mixes (up to 9" slump). There is no technical issue which questions the acceptability of properly designed high-slump concrete mixes. Their use in highly congested areas is advantageous to quality placements if controlled, as is done at Seabrook, on a case by case basis.

Since the FSAR now documents the actual use of high range, water reducing admixtures and high slump concrete at Seabrook Station, this item is considered closed.

- 4) (Open) Unresolved item (443/82-12-01): Lack of counterbore dimensions on the containment electrical penetration detail drawings. The inspector reviewed the revisions to the Westinghouse penetration drawings (UE&C Foreign Print 32363) which now indicate the depth of counterbore. He evaluated these dimensions with regard to the effect upon weld quality relative to the assembly and fit-up of the electrical penetration to the containment penetration sleeve. It was noted that both the sleeve end preparation details and the penetration assembly counterbore details provide for tolerances which, when the two pieces are fit-up, may or may not provide for any gap to allow thermal growth of the thinner member, similar to socket weld provisions.

While the acceptability of the weld root gap was verified by controls established in the Welding Procedure Specification (WPS ITS-III-1-BR-2), the need for any gap between the containment penetration sleeve land extension and the electrical penetration assembly must be further reviewed. Pending engineering justification that acceptable stress conditions are achieved after welding with or without the subject gap, as caused by the respective fabrication tolerances, this issue remains unresolved.

b. Construction Deficiency Reports (CDR) - 10CFR50.55(e)

- 1) (Closed) CDR (443/82-00-11): Cracks in containment annular steel radial beam connections. Cracks had been noted in a large number of the connections due to lamellar tears which initiated within the filler plate material due to stresses resulting from a restrained tee joint.

The inspector reviewed UE&C NCR2731 which provided the following measures to be enacted to prevent recurrences of the lamellar tearing:

- Replacement of all the existing filler plates with either ASTM A516 Lukens Fine Line or ASTM A36 Phoenix XO material. These have improved ductility characteristics to inhibit the initiation of the lamellar tearing (Reference UE&C drawing 101927).

- A 200°F preheat is to be maintained throughout the duration of welding to reduce thermal stresses.
- Welding deposits are to be sequenced to achieve stress reductions.
- Final torque of the end connection bolts is accomplished after welding to allow for any thermal movements.

The inspector has reviewed the modifications incorporated into the annular steel connection installation and welding procedure and considers that adequate corrective action has been accomplished such that this item is considered to be closed.

- 2) (Closed) CDR (80-00-06): Undersized fillet welds and other pipe support design errors. Based upon the items reviewed by the inspector in section 3.a.1, this CDR is additionally considered to be closed.

4. Licensee Construction Deficiency Report - Questionable Surface NDE

On May 4, 1983 the licensee identified as a potential construction deficiency report under 10CFR50.55(e) the questionable conduct of the nondestructive evaluation (NDE) of approximately 2,400 welds (later reduced to 2,100), performed by one Pullman-Higgins NDE technician. The suspect NDE includes magnetic particle (MT) and liquid penetrant (LPT) examinations of welds made by several site contractors and is based upon discovery that procedures were violated by the technician in the conduct of the examinations. Approximately one-third of the suspect welds have been determined to be safety-related.

Planned licensee corrective action, to date, includes:

- 1) Reevaluation of all welds in question for reinspection or reanalysis as required.
- 2) Reinspection of a sample of 10 welds per Pullman NDE technician per NDE process (MT, LPT, Ultrasonic thickness checks), commencing 5/9/83.
- 3) Increased Pullman Power Products Corporate audit/surveillance personnel will be assigned to the site.
- 4) Increased surveillance by YAEC QA personnel of Pullman NDE activities on all shifts is in progress.
- 5) Random "information only" LPT and MT examinations by YAEC NDE personnel of welds accepted by Pullman will be instituted.
- 6) YAEC and UE&C have established a Supervisory Support Group to monitor Pullman activities, including NDE, on a full-time basis until further notice.
- 7) A corporate Director of QA from Pullman Power Products has been detailed to the site.

The inspector will monitor the status and conduct of these corrective actions as they progress. Formal follow-up of this issue will be provided and documented in conjunction with the evaluation of the licensee's written 50.55(e) report.

5. Piping and Pipe Supports

- a. The inspector reviewed section 9.5.8 of The Seabrook Station Safety Evaluation Report (SER) in which the diesel generator exhaust system was indicated to be treated as a safety related system. The licensee's response to NRR RAI 430.127 had specified the required nondestructive examination (NDE) to be applied to the B31.1 designed system. The adequacy of the Pullman-Higgins inspection program and the conduct of the requisite NDE was questioned in YAEBC Blue Sheet 53 relative to the exhaust piping. As a result of the Blue Sheet questions, the licensee initiated the following actions:

- UE&C Engineering Stop Work Order (ESWO) P-0018 was generated to place all field work on hold for the exhaust lines. The stop work extended to another safety related B31.1 designed system, the Control Building Air system.
- NCR 1948 was issued to apply B31.1 (Table 136.4) high temperature line radiography requirements to the exhaust system field welds.
- Field Trouble Reports M1-0062A and M1-0063A were initiated to record and seek resolution on damage noted by the inspector to the exhaust system expansion joints.
- NCR 2062 was issued to note the non-performance of the radiography examination of the exhaust system shop welds per B31.1 requirements.

The inspector received a preliminary response to Blue Sheet 53 in which a commitment was made to apply the Pullman-Higgins ASME QA program to any future work on the exhaust piping. Additionally, further engineering review is ongoing to identify all other B31.1 designed systems which require an inspection program in accordance with 10CFR50 Appendix B.

Based upon the corrective action taken to date to upgrade the exhaust system inspection and upon an open unresolved item (443 & 444/83-05-02) previously questioning the generic implication of the inspection provided to B31.1 safety related systems, the inspector has no further concerns at this time in regards to the exhaust system.

- b. The inspector observed a temporary installation of an ASME Class 3 spool in line CC-721-02 (Field Welds F0203 and F0204). No process sheets were available to demonstrate that the welds had been made in accordance with code requirements. The inspector was provided with the following documentation associated with the spool installation:
- a) The weld rod requisition forms verified that the proper welding procedures and rod type had been used. Additionally the welder was qualified to make the field welds.
 - b) Pullman-Higgins drawing CC-721-02 Rev. 0 and Rev. 2 along with Speed Letter PPP #616 directed that the temporary spool be installed.
 - c) NCR 4426 recorded the lack of documentation for the welds with a disposition to completely remove the spool, perform area NDE of the permanent pipe and install the flow elements in accordance with ASME code requirements.

