



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

November 6, 1990

OFFICE OF THE
INSPECTOR GENERAL

Mr. Ted Feigenbaum
Chief Executive Officer
New Hampshire Yankee
P.O. Box 300
Seabrook, New Hampshire 03874

Dear Mr. Feigenbaum:

As you know, the Office of the Inspector General is conducting an investigation which involves welding issues at Seabrook Nuclear Power Station. On November 1, 1990, Special Agent Frank Forgione of this office spoke with Mr. Neal Pillsbury, New Hampshire Yankee (NHY), Director of Quality Programs. Mr. Forgione has indicated that this conversation concerned the NRC Independent Review Team report NUREG-1425 and the need for additional information from NHY by the Office of the Inspector General (OIG).

In order to more clearly understand the Yankee Atomic Electric Company's (YAEC) 100% review of Pullman Higgins weld radiographs, additional documentation is needed. The table compiled by NHY in NUREG-1425 page 14-2, indicates for the year 1982, 537 film packages were reviewed and two film-quality rejects/discrepancies and three administrative-type rejects/discrepancies were identified. The table provided no reject data for the period from 1979 through 1981 when the table lists 636 film packages were reviewed.

It is requested that NHY provide controlled speed letters (CSL's), YAEC audit reports, YAEC surveillance reports or other documentation which identifies film-quality, weld-quality and administrative-type rejects identified by YAEC during the 100% review for the period from January 1979 through November 1983.

If any questions result from this request, please have a member of your staff contact Frank Forgione at 301-492-4397. Your continued cooperation in this matter is appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "Leo J. Norton".

Leo J. Norton, Assistant Inspector
General for Investigations

cc: N. Pillsbury

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PDR ADQCK 05000443
PDR
P

He shall be responsible for quality surveillance at the site and shall provide a second level of assurance over the quality control level provided at the site by subcontractors and the Construction Manager (UE&C) for safety related activities. Personnel working under his direct supervision will be qualified to perform duties assigned. The activities of this staff, as well as the safety related activities performed by others at the site will be audited by Quality Control and Audit Engineers from YAEC Corporate Office. The Field QCA staff shall have discussions on a day-to-day basis directly with each quality assurance group at the site. The YAEC Project Manager, QCA Manager and the Site Manager shall be informed of all matters of quality assurance by the Field QCA Manager who shall formalize these discussions in writing.

The YAEC Construction Site Manager, who reports to the Construction Manager, is responsible for the coordination of all site activities and shall direct the activities of the YAEC site construction staff. He is responsible for surveillance of all construction activities to assure compliance with good construction practices and procedures. He works closely with the UE&C Construction Superintendent in discharging his responsibilities and is familiar with site construction policies, planning, schedules and procedures. He holds the authority to reject or discontinue any site construction activity affecting the quality of site work.

YAEC personnel performing quality assurance duties are qualified by virtue of their experience or they will receive instruction or other training as required to ensure adequate knowledge and understanding for the performance of their duties. In preparation for the initial assignments to review or audit without direct supervision, personnel are instructed in the governing procedures and they perform reviews or audits under qualified supervision. Personnel are given in-house training and attend courses as necessary to qualify them for assignments or to upgrade their qualifications in such areas as nondestructive testing, welding, code requirements and design control and audit procedures. The qualifications and performance of personnel are valued annually.

Consultants retained by YAEC as necessary to supplement the work of the YAEC quality assurance organization are required to comply with this Program. Their work will be reviewed on a continuing basis by the YAEC individual responsible for their scope of work.

17.1.2 Quality Assurance Program

Consistent with its objective of assuring the highest practical degree of integrity for safety related equipment, and with the criteria contained in Appendix B of 10CFR50, YAEC includes in this program those planned and systematic actions necessary to provide adequate confidence that structures, systems or components will perform satisfactorily in service.

The program covers quality assurance measures taken by YAEC, as well as by the Nuclear Steam Supplier (Westinghouse Electric Company) and the Engineer-Construction Manager (United Engineers and Constructors) and those items imposed on contractors, subcontractors and vendors throughout design, procurement, fabrication, construction and testing phases. It includes provisions for control during each of these phases by means of reviews, inspections, tests, and audits and by documentation of activities affecting quality. All activities affecting quality shall be accomplished under suitably controlled conditions.