Procedurally, even temporary field welds in ASME components shall be fully documented and inspected. Specifically, the welds in question shall be removed under a quality program which assures no adverse effects upon the permanent pipe. Thus no further questions remain on this inadequately documented installation.

The inspector accompanied licensee personnel during a verification check on ITT-Grinnell Figure 306 and 307 mechanical sway and shock suppression components. The check was performed in accordance with procedure PE479-1. Gage check blocks were inserted to determine the clearance available within the clevis portion of the unit. Support 835-RM-S was found to be defective and rework will be performed to provide the required internal clearance.

The inspector was notified by the Mechanical Engineering Branch (NRR) that a potential problem existed with the use of ITT-Grinnell Figure 315 pipe clamps. The clamp installation directions specify a large preload torque for the associated U-bolts which could result in an overstressed condition for the clamped pipe. Four of these clamps were scheduled to be used at Seabrook for supports: 4000-SG-14, 4001-SG-14, 4002-SG-14, and 4003-SG-14. The inspector alerted the licensee about the potential deficiency detected by NRR and engineering has responded that these clamps will not be used at the Seabrook site; therefore, the inspector has no further questions.

No violations were identified in the area of piping and pipe supports during the course of the inspection.

6. Electrical Raceway and Cable

An incorrect vertical tray support (1-90A14) attachment to containment structural steel was noted by the inspector. The connection was in variance to ECA 54/2880C in that a specified gap was not provided between the vertical unistrut member and the clip angles to allow for a slip fit. The inspector noted FBM Inspection Report 38-122 which directed that the connection be reworked to conform to the noted ECA. As this was a one-of-a-kind installation and the physical installation has been corrected, the inspector has no additional concerns.

The inspector observed that an exposed conduit for the Intelligent Remote Terminal Unit (IRTU) surge ground, a non-safety component, had not received any QC inspection. However, ECA 03/0450A specifies that all exposed conduit (excluding lighting system conduit) within the Nuclear Island shall be considered as safety related and subject to the appropriate inspection. Given the inconsistency between the FBM conduit inspection program and the direction provided by the ECA, YAEC QA issued a Deficiency Report (DR401), which the inspector determined was sufficient to resolve this non-safety issue.

The inspector observed a cable pull from the Control Building E1 50' to the Service Water Pump House. The following cables were involved:

AQ3-CR6, AQ4-CR7, AQ4-VL5, K4K-KY6, AQ3-N81/1, AQ3-VL3,
AQ4-N83/1, CV7-FD8, CV7-FD8/1, CS7-F70, CV5-FD8, CV5-FD8/1,
CV6-FD8, CV6-FD8/1, CS6-F70, CS9-F70, CS0-F70, F72-VL3

The cable installation was verified to be in accordance with the criteria contained in the FSAR, Regulatory Guides IEEE 336 and FBM procedures FCCP-504 and QCP-504. The following attributes were noted as acceptable for the cable pull:

- 1) Cable pull tension within allowable limits as measured by a calibrated device.
- 2) Pulling lubricant applied where required
- 3) Adequate QC coverage during the cable pull
- 4) Final cable harnessing to the raceway was done in accordance with FBM NCR-222 such that previously installed associated cables can be inspected at a later date.

The inspector noted no violations for the above inspection items.

7. Structural Steel Modification

The inspector observed a structural beam (47B-51) connection which had been partially dismantled. The Structural Steel Installation Summary (SSIS) was checked for identification of the document authorizing the modification. This information was not provided for the beam in question. The splice plate connection had been inspected on 8/9/82 (Structural Steel Report S-1276) while on 10/29/82, ECA 54/3003B was issued to redesign the connection. The physical configuration of the splice plates was not in agreement with the ECA nor had a Structural Steel Removal Authorization (SSRA) been initiated for the partial dismantling as required by Perini Procedure FCCP-153.

As a result of the above combination of events, Perini QC was not notified that a previously inspected beam connection had been modified, thereby potentially invalidating their original inspection. Perini has instituted the following measures to prevent recurrence of this situation:

- Perini QC will receive ECA's affecting structural members to monitor the effect upon previously inspected items.
- QC will conduct surveillance monitoring of construction efforts, in particular the disassembly of structural members.
- Procedural changes have been made to FCCP-153 to clarify the requirements for engineering response to removal directives.

The inspector has reviewed Perini procedures, interviewed area structural engineers, reviewed the SSIS system and evaluated the interfaces between Perini engineering and QC, and thereby determined that this was an isolated problem and that adequate steps have been taken to preclude recurrence.

No violations were identified by the inspector.

8. Control and Purchase of Weld Material

The inspector reviewed the control and purchase of weld material utilizing the requirements contained within the following documents:

- Seabrook Station FSAR
- ASME Boiler and Pressure Vessel Code Section II and III
- AWS Structural Steel Welding Code
- UE&C Specification 248-1
- UE&C Specification WS-1
- Pullman-Higgins Procedure JS-VIII-3

The inspector verified that the Primary Auxiliary Building (PAB) and Seawall rod rooms were in compliance with the applicable requirements, the following were checked and found to be acceptable:

- Holding oven temperatures were correct for the stored rod type, and a log was available to document the calibration of the oven temperatures.
- Holding ovens contained a singular alloy and heat electrode type with the oven exterior clearly marked to delineate the contents therein.
- Color coding of covered electrodes was checked.
- Portable oven color coding (designates two different operating temperatures) was checked against weld rod requisition slips to verify proper electrode storage within.
- Segregation of ASME and Non-ASME materials was noted.

The inspector checked portable oven #2053 and found it to be out of the required calibration time limit as specified by Pullman-Higgins Procedure JS-VIII-3. NCR4560 was initiated to document the uncalibrated oven condition. The inspector reviewed the portable oven calibration log book and found this to be an isolated case, for which the disposition to the NCR will dictate appropriate corrective action. This might include calibration using thermocouples.

The thermocouple calibration of the portable ovens was observed by the inspector. UE&C maintenance personnel perform this operation with an Elnik ESC-6 recorder. This process represents a far more accurate method of determining the oven temperature versus a pyrometer. The thermocouple calibration is performed for all repaired units, i.e. those found to be inoperable or outside the specified temperature limits.

Weld material purchase orders were reviewed by the inspector for several orders:

- UE&C Purchase Order (PO) 29997 for ER308L, ER309L and ER316L welding wire
- UE&C PO 24787 for E7018 electrode
- UE&C PO 28300 for consumable insert material

The purchase orders contained the applicable requirements to be satisfied by the material supplier in accordance with the aforementioned list of documents. Certified material test reports were reviewed and found to satisfy the appropriate ASME requirements.

In regards to the above, the inspector has no further questions, nor were any violations identified.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations, or deviations. The unresolved item disclosed during the inspection was discussed in Paragraph 2.

10. Management Meetings

At periodic intervals during the course of this inspection, meetings were held with senior plant management to discuss the scope and findings of this inspection.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

JUN 22 1983

Docket Nos. 50-443
50-444

License Nos. CPPR-135
CPPR-136

Public Service Company of New Hampshire
ATTN: Mr. Robert J. Harrison
President and Chief Executive Officer
P.O. Box 330
Manchester, New Hampshire 03105

Gentlemen:

Subject: Combined NRC Meeting Nos. 50-443/83-10; 50-444/83-07

This refers to the meeting held at the NRC Region I office on June 7, 1983 to discuss the planned licensee corrective actions relative to the performance of the site piping contractor and the status of the licensee investigation into the suspect NDE surface examinations, as reported under 10CFR50.55(e).

The scope and content of the meeting is described in the enclosed NRC Region I meeting report. As noted in the enclosed report, we understand that a high level of management attention is being devoted to the subject problems. The effectiveness of your corrective actions will be judged not only by the evaluation of your future findings and reports, but also by further NRC inspections of the programs and controls established to assure acceptable performance in the piping, pipe support and NDE areas.

In accordance with 10CFR2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 2.790(b)(1). The telephone notification of your intent to request withholding, or any request for an extension of the 10 day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely,

Original Signed BY:

Richard W. Starostecki, Director
Division of Project and Resident
Programs

8307110422 2pp

Public Service Company of New Hampshire 2

JUN 22 1983

Enclosure: Combined NRC Region I Meeting Report Number 50-443/83-10;
50-444/83-07

cc w/encl:

- ✓ John DeVincentis, Project Manager
- Public Document Room (PDR)
- Local Public Document Room (LPDR)
- Nuclear Safety Information Center (NSIC)
- ✓ NRC Resident Inspector
- ✓ State of New Hampshire

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-443/83-10
50-444/83-07

Docket No. 50-443
50-444

License No. CPPR-135
CPPR-136

Priority --

Category A

Licensee: Public Service Company of New Hampshire

1000 Elm Street

Manchester, New Hampshire 03105

Facility Name: Seabrook Station, Units 1 and 2

Meeting at: NRC Region I Office, King of Prussia, PA

Meeting conducted: June 7, 1983

NRC Personnel: Al Cerne
A.C. Cerne, Sr. Resident Inspector

6/15/83
date signed

For: Al Cerne
R.A. Gramm, Resident Inspector

6/15/83
date signed

date signed

Approved by: Robert M. Gallo
R.M. Gallo, Chief, Projects Section 2B,
Division of Project and Resident Programs

6/17/83
date signed

Meeting Summary:

Meeting on June 7, 1983 (Combined Report Nos. 50-443/83-10 & 50-444/83-07)

Special, announced management meeting to discuss current and proposed licensee actions in response to general NRC concerns regarding the past performance of the site piping contractor (Pullman-Higgins) and to the specific construction deficiency involving the questionable conduct of surface nondestructive examinations (NDE) performed by one Pullman Higgins technician. The status of the licensee investigation and reporting, under 10CFR50.55(e), with respect to the questionable NDE was discussed, along with other licensee management and inspection initiatives.

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DETAILS

1. Licensee Attendees

D. N. Merrill, Executive Vice-President (PSNH)
W. P. Johnson, Vice-President (YAEC)
A. M. Shepard, Director of Quality Assurance (YAEC)
H. T. Tracy, Jr., Director of Construction (YAEC)
G. F. McDonald, Jr., Quality Assurance Manager (YAEC)

2. NRC Attendees

R. W. Starostecki, Director, Division of Project & Resident Programs, Region I
S. D. Ebnetter, Chief, Engineering Programs Branch, Region I
R. M. Gallo, Chief, Reactor Projects Section 2B, Region I
H. B. Kister, Chief, Reactor Projects Section 2C, Region I
A. C. Cerne, Senior Resident Inspector, Region I
R. A. Gramm, Resident Inspector, Region I
S. D. Reynolds, Jr., Lead Reactor Engineer, Region I
G. R. Klingler, Enforcement Staff, Office of Inspection & Enforcement

3. Licensee Presentation and Discussion

The licensee presented corrective steps, taken by management of both the piping contractor (Pullman-Higgins) and the licensee itself, to address concerns raised about the performance of the piping contractor. These steps include:

- mobilization of a joint licensee/construction manager supervisory support group to monitor Pullman-Higgins site activities on a daily basis and evaluate findings.
- an increase in the frequency of surveillances and audits of Pullman-Higgins site activities, performed by YAEC second and third level QA inspection personnel.
- the initiation of management actions by Pullman corporate direction to assign a Director of QA to the site and increase the number of personnel assigned to the site internal surveillance group.
- regular evaluation of effectiveness of the Pullman program by corporate personnel with weekly meetings with the licensee to assess the need for further corrective measures.

The licensee interim 10CFR50.55(e) report on Suspect NDE Examinations (June 3, 1983) was also discussed to include the status of re-examinations, evaluation of the NDE performed by other technicians, and the future course of the investigation for the continued analysis of the safety implications of this problem.

The licensee presentation emphasized management involvement in evaluating and directing future corrective steps and in assuring that adequate controls

have been established to verify satisfactory performance by the piping contractor.

4. NRC Action

The Region I staff solicited and received commitment from licensee management to submit to Region I, monthly Supervisory Support Group Evaluation Reports on Pullman-Higgins activities and periodic interim 50.55(e) reports on the status of their NDE investigation and results. Future NRC inspections in the area of piping, supports and control of the piping contractor work, to include design and construction interfaces, will be conducted to check the effectiveness of licensee corrective actions and to verify the construction of plant systems in accordance with licensee commitments and acceptable programmatic controls.