The YAEC Quality Assurance Program will be applied to those structures, systems and components whose failure might cause risk to the safety of the public. The structures, systems and principal components listed in Table 3.2-1 and those identified as ANS Safety Class 1, 2 and 3 in Table 3.2-2 are within the scope of this program. The contractor responsible for design and procurement are denoted in the tables. UE&C will award contracts to constructors and will be responsible for site construction coordination. Constructor quality assurance programs, subject to UE&C review and approval, will be consistent with the YAEC Program.

The YAEC policy for quality assurance will normally involve three control levels:

- Level 1 - Quality control by vendors and constructors on the activities they perform and by UE&C on site receiving inspection and storage. This includes reviews, inspections and tests.
- Level 2 - Surveillance of design, fabrication and construction activities, including Level 1 quality control. Contractors provide this level for the design and procurement phases. YAEC provides a surveillance level on all site activities under this Program. (UE&C provides additional surveillance on site construction of structures.)
- Level 3 - Audits by YAEC QCA Department-Westboro of activities performed by Level 1 and 2 organizations.

YAEC will provide the third level for all activities. At each level, the individual or group responsible for reviewing, inspecting, auditing or otherwise verifying that an activity has been correctly performed will be independent of the individual or group responsible for performing the specific activity. The degree of control at each level will reflect the importance of the activity to plant safety and reliability.

Yankee activities covered by this program, as well as the activities of its contractors, vendors and constructors, will be performed in accordance with written procedures or manuals. These control procedures will incorporate the criteria described in the remainder of this program. YAEC will review and approve the primary quality documents of the contractors which are the Westinghouse Product Assurance Manual and the UE&C Quality Assurance Manual containing the Seabrook quality assurance procedures. Other contractor procedures will be subject to YAEC audits for implementation.

In addition YAEC will audit contractors, subcontractor and vendor performance as required to provide assurance of compliance with approved QA procedures and to assure effectiveness of the QA Program.

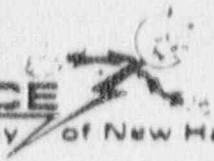
PSNH and Yankee management will review the status of the Quality Assurance Program as required to ensure continued program effectiveness. PSNH engineering personnel will participate in the QA Management Audit Program for Seabrook Station. This program is specifically oriented toward verification that project activities are being conducted in accordance with the approved methods delineated in the Seabrook QA Manual. The Management Audits will be conducted annually using approved checklists and will follow a pre-established schedule. Additionally, PSNH engineering personnel will select and participate on a quarterly basis in internal and external audits to assess Yankee's performance in QA activities. This performance assessment can also be done through PSNH engineers personally performing internal reviews at Yankee and sampling external audit reports prepared by Yankee. The results of these PSNH activities will be formally reported to its management with corrective actions noted when necessary. The contractor's management are, also, required to make status reviews of the QA Program within their area of responsibility.

17.1.3 Design Control

Each organization performing design activities for items covered by this program shall maintain design control measures. The measures shall consist of procedures defining: preparation and review requirements to assure that applicable regulatory and design basis requirements as defined in the applicable sections of the PSAR, are incorporated in the specification, drawings, procedures and instruction; preparation and review requirements to assure that appropriate quality standards are specified in design documents; methods for control of deviations from above requirements; requirements for selection and review of materials for suitability of application; inter-organization review, approval, release, distribution and revision of design documents involving design interfaces; checks of calculations; requirements for testing under the most adverse design conditions when test programs are used to verify design. These design measures shall be applied to items such as the following: reactor physics, stress, thermo-dynamic, hydraulic, and accident analysis; compatibility of materials; accessibility for inservice inspection, maintenance and repair; delineation of acceptance criteria for inspections and tests. The contractors or their vendors are responsible to perform design reviews (i.e. stress reports, over-pressure protection reports, specification coordination) as defined in ASME Boiler and Pressure Vessel Code, Section III, within their respective areas of responsibilities. Controls for changes, including field changes, shall be commensurate with the controls applied to the original document. UE&C shall review and approve constructors' procedures for the processing of design changes. Changes will be reflected in "as built" drawings and specifications. In addition, each organization shall maintain an audit level to assure its compliance with the above.