JAN 25 1984

Docket Nos. 50-443
50-444

Public Service Company of New Hampshire
ATTN: Mr. Robert J. Harrison
President and Chief Executive Officer
P. O. Box 330 Manchester, New Hampshire 03105

Gentlemen:

Subject: Inspection Nos. 50-443/83-18 and 50-444/83-14

This refers to the special safety inspection conducted by Mr. L. Narrow of this office on November 14 - 18, 1983, at Seabrook Nuclear Plant, Units 1 and 2, Seabrook, New Hampshire of activities authorized by NRC License Nos. CPPR-135 and CPPR-136 and to the discussions of our findings held by Mr. Narrow with Mr. J. W. Singleton and other members of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Narrow and Mr. Singleton on November 23, 1983 concerning the results of a fillet weld test program.

Areas examined during this inspection are described in the NRC Region I Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Within the scope of this inspection, no violations were observed.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room unless you notify this office, by telephone, within ten days of the date of this letter and submit written application to withhold information contained therein within thirty days of the date of this letter. Such application must be consistent with the requirements of 10 CFR 2.790(b)(1). The telephone notification of your intent to request withholding, or any request for an extension of the 10-day period which you believe necessary, should be made to the Supervisor, Files, Mail and Records, USNRC Region I, at (215) 337-5223.

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Public Service Company
of New Hampshire

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No reply to this letter is required. Your cooperation with us in this matter is appreciated.

Sincerely,

Original Signed by
S. D. Ebner

for Thomas T. Martin, Director
Division of Engineering and
Technical Programs

Enclosure: Combined NRC Region I Inspection
Report Nos. 50-443/83-18 and 50-444/83-14

cc w/encl:

John DeVincentis, Project Manager
Stephen D. Floyd, Operational Services Supervisor Donald E. Moody, Station Manager - Seabrook Station
H. W. Kerch, RI
Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New Hampshire

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-443/83-18 and 50-444/83-14

Docket Nos. 50-443 and 50-444

License Nos. CPPR-135 & CPPR-136 Priority -- Category B

Licensee: Public Service Company of New Hampshire
1000 Elm Street
Manchester, New Hampshire 03105

Facility Name: Seabrook Station, Units 1 and 2

Inspection At: Seabrook, New Hampshire

Inspection Conducted: November 14 - 18, 1983

Inspectors: Lewis Narrow
L. Narrow, Lead Reactor Engineer

1/3/84
date signed

Lewis Narrow / for
E. H. Gray, Lead Reactor Engineer

1/3/84
date signed

Stephen H. Harris
S. H. Harris, Engineering Technician

1-3-84
date signed

R. M. Campbell
R. M. Campbell, Engineering Technician

12/28/83
date signed

Approved by: J. P. Durr
J. P. Durr, Chief, M&P Section, EPB, DETP

1/25/84
date signed

Inspection Summary: Inspection on November 14 - 18, 1983 (Combined Report Nos. 50-443/83-18 and 50-444/83-14)

Unit 1:

Areas Inspected: Special unannounced inspection by four region-based inspectors of licensee actions on previous inspection findings; review of documentation; and nondestructive examination (NDE) of piping and pipe support weldments for re-verification of previous NDE results. The inspection involved 86 hours of direct inspection time on site and eight hours of direct inspection time in the regional office.

Results: No violations were identified.

Unit 2:

Areas Inspected: Routine, unannounced inspection by one region-based inspector for review of safety-related concrete records. The inspection involved 10 hours of direct inspection time on site.

Results: No violations were identified.

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DETAILS

1. Persons Contacted

Public Service of New Hampshire (PSNH)

- * P. B. Bohan, Construction Manager

Yankee Atomic Electric Company (YAEC)

- * J. D. Azzopardi, QA Engineer
- F. W. Beam, QA Engineer
- W. Copeland, QA Engineer, Test and Startup
- * D. Corill, QA Engineer
- T. J. Davis, QA Engineer, Documentation
- * R. C. Julian, QA Engineer
- * W. T. Middleton, QA Supervisor
- * B. J. Mizzau, QA Engineer
- * J. W. Singleton, Field QA Manager
- ** K. Willens, Welding Engineer

United Engineers and Constructors (UE&C)

- ** J. Cannon, Supervisor of Weld Engineering
- ** T. Frolo, Seabrook Weld Engineer
- * J. A. Grusetski, Site Engineer
- ** H. Kaplan, Program Coordinator
- * D. Lambert, Field Superintendent of QA

Pullman-Higgins (P-H)

- R. Becksted, Staff QA Engineer
- D. Daubert, NDE Coordinator
- D. Hunt, QA Records Engineer
- J. D. Wampler, Site Level III, NDE

Perini Constructors, Inc. (Perini)

- E. Enman, QA Documentation

Royal Globe Insurance Company

- J. Anzivino, ANI

Lehigh Testing Laboratories

- ** J. Kelly, Metallographer

U.S. Nuclear Regulatory Commission

- * A. C. Cerne, Senior Resident Inspector
- * H. Wescott, Resident Inspector

- * denotes those present at Exit Meeting on November 18, 1983
- ** denotes those present at meeting at Lehigh Testing, Inc., in Wilmington, Delaware on September 14, 1983

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (443/83-01-02): Combined Inspection Report 50-443/83-01 and 50-444/83-01, paragraph 5(a), identified the excessive use of 3/32" diameter, E7018 electrodes on fillet welds with relatively high heat sinks as an unresolved item. The concern about the use of these electrodes in as welded safety related hangers and supports was related to the increased propensity for lack of fusion defects, cracked welds due to insufficient throat, and greater mismatch in weld metal, weld heat affected zone and base metal properties. The excessive use of 3/32" electrodes was at least partially caused by a requirement to limit all undercut to 0.010" regardless of primary stress direction or whether the welding was conducted in accordance with AWS D1.1 or ASME Section III, NF specifications.

The licensee was asked to address the potential for increased metallurgical and welding defects caused by the excessive use of low heat input electrodes. In response, he conducted a test program consisting of six sets of fillet weld test assemblies welded by site subcontractors with 1/8" and 3/32" diameter E7018 on both 3/8" and 1" thick carbon steel plate typical of that in use for site structural components.

On September 14, 1983, the inspector attended a meeting with UE&C and YAEC personnel at Lehigh Testing, Inc., to review the test program and test results. Hardness test data for weld, heat affected zone (HAZ) and base metal of structural steel weld test assemblies were reviewed. Welds of all six subcontractors were reported to be free of magnetic particle (MT) indications.

The inspector visually examined a sample of the fillet weld test assemblies and noted them to show evidence of previous MT examination and observed no cause for visual rejection. Fillet weld test assemblies from four of the six site subcontractors were hardness tested and macro etched. The NRC inspector examined the test samples and questioned the following aspects of the test program.

- a) Chemistry (C-Mn) of base plates.
- b) Significance of one C35 HAZ hardness equivalent to Rockwell C35.

The NRC inspector concluded that the use of either 3/32" diameter or 1/8" diameter E7018 electrode would result in similar hardness values with the construction carbon steel materials and welding procedures evaluated.

The inspector reviewed the UE&C final report of November 14, 1983, titled, "Evaluation of Weld Test Assemblies using E7018 3/32" and 1/8" Electrodes." Additional microhardness testing, as shown in this report, indicate a similar maximum hardness level in the HAZ for both electrode sizes. Furthermore, the metallurgical structure in the highest hardness region of the HAZ for both size electrodes is shown to be similar. The report contains chemistry analysis values for both carbon and manganese of the base materials welded.

Based on the observation of test specimens on September 14, 1983, and review of the UE&C report dated November 14, 1983, the inspector has no further concern about potential metallurgical differences in the use of 3/32" or 1/8" diameter E7018 welding electrodes for structural welding under the conditions evaluated.

This item is closed.

3. Documentation Review

The inspector reviewed records control and selected records maintained by UE&C, P-H and Perini, and discussed records control with representatives of those organizations. The adequacy of the system with respect to preparation, review, control, storage and retrievability was examined. Records are prepared and maintained temporarily by the organization responsible for performance of the work. Permanent records are maintained on microfilm by YAEC as a part of the Information Management System (IMS).

The inspector discussed this program with a YAEC representative and examined a draft of a procedure for the records management system. Documents submitted to IMS as permanent plant records are reviewed by the Construction Field QA Group for legibility, content and technical adequacy. Submittal and review of records is an ongoing process as portions of the work are completed.

3.1 UE&C Records (Unit 1)

UE&C is responsible for receiving, storage, preparation and maintenance of the appropriate records. Data packages for selected Containment Spray and Safety Injection system pipe spools were examined. They included receiving inspection reports (RIRs), vendor certifications and material test reports. All documents had been reviewed and accepted by UE&C QA, and had been reviewed by QA Records for traceability, legibility and UE&C acceptance. The Authorized Nuclear Inspector had reviewed the RIR's. These records had been turned over to IMS and were readily retrievable, legible, complete and technically acceptable.

3.2 P-H Records (Unit 1)

The inspector discussed review and control of process sheets with P-H representatives. Process sheets are prepared by UE&C, reviewed by P-H engineering and then by P-H QA which assigns "Hold" points for inspection purposes. The ANI also assigns "Hold" points for his review. Process sheets for selected field welds on Containment Spray and Safety Injection piping and for field installation of RHR pump and heat exchanger were examined. The process sheets provide a record of inspection at "Hold" points as well as identification of weld procedures, welders and weld material traceability. NDE records were included in the documentation package. The welding and equipment packages examined had not been turned over to IMS and in some cases work had not been completed. Records were available and acceptable. The inspector was informed that changes in the form of Engineering Change Authorizations (ECA's) frequently required rework.

Turnover of completed portions of the systems to Test and Start-up is accomplished through Boundary Identification Packages (BIP's). This system rarely, if ever, coincides with the standard piping system package which is based on isometric drawings (ISO's) and affects orderly completion of piping systems.

3.3 Perini Records (Unit 2)

The inspector reviewed records of selected concrete placements for the reactor containment. Records examined included preplacement, placement and post-placement inspection records; Laboratory tests of grout and concrete samples; reinforcing steel, cadwelding and waterproofing inspection reports. Documentation had been turned over to IMS and was readily retrievable, legible, and technically acceptable.

3.4 Nonconformance Reports (NCRs) (Unit 1)

NCR's identified in the UE&C and P-H records, referred to above, were reviewed. Dispositions had been reviewed by the Nonconformance Review Board technically and for reportability in accordance with 10 CFR 50.55(e). A technical justification was provided. Records of corrective action were provided when applicable.

3.5 Conclusions

Records which had been turned over to IMS were complete, legible, readily retrievable, technically acceptable and had been subject to repeated review.

Records not yet turned over (primarily piping) were technically acceptable to the extent complete, legible and retrievable although not completely assembled in some cases. Review of these records was not complete. Completion of these systems is affected by ECA's and the requirements for turnover to Start-up and Test.

No violations were identified during review of documentation.

4. Independent Measurements - NRC Nondestructive Examinations (NDE) (Unit 1)

An on-site independent nondestructive examination (NDE) was conducted at the site from November 14 through 18, 1983. This was a confirmatory inspection of the reexamination/reevaluation program completed by Pullman-Higgins on suspect nondestructive examinations performed by a former P-H employee. This was a reportable incident under 10 CFR 50.55(e) identified by the licensee on May 4, 1983, concerning approximately 2,399 safety and non-safety related welds in question. Welds were randomly selected and retested by region-based NDE personnel.

4.1 Nondestructive Examination

Examinations were performed using NRC procedures with addenda written specifically for compliance to the Licensee's PSAR commitment to the ASME B&PV Code for on-site fabrication. The intent was to duplicate to the extent practicable the techniques and methods of the original examinations.

The following examinations were performed:

Magnetic Particle Examination - Thirteen safety related pipe weldments were examined per NRC procedure NDE-6, Revision 0, and addendum SB-1-6-1.

Results: All areas examined were found acceptable per applicable procedures and acceptance criteria.

Liquid Penetrant Examination - Fifty-two safety related pipe weldments and structural supports were examined per NRC procedure NDE-9, Revision 0, and addendum SB-1-9-1. Samples examined included ASME Class 1, 2, and 3 welds and section NF for pipe supports.

Results: All areas inspected were acceptable.