YAEC reviews contractors design documents as defined in the applicable contract. Within YAEC, the Project Manager coordinates the design control measures. Procedures define internal and inter-organizational review and approval cycles. The Project Manager distributes the design documents to the Engineering Department and the QCA Department for performance of applicable reviews per procedures. The procedures define the review

PUBLIC SERVICE
Company of New Hampshire



SEABROOK STATION
Field Office
P O Box 700
Seabrook, N.H. 03874

page 1 of 2

June 20, 1980
PSY 2036
File: SB 5.6

Mr. J.F. Vought
Resident Construction Manager
United Engineers & Constructors, Inc.
P.O. Box 700
Seabrook, N.H. 03874

Subject: Seabrook Station
Pipe Welding Quality

Dear Joe:

The quality of pipe welding which we have been getting at Seabrook Station is cause for serious concern. The rejection rate for radiographed safety class welds performed by Pullman-Higgins was 38% as of 6/10/80. The rejection rate for weld repairs was 50% for the same period. From the period 5/1/80 to 6/10/80 the rejection rate for both new welds and repairs was 60%. In addition YAEC FQA has evaluated some radiographs which were taken at random of non safety related pipe welds. Both stainless and carbon steel were included with a size range of 3" to 12". The results of this investigation are included in a memo dated 5/13/80 from W.J. Cagnon to J.W. Singleton with a copy to you. Recognizing the fact that the acceptance criteria for non safety related pipe are visual and hydrostatic examination, the radiographs reveal in all cases that we have problems with technique and/or control.

The above examples show an unacceptable situation wherein the quality of welding is poor and seems to be worsening. We recognize that the end product will be top quality. This is our acceptance standard for quality assurance and nothing less will be tolerated. However with the amount of rework required to achieve acceptable quality based on the welding performance we have experienced to date, we are really facing a major cost factor which is forcing the welding costs to increase. Furthermore with the limited manpower situation, particularly welders, this will also have a negative impact on schedule performance.

We request that UE&C investigate this problem and respond to us, in writing, by 7/9/80 with a plan to rectify this situation and a date when the plan will be implemented. UE&C has very capable expertise in the welding and construction areas, both on site and off site, which in your role as Construction Manager could be used to assist and ensure that the contractor, Pullman-Higgins, improve the welding quality to an acceptable level.

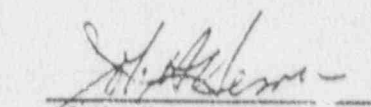
Reference 3

The following areas, based on our observations may have an impact on the quality of welding. We offer these as suggestions but do not want to imply that the problems are limited to these areas.

- A. Training of site welders to improve their technique and ability. This area has been addressed on several occasions. Nothing has been accomplished to date.
- B. In-process assistance. Perhaps more coaching or advising during the welding process would help improve the technique and thereby reduce the rejection rate. Pullman-Higgins' organization chart shows the welding engineers in the QA department. We question whether this arrangement is conducive to the type of coaching that may improve technique and thereby quality because of the dual role of coach and inspector that would be required.
- C. Increased surveillance and non-destructive examination, particularly in the NNS piping systems may be useful to spot trends and generic problems which warrant additional attention.
- D. Perhaps the welding processes and procedures being used are difficult to use effectively.

If we can be of assistance, please do not hesitate to contact us.

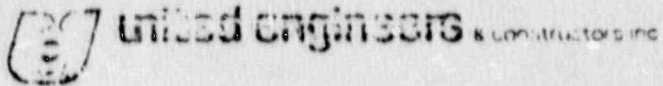
Very truly yours,



J.H. Herrin
Site Manager

JHH:PBB:mat

cc: B.B. Beckley 2
J. De Vincentis 2
R.P. Pizzuti 1
J.W. Single 1



SEABROOK STATION
Field Office
P.O. Box 700
Seabrook, N.H. 03874
July 8, 1980

SBF-3419
SB-PS-F-223

Public Service Company of New Hampshire
P O Box 700
Seabrook, New Hampshire 03874

Attention: Mr. J. H. Berrin, Site Manager

Public Service Company of New Hampshire
Seabrook Station
Pipe Welding Quality

Reference PSY 2036-File SB5.6 dated June 20, 1980

Gentlemen:

We are well aware of the problems and concerns stated in the referenced letter. United Engineers has been analyzing the weld radiograph rejection rate trends during the past five (5) months. We have interfaced with Pullman-Higgins on several occasions discussing the problems stemming from weld rejections their causes and probable solutions.