Visual Examination - Seventy-one weldments and adjacent base material were visually inspected for weld reinforcement, overall workmanship and surface condition per NRC procedure, NDE-14, Revision 0.

Results: All areas inspected were acceptable.

See attachment 1 for detailed listing of welds and NDE completed during this inspection.

5. Exit Interview

An exit interview was held on November 18, 1983, with members of the licensee's staff. The inspector summarized the purpose, scope of inspection and findings of this inspection. At no time during this inspection was written material provided to the licensee by the inspectors.

INDEPENDENT MEASUREMENT PROGRAM

WELD NUMBER Line/ISO	CLASS	SIZE	DATA	THICK	M.T.	R.T.	U.T.	P.T.	HARDNESS	VISUAL	REMARKS
RC 0008 F0101	1	36"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
RC 0013 F0705	1	12"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
RC 0058 F0503	1	12"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
CBS 1216 F0101	2	3/4"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Socket Weld
NG 1656 F0117	2	1"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	C/S Socket Weld
RH 0155 F0310	2	10"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S (Area of PT) Data Plate Removal
SI 0238 F0201	2	2"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Socket Weld
SI 0242 F0201	2	2"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	
CC 0797 F0505	3	24"	N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	C/S Pipe Weld
CS 0541 F0101	3	3/4"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	C/S Socket Weld
CS 0541 F0224	3	3/4"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	C/S Socket Weld
RH 0155 F0301	2	10"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
DG 4382 F0406	3	1 1/2"	N/A	N/A	ACC	N/A	N/A	N/A	N/A	ACC.	C/S Socket Weld

INDEPENDENT MEASUREMENT PROGRAM

WELD NUMBER Line/ISO	CLASS	SIZE	DATA	THICK	M.T.	R.T.	U.T.	P.T.	HARDNESS	VISUAL	REMARKS
CS 0541 F0506	3	2"	N/A	N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Socket Weld
CS 0540 F0211	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0505	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0205	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0206	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0201	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0202	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0501	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0502	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0905	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F0906	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0540 F0214	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0540 F0315	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld

INDEPENDENT MEASUREMENT PROGRAM

WELD NUMBER Line/ISO	CLASS	SIZE	DATA	THICK	M.T.	R.T.	U.T.	P.T.	HARDNESS	VISUAL	REMARKS
CS 0540 F0310	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0540 F0216	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
AWS 9112 RG-9B4	NNS 1	3/8" Plate		N/A	ACC	N/A	N/A	N/A	N/A	ACC.	C/S Plug Weld
RC 058 F0502	1	12"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
SI 0242 F0202	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
NG 1656 FW1176	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
SI 238 FW 0203	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
SI 238 FW 0203	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
SI 238 FW 0309	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
SI 238 FW 0310	2	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CBS 1216 F 1003	2	10"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
CBS 1216 F 1004	2	10"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	S/S Pipe Weld
NG 1655 F 0116	2	1"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld

INDEPENDENT MEASUREMENT PROGRAM

WELD NUMBER Line/ISO	CLASS	SIZE	DATA	THICK	M.T.	R.T.	U.T.	P.T.	HARDNESS	VISUAL	REMARKS
NG 1655 F 0117	2	1"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F 0909	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0541 F 0910	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 0540 F 0210	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0903	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0904	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0401	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0411	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0101	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
CS 541 F 0114	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4396 F 0107	3	2"		N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	2" Pipe Weld
DG 4396 F 0108	3	2"		N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	2" Pipe Weld
DG 4396 F 0109	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld

INDEPENDENT MEASUREMENT PROGRAM

WELD NUMBER Line/ISO	CLASS	SIZE	DATA	THICK	M.T.	R.T.	U.T.	P.T.	HARDNESS	VISUAL	REMARKS
DG 4396 F 0112	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4382 F 0411	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4382 F 0410	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4382 F 0412	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4382 F 0409	3	2"		N/A	N/A	N/A	N/A	ACC.	N/A	ACC.	Socket Weld
DG 4382 F 0408	3	2"	N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4382 F 0407	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4382 F 0406	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4378 F 1006	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4378 F 1007	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4378 F 1008	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4378 F 1009	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds
DG 4378 F 1010	3		N/A	N/A	ACC.	N/A	N/A	N/A	N/A	ACC.	Socket Welds

[illegible]



Public Service of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

June 3, 1983

SBN-515
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Resident and Project Inspection

References: (a) Construction Permits CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) Telecon of May 4, 1983, A. L. Legendre, Jr. (YAEC) to
C. Holden (NRC Region I)

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

On May 14, 1983, we reported a potential 10CFR50.55(e) deficiency
[Reference (b)] regarding the suspect quality of NDE examinations performed at
Seabrook Station.

It has been determined that this item is reportable under 10CFR50.55(e).
The following information is being filed pursuant to the interim reporting
provision of 10CFR50.55(e)(3).

A. Description of Deficiency

Based on the latest information provided by the contractor, it now
appears that the inspector in question performed a total of 2,408
non-destructive examinations which affected a total of 1,966 welds.
The discrepancy in numbers is based on the fact that many of the
examinations were performed on non-welded items (crane hoods, base
material, etc.) and, in many instances, more than one examination
was performed on a single weld joint. The validity of all these
examinations remains in doubt, except where re-examined as noted
below.

B. Analysis of Safety Implications

Based on the latest information provided by the contractor,
approximately 65% of the affected welds are non-safety related, 33%
are safety related, and 2% are other types.

C. Corrective Action Taken

The contractor has taken the following action:

1. A statistical sampling of the examinations performed by other NDE technicians was completed. This sampling determined that the situation was restricted to one individual.
2. A plan has been established to re-examine 100% of all readily accessible affected work performed by the inspector in question regardless of classification. This re-examination is currently underway. Of the 60 areas re-examined to date, 43 have been accepted and 17 have been questioned.

We have yet to receive information concerning the type of defects which caused these 17 welds to be suspect, nor do we know the safety classification of the items involved.

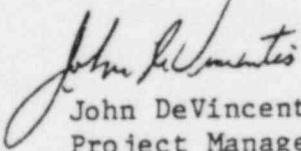
3. Efforts are being made to increase the contractors NDE staff to expedite the re-examination.
4. Inaccessible items will be evaluated on a case-by-case basis.

D. Information for Analysis and Evaluation

Our investigation is continuing. At present, it is not possible to determine the safety implications of this situation. A follow-up report will be submitted by August 31, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List

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



Public Service of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

July 5, 1983

SBN- 527
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations," J. DeVincentis to
R. W. Starostecki
(c) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting
Nos. 50-443/83-10; 50-444/83-07," R. W. Starostecki to
R. J. Harrison

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins reexamination program.

The status as of July 1, 1983, of reexaminations is summarized below:

1. As of Friday, July 1, 1983, of the 1968 suspect areas,
 - 468 items have been reexamined.
 - 434 have been determined to be acceptable.
 - 34 will require minor repair by surface grinding, polishing or filing.
2. Pullman-Higgins has hired a NDE Service Contractor to perform the reexaminations. This Service Contractor will work under the direction of a P-H Corporate employee who is certified as an NDE Level III Examiner.

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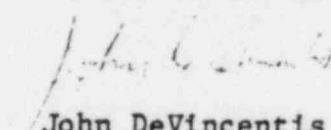
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3. Six (6) NDE Service Contractor personnel arrived on-site June 20, 1983. All six technicians completed training and certification on Friday, June 24, 1983, and commenced reexamination of the suspect areas immediately upon certification, mid-morning of 6/24/83.
4. The NDE Service Contractor will be providing four (4) additional technicians July 5, 1983 for training and certification which is scheduled to be completed by July 8, 1983. These additional technicians will commence work on July 11, 1983 for a total force of ten (10) technicians.
5. The total reevaluation program is scheduled to be completed by July 30, 1983.
6. The program for evaluation of inaccessible areas has commenced. Each category will require analysis and resolution on a case-by-case basis. This evaluation program is also scheduled to be completed by July 30, 1983.

An additional Interim 10CFR50.55(e) Report will be submitted by August 3, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List

Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555



Public Service of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

August 4, 1983

SBN- 541
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting
Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to
R. J. Harrison

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins reexamination/reevaluation program relative to suspect nondestructive examinations performed by a former P-H employee.

The status as of July 26, 1983, of the reexamination/reevaluation program for the 1978 suspect areas is as follows:

- a. 1340 items have been reexamined.
- b. 1294 items have been determined acceptable.
- c. 46 items will require repair by grinding, polishing, filing, or welding.
- d. 46 items have been repaired.

United States Nuclear Regulatory Commission
Attention: Mr. Richard W. Starostecki

August 4, 1983
Page 2

The current schedule for completion of the reexamination/reevaluation program is August 5, 1983 [Reference (c) scheduled completion on July 30, 1983]. A report will be submitted to Region I by August 15, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincents
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List



Public Service of New Hampshire

CD2 83-00-08
SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

August 16, 1983

SBN- 551
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting
Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to
R. J. Harrison
(e) PSNH Letter, dated August 4, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins reexamination/reevaluation program relative to suspect nondestructive examinations performed by a former P-H employee.

Reference (e) indicated that the "current schedule for the completion of the reexamination/reevaluation program is August 5, 1983"; however, the program has yet to be completed.

The status as of August 12, 1983, of the reexamination/reevaluation program for the 1,978 suspect items is as follows:

- a. 2,439 NDE operations (reexaminations/reevaluations) have been performed.

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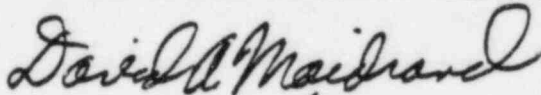
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- b. 1,316 areas have been determined acceptable by reexamination.
- c. 826 areas have been determined acceptable by Engineering evaluation.
- d. 41 areas required repair by polishing, grinding, or blending and were subsequently accepted.
- e. 53 areas will require repair by grinding, blending, welding, or replacement.
- f. 203 areas will require Engineering evaluation on a case-by-case basis.
- g. 1 area requires reexamination.

An additional report will be submitted to Region I by September 9, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



J. DeVincentis *for*
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List



Public Service of New Hampshire

SEABROOK STATION
Engineering Office
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

September 9, 1983

SBN- 562
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting
Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to
R. J. Harrison
(e) PSNH Letter, dated August 4, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(f) PSNH Letter, dated August 16, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins reexamination/reevaluation program relative to suspect nondestructive examinations performed by a former P-H employee.

Reference (f) indicated that an additional report would be submitted by September 9, 1983.

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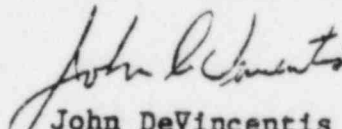
The status as of September 6, 1983, of the reexamination/reevaluation program for the 1,978 suspect items is as follows:

- a. One safety-related weld remains to be reexamined and this will be accomplished as soon as necessary staging is placed.
- b. The present disposition of the 203 (see Reference (f)) welds requiring Engineering evaluation is as follows:
 - i) UE&C has recommended that all but two of the safety-related welds should be "accepted-as-is" based on the results of acceptable volumetric examinations performed subsequent to the suspect inspections,
 - ii) Two safety-related welds which are embedded require further evaluation, and
 - iii) UE&C is in the process of classifying the remaining non-safety-related welds based on service severity levels.

An additional report will be submitted to Region I by October 7, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List



Public Service of New Hampshire

CDR-83-80-08
SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

October 12, 1983

SBN- 570
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

References: (a) Construction Permit CPPR-135 and CPPR-136, Docket
Nos. 50-443 and 50-444
(b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting
Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to
R. J. Harrison
(e) PSNH Letter, dated August 4, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(f) PSNH Letter, dated August 16, 1983, "Interim 10CFR50.55(e)
Report; Suspect NDE Examinations", J. DeVincentis to
R. W. Starostecki
(g) PSNH Letter, dated September 9, 1983, "Interim
10CFR50.55(e) Report; Suspect NDE Examinations",
J. DeVincentis to R. W. Starostecki

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we
committed to provide periodic Interim 10CFR50.55(e) Reports on the status of
the Pullman-Higgins reexamination/reevaluation program relative to suspect
nondestructive examinations performed by a former P-H employee.

Reference (g) indicated that an additional report would be submitted by
October 7, 1983.