Pullman-Higgins has just completed a study of the type of rejections encountered. This information will be utilized in the proposed welder upgrading program when it is implemented.

Pullman-Higgins has taken action to try to reduce the weld rejection rate. These actions are a result of their own initiative and program or from discussions between Pullman-Higgins and United Engineers. These actions are as follows:

1. Permitting the use of a GTAW cover pass over the inert.
2. Surveillance and evaluation of welders in the field.
3. Requiring a welder to retest. (If visual or radiography examination deems it necessary).
4. Initiating a welder upgrading program.

After many hours of discussions between Pullman-Higgins and United Engineers, it was mutually agreed upon by both parties that the following items shall be initiated. These items if implemented properly should help reduce the rejection rate.

- A. Third instructor at the off site school. This will permit more qualified welders to come through the school.
- B. Upgrading school. Volunteers will be permitted to improve their welding technique on their own time at the offsite school.
- C. Pullman-Higgins to provide offsite school instructor with a list of welding problems which frequently occur at the site. This information to be used in training new welders and upgrading current welders.
- D. Pullman-Higgins to hire two (2) production welding supervisors. The main responsibility of these supervisors shall be evaluation of and provide technical assistance to welders in the field.
- E. Establish Repair Crews-An evaluation process is being conducted by Pullman-Higgins to select welders who are capable of repairing welds.
- F. Explaining repair crew concept to offsite welding school instructors so that they may evaluate welders for adaptability to this type program.
- G. Interfacing between offsite welding school and site Welding Supervision on evaluation of welders by the school.

The third instructor at the offsite welding school is supposed to be at the school within a week and a half. He will be trained in school procedures for one week. New students will then be accepted into the school.

The upgrading school is to start as soon as technical, jurisdictional and other problems between the Local 131 and UE&C/PSNH are resolved. You are aware of these problems.

Pullman-Higgins has stated that one Welding Supervisor will arrive on site July 14, 1980. The second supervisor is tentatively scheduled for sometime in July.

The following are being investigated or suggested by UE&C as methods or means to help improve weld quality.

1. Automated Welding Systems.

A summation of a plan to improve weld quality with implementation dates is as follows:

1. Establishing weld repair crews-Evaluation in progress at present time.
2. Permitting use of GTAW cover pass over the insert-Currently implemented.
3. Surveillance and evaluation of welders-Currently implemented.

4. Retesting welders-Currently implemented.
5. Third Instructor at offsite school-To be implemented July 21, 1980.
6. Explain repair crew concept to offsite welding school instructors. To be accomplished by July 14, 1980.
7. Pullman-Higgins Production Welding Supervisors to train, evaluate and assist welders in the field to improve techniques and ability. To be implemented July 21, 1980.
8. Interfacing between Pullman-Higgins Welding Supervisors & offsite school instructors on evaluation of welders furnished by school. To be implemented July 21, 1980.
9. Upgrading school for offsite welders. To be implemented as soon as technical and jurisdictional problems solved.
10. Providing offsite school with list of welding problems common to site. To be accomplished prior to the start of upgrading school.
11. Automated welding systems. Program to be presented to the client in October 1980. Upon acceptable response from client, automated welding systems will be utilized to weld the R. C. Main loop piping starting in April 1981.

Item 2 is in response to item D of the referenced letter.

Item 3 & 7 is in response to item A, B & C of the referenced letter.

Item 9 is in response to item A of referenced letter.

United Engineers will continue to evaluate the weld rejection trend and interface with Pullman-Higgins to improve weld quality.

This is the initial program to improve weld quality. As the job progresses other options not discussed at this time may be implemented to continue to improve weld quality.

Very truly yours,

UNITED ENGINEERS & CONSTRUCTORS INC.

J. F. Vought

J. F. Vought
Resident Construction Manager

JFV/GSR/jstg

cc: KF Hagan/L/M Sherry
J. DeVincentis
BB Beckley
JH Berrin
JW Singleton

cc: G. F. Cole
D. H. Elvick
J. R. Derry
M. P. Haman
E. H. Gane
C. H. Berkacher

Document Control
~~885-File~~
Constructor File
G. W. Kelly
J. F. Nay
R. A. Kountz

New Hampshire Yankee
January 11, 1991

REFERENCE 5

SALP REPORT

12/28/82

(Available for review at Seabrook Station or upon request)

New Hampshire Yankee
January 11, 1991

REFERENCE 6

SALP REPORT

08/17/83

(Available for review at Seabrook Station or upon request)

New Hampshire Yankee
January 11, 1991

REFERENCE 7

SALP REPORT

04/25/84

(Available for review at Seabrook Station or upon request)

New Hampshire Yankee
January 11, 1991

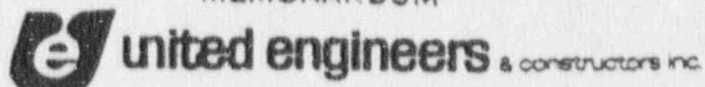
REFERENCE 8

SALP REPORT

05/28/83

(Available for review at Seabrook Station or upon request)

MEMORANDUM



JOB No. 9763.011
DEPT. Welding
TO: W. J. Taylor

FROM: R. A. Kountz

OFFICE: Seabrook Station
DATE: August 1, 1982
COPIES: E. M. Hayes
G. T. Pittman
E. R. Degan
J. R. Mayne

SUBJECT: Public Service Company of New Hampshire, et al.
Seabrook Station - Units 1 and 2
Radiographic Reject Rates

Attached you will find three (3) separate reports in regards to Pullman-Higgins reject rates.

Part I is the accumulative totals for radiographed weld joints. Please note that with the entry of the July 1983 figures, the reject rates for new welds and total welds (new and repair) is at the lowest rate since the project began. The previous low rates were established on September 30, 1981. It is anticipated that these rates will continue to be lowered.

Part II is a monthly summary and yearly recap of radiographic reject rates. Of particular significance in this part of the report is the downward trend established during the first seven (7) months of the calendar year 1983. A similar downward trend occurred in 1981 and lasted six (6) months, however, approximately three (3) times more welds were radiographed during the 1983 period as compared to the 1981 period. (1030 welds versus 386 welds). The reject rate during the 1981 six (6) month period was 18.9 percent, while the seven month 1983 reject rate is 16.3 percent.

Part III is a report on reject rates obtained in the various areas of the plant. Each area is participating in lowering the reject rate.

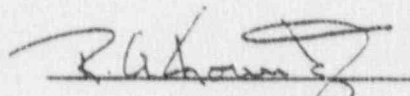
It might be thought that these improved reject rates are the result of the recent Award Fee Goal Programs established to lower reject rates. However, the real goal was established in late December of 1982 with the Award Fee being PRIDE. At that time Jack Corcoran and myself had a meeting to discuss the, then, upward trend of the reject rates. We both agreed that the trend was unsatisfactory and must be reversed. We mutually set a goal of eighteen (18) percent for the calendar year 1983. Jack had subsequent meetings with his welding and piping staff to inform them of the goal.

Jack's staff made a commitment to meet the goal and further committed to reducing the accumulative site reject rate below twenty (20) percent. His staff has been working towards this goal and is evidenced by the 1983 figures in Part II. Since that meeting, the reject rate has been 16.3 percent and the accumulative reject rate has been reduced from 29.3 percent to 25.8 percent. The Award Fee Cost Goal Programs have added incentive to the PRIDE goal established in December 1982.

Pullman-Higgins Welding and Piping Supervision should be commended for their efforts in obtaining the drastically reduced reject rates during the first seven (7) months of 1983. The weldors and pipefitters involved in these efforts should be equally commended, for without their high level of quality workmanship, these goals would be unobtainable.

Pullman-Higgins personnel (management, supervision and craft) should be proud of their accomplishments and endeavors to obtain this high level of quality welding.

We are looking forward to equally impressive results during the balance of 1983 and the remainder of the project.



R. A. Kountz

RAK/sam

Attachments

New Hampshire Yankee
January 11, 1991

REFERENCE 10

SEABROOK PROJECT MANAGEMENT PRUDENCE AUDIT
(PLG-0447) BY PICKARD, LOWE AND GARRICK, INC.
DATED JULY 1986

(Available for review at Seabrook Station or upon request)

New Hampshire Yankee
January 11, 1991

REFERENCE 11

STUDY OF THE SEABROOK PROJECT, CONDUCTED BY
CHALLENGE CONSULTANT, INC.
DATED NOVEMBER 1986

(Available for review at Seabrook Station or upon request)

New Hampshire Yankee
January 11, 1991

REFERENCE 12

RETROSPECTIVE AUDIT OF THE SEABROOK NUCLEAR PROJECT FOR
THE STATE OF CONNECTICUT DEPARTMENT OF PUBLIC UTILITY CONTROL
DATED SEPTEMBER 1987

(Available for review at Seabrook Station or upon request)

MEMORANDUM

TO Distribution December 10, 1984
DATE
 FROM C. R. Gram 12/11 FILE SR 5, 6, 6
COMPANY OR LOCATION M-3541
 SUBJECT P-H QA & CONSTRUCTION PROCEDURES

REFERENCE: C. R. Gram Memo M-3532, dated 11/21/84

The attached Action Item Matrix has been updated to reflect current status of recommendations made by the IRT, Pullman-Higgins, and the Owners Construction Management Organization relative to P-H QA and construction procedures. Items closed at the 11/29/84 status update meeting have been removed from the list.

A status meeting has been scheduled for 9 a.m., Thursday, 12/13/84, in the Owners Construction Office conference room. Those requested to attend are indicated by an "*" in the following distribution.

ROUTING STAMP	
RES. MGR.	<i>[Signature]</i>
ASST. RES. MGR.	<i>[Signature]</i>
ADM. MGR.	
CONSTRUCTION MGR.	<i>[Signature]</i>
Q. A. MGR.	<i>[Signature]</i>
CHIEF ENGR. OFF.	<i>[Signature]</i>
C & S DEPT.	
FILE	

[Signature]
 G. R. Gram
 Director of Construction

CRG:RRC:ksl

Attachment

Distribution:

W. P. Johnson	- 12 40	J. E. Powell	- 12 48	J. DeVincentis	- 08 62
W. B. Derrickson	- 12 40	L. H. Herrin	- 11 01	D. J. Peeples	- 06 10
*C. M. Wiley	- 07 46	J. F. Canada	- 05 45	D. G. McLain	- 09 08
A. R. Walker	- 04 43	R. A. Garramore	- 08 62	*M. P. McKenna	- 08 80
R. W. Jule	- 08 91	...	- 12 23	J. J. Corcoran	- 07 36
*C. A. Scannel	- 07 36	*R. R. Donald	- 07 36	*P. A. Giansiracusa	- 08 89
*D. C. Turquist	- 08 97	*G. F. McDonald	- 10 07	D. E. McCarrigan	- 10 07
*R. A. Cummings	- 12 23	*M. Charney	- 11 01	*L. F. Bennett	- 11 01
*R. R. Cliche	- 11 01	R. C. Sevonty	- 08 62	*T. R. Frolo	- 04 81

ITEM DESCRIPTION	REFERENCE	RESPONSIBILITY	ACTION/DESCRIPTION	DATE REQ'D
24 Quenching of SS welds to reduce interpass temp.	Item 3	TRF/P-II	Need response to RFI 73/7153A. ECA 19/101426A.	11/30/84
25 Pipe supports spanning civil expansion joints.	Item 4	P-II/ENG	Evaluate and implement (revise ECA 25/11289A; P-II cannot effectively implement).	11/29/84
26 TP-10 resulting in many ECA's and NCR's.	Item 5	MPM	Evaluate P-II/UE&C programs and make recommendation. RFI 73/7058A.	
27 TP-8 resulting in excessive paperwork.	Item 6	MPM	Revise procedures (new program issued 11/01/84 to reduce paper).	
29 Need well-defined minus tol. for pipe support gaps.	Item 8a	GFM/ENG	Generic tolerance not possible. Evaluate full review. GFM to issue memo to clarify completion.	
31 Need greater tol. for anchor-type supports.	Item 8c	P-II/ENG	Evaluate and implement change.	12/07/84
33 Longer Hilti bolts must be used vs. larger dia. only.	Item 10	P-II/Eng.	Review Hilti spec, evaluate problem, implement. ("Drilco" demo 12/13/84)	12/07/84
34 Hilti spec. should allow 1/8" dia. increments for replacement.	Item 11	P-II/Eng.	Review Hilti spec, evaluate problem, implement.	
36 ECA's now req'd to delete. Return welds.	Item 13	P-II/Eng.	Evaluate and implement (show on as-built in lieu of ECA).	11/30/84
38 Generic authorization to weld misplaced baseplate holes.	Item 15	Eng.	Eng. review requested Memo M-3535 to JDV (ref. ECA 54/2203C).	11/28/84
40 Site training requirements are overconservative.	Item 17	GFM	Evaluate and implement change.	11/21/84
41 100% Level III film review redundant.	Item 18	GFM/P-II	100% review to continue. GFM will review specific problems.	11/21/84
42 YAEK guidelines on geometric unsharpness beyond code req.	Item 19	GFM	Evaluate and implement change.	11/21/84
43 Daily validation of rod tickets and rod return after 3 days.	Item 20	DEM	Implement change. (Administrative not QA requirement.)	11/21/84

MEMORANDUM

TO G.F. McDonald 10/07 June 27, 1985
 COMPANY OR LOCATION DATE
 FROM R.P. Grippardi 10/07 FILE Q 1.1.4/YFQA-483
 COMPANY OR LOCATION

SUBJECT UNACCEPTABLE RADIOGRAPHY STATUS

I. Existing NCR's requiring repairs and/or re-radiography as a result of YAEC QA review of vendor and contractor film.

- a. Vendor film - All vendor film for Unit I equipment/components received on site has been reviewed. Repairs and re-radiography have been identified and are currently being tracked for closure.

Note: There is no total list of purchase orders which require submittal of RT film to the site, therefore, the possibility exists for additional film being received on site which would have to be reviewed.

- b. Production film from site contractors has been reviewed with problems identified and tracked for closure. There is currently no known review backlog. Review of new production film is an ongoing process and should not be a problem.

II. Equipment/components which have been retagged and moved from Unit II to Unit I.

- a. A complete review of the retag log has been completed. Radiographs for equipment/components moved from Unit II to Unit I have been reviewed and found satisfactory. A periodic review of the retag logs will be made to assure that radiographs for equipment/components moved in the future are properly reviewed.

III. Existing contractor NCR's requiring repairs and/or re-radiography.

- a. Those NCR's are tracked by the individual contractor's program. Each contractor has the necessary controls in their programs to assure closure of such NCR's prior to the signoff of "IT" packages.

IV. Current Status

- a. There were originally 21 NCR's identified which required re-radiography and/or repairs. As of 6/26/85, re-radiography and/or repairs has been completed on 14 of the NCR's.
- b. There were 100 welds identified by YAEC QA which required re-radiography. As of 6/26/85, 44 have been reshot and are considered closed.

c. Attached is a status report as of 6/26/85. This report is updated on a weekly basis by YAEC QA. The report indicates the current status of the radiography and also scheduled dates for the remaining radiography. Dates are not indicated for radiography associated with DN #090. These dates are established by Startup based on the availability of the systems. A daily interface has been established with Startup for determination of system availability. This information is prioritized and then transmitted to Pullman for scheduling of the radiography.

In conclusion, we feel we have identified the scope of the problem and have established the necessary interfaces between Startup, Engineering, YAEC QA and Pullman NDE to assure completion of the radiography and any required repairs in a timely manner.

00500211111
00540JUJ42

R.P. Grippardi
R.P. Grippardi
Assistant QA Manager

RPG/pad
Attachments

New Hampshire Yankee
January 11, 1991

ENCLOSURE 2 TO NYN-91002

YAEC MEMORANDUM DATED JUNE 21, 1983,
SUBJECT: CONTROLLED SPEED LETTERS

YAEC CONTROLLED SPEEDLETTER #089 DATED NOVEMBER 30, 1983. NOTE: NO
OTHER CSL DEALING WITH YAEC 100% REVIEW OF RADIOGRAPHIC FILM
PREDATES CSL 089.

MEMORANDUM

TO All YAEC CFQAG - Seabrook June 21, 1983
COMPANY OR LOCATION DATE

FROM J.W. Singleton YAEC CFQAG Manager - Seabrook FILE Q 1.1.4
COMPANY OR LOCATION

SUBJECT CONTROLLED SPEED LETTERS

Effective on Wednesday, June 22, 1983, the YAEC CFQAG will implement a system involving the use of Controlled Speed Letters. Existing Speed Letter Form 44-912 (Gray Line - Snap-A-Way Form) will be utilized following the instructions for Sender/Recipient currently on the form.

The only difference from the way we currently use "Speed Letters" will be that Speed Letters issued on/after June 22, 1983 will be controlled. Administratively, a file will be set up with two sections, open and closed. Numbers starting with 001 to 999 will be listed on a sheet with a place for initials. Each person issuing a Controlled Speed Letter will take the next available number, line out the number, initial by the number and write, "YAEC Controlled Speed Letter, No. 001" at the top of the current form. The person sending the Controlled Speed Letter will fill out the necessary information as required on the form, then detach the yellow copy and file it in the Controlled Speed Letter - Open file. The yellow copy will remain in the open file until a satisfactory answer is received. Then the Controlled Speed Letter will be "Closed" by crossing out the word "Open" at the top of the form, initialing and will be filed in the closed section of the file.

Controlled Speed Letters can be used but are not limited to the following situations:

1. Surveillance Group to Field Engineering Group - Surveillance personnel will use the Controlled Speed Letter to transmit concerns/problems found during surveillance to applicable sections of the Field Engineering Group. These concerns might fall in the area of NRC Follow Items, ECA's, Contractors Procedures, etc.
2. Controlled Speed Letters will be used for interim follow action for deficiency reports and observations. When an initial or subsequent unsatisfactory response to a deficiency or observation is received from a contractor; a Controlled Speed Letter will be sent to that contractor stating the response is unsatisfactory, the reason, and when a revised response is due. When a satisfactory response is received from the Contractor the Deficiency/Observation Report and all Controlled Speed Letters will be closed out as mentioned in sub paragraph 1 (above).
3. Notification to a contractor of Surveillance Hold Points - When there are work items going on in the field for which we require the contractor notify us to come witness a Test or Hold Point; the Controlled Speed Letter will be used.

As we implement and use the Controlled Speed Letter system there will be many more ways that this system can be used to more effectively control everyday work situations at Seabrook Station. This memo and the required actions will remain in effect permanently and will be incorporated in the YAEC CFQAG Manual at the next revision.

J.W. Singleton
 J.W. Singleton
 YAEC CFQAG Manager

JWS/psd
 cc: All
 G.F. McDonald
 R.E. Guillette

Speed Letter, YAEC CONTROLLED SPEED LETTER #089

To R. Davis, J. Wampler, E. Bowles

From R.C. Julian

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P-H 536

YAEC CFQA 107

Subject RADIOGRAPHY

MESSAGE

Date November 30 19 83

① Request P-H to reshot 1-RC-7-01, F0101 STA "5-6". Review by Mr. H. Kerch NRC Region #1 that STA 5-6 has artifact @ 6 in base material which cannot be fully evaluated with existing film.

② Conditions exist that film quality of processing is marginal to poor. Radiographs submitted for review, have streaks, water marks in the area of interest, therefore hampering interpretation. P-H is requested to address this condition, and the "corrective action" to alleviate these conditions.

NOTE: Response in writing