The status as of October 12, 1983, of the reexamination/reevaluation program for the 2399 suspect NDE examinations (1978 items) is as follows:

- o Welds/items initially accepted by reexamination - 1277
- o Welds/items initially rejected by reexamination - 94

Current Status of 94 Rejected Welds/Items

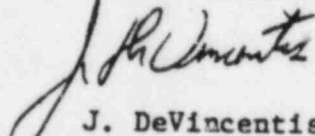
- 43 - repaired, reexamined, and accepted
- 6 - cut out per ECA, FTR, or NCR
- 45 - remain to be repaired

- o Examinations accepted as is - 880
- o Examinations remaining to be evaluated on a case-by-case basis (examinations performed on items which are now inaccessible) - 148
- Total Examinations - 2399

An additional report will be submitted to Region I by November 30, 1983.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


J. DeVincentis
Project Manager

ALL/pf

cc: Atomic Safety and Licensing Board Service List



Public Service of New Hampshire

SEABROOK STATION
Engineering Office:
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

December 2, 1983

SBN- 588
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

- References:
- (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
 - (b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki
 - (c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki
 - (d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to R. J. Harrison
 - (e) PSNH Letter, dated August 4, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki
 - (f) PSNH Letter, dated August 16, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki
 - (g) PSNH Letter, dated September 9, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki
 - (h) PSNH Letter, dated October 12, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVincentis to R. W. Starostecki

Subject: Interim 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins (P-H) Re-examination/Re-evaluation Program relative to suspect nondestructive examinations performed by a former P-H employee.

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United States Nuclear Regulatory Commission
Attention: Mr. Richard W. Starosteki

December 2, 1983
Page 2

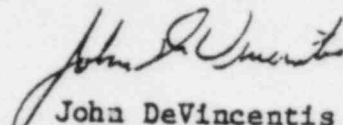
In References (b), (c), (e), (f), (g), and (h) we provided quantitative status reports on the Re-examination/Re-evaluation Program for the 2399 suspect NDE examinations.

The Re-examination/Re-evaluation Program is essentially complete, save the completion of a detailed report on the results of the Program.

Upon completion of an internal review, the report on the results of the Program will be submitted to Region I. We expect to submit this report to Region I by January 15, 1984.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


John DeVincentis
Project Manager

ALL/bal

cc: Atomic Safety and Licensing Board Service List

Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555



SEABROOK STATION
Engineering Office
1671 Worcester Road
Framingham, Massachusetts 01701
(617) - 872 - 8100

Public Service of New Hampshire

December 21, 1983

SBN- 603
T.F. Q2.2.2

United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attention: Mr. Richard W. Starostecki, Director
Division of Project and Resident Programs

- References:
- (a) Construction Permits CPPR-135 and CPPR-136, Docket Nos. 50-443 and 50-444
 - (b) PSNH Letter, dated June 3, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (c) PSNH Letter, dated July 5, 1983, "Interim 10CFR50.55(e) Report: Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (d) USNRC Letter, dated June 22, 1983, "Combined NRC Meeting Nos. 50-443/83-10; 50-444/83-07", R. W. Starostecki to R. J. Harrison
 - (e) PSNH Letter, dated August 4, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (f) PSNH Letter, dated August 16, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (g) PSNH Letter, dated September 9, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (h) PSNH Letter, dated October 12, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki
 - (i) PSNH Letter, dated December 2, 1983, "Interim 10CFR50.55(e) Report; Suspect NDE Examinations", J. DeVinentis to R. W. Starostecki

Subject: Final 10CFR50.55(e) Report; Suspect NDE Examinations

Dear Sir:

In a meeting conducted at Region I Headquarters on June 7, 1983, we committed to provide periodic Interim 10CFR50.55(e) Reports on the status of the Pullman-Higgins (P-H) Re-examination/Re-evaluation Program relative to suspect nondestructive examinations performed by a former P-H employee.

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IE 27

In References (b), (c), (e), (f), (g), and (h), we provided quantitative status reports on the Re-examination/Re-evaluation Program for the 2399 suspect NDE examinations.

In Reference (i), we stated that the Re-examination/Re-evaluation Program is essentially complete, save the completion of a detailed report on the results of the Program.

The following is a summary of the final disposition of Pullman-Higgins' NCR 4490 that has controlled this item. The NCR was closed on December 15, 1983.

The final number of suspect items remains at 2399.

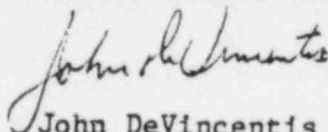
Breakdown:

1. Items re-examined and determined acceptable.	1373
2. Items "Accept-As-Is".	826
3. Items not requiring re-examination/re-evaluation due to removal via engineering changes.	7
4. Inaccessible items evaluated and accepted on a case-by-case basis by UE&C engineering.	193
Total	2,399

It should be noted and as substantiated by the above mentioned data, the suspect conditions did not adversely affect the installed items, components, or systems.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY



John DeVincentis
Project Manager

cc: Atomic Safety and Licensing Board Service List

Director, Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

EDO PRINCIPAL CORRESPONDENCE CONTROL

FROM:

15
DUE: 07/03/85

EDO CONTROL: 000742

DOC DT: 06/11/85

FINAL REPLY:

NICHOLAS J. COSTELLO
MASSACHUSETTS STATE SENATOR

TO:

CHAIRMAN PALLADINO

FOR SIGNATURE OF:

** GREEN **

SECY NO: 85-491

MURLEY

DESC:

ROUTING:

REQUEST INVESTIGATION INTO THE QUALITY OF
CONSTRUCTION AT SEABROOK

DENTON
TAYLOR
GCUNNINGHAM

DATE: 06/19/85

ASSIGNED TO: RI

CONTACT: MURLEY

SPECIAL INSTRUCTIONS OR REMARKS:

CORRESPONDENCE CONTROL TICKET

SECY NUMBER: 85-491

LOGGING DATE: 6/18/85

OFFICE OF THE SECRETARY

ACTION OFFICE: EDO

AUTHOR: Nicholas J. Costello

AFFILIATION: Commonwealth of Massachusetts

LETTER DATE: 6/11/85

FILE CODE:

ADDRESSEE: Palladino

SUBJECT: Req thorough investigation be made into the quality of construction at Seabrook station

ACTION: Direct Reply...Suspense: June 27

DISTRIBUTION: Docket, Cmr's

SPECIAL HANDLING: None

SIGNATURE DATE:

FOR THE COMMISSION: Champ

Rec'd Off. EDO
Date... 6-19-85
Time... 1:15 p.m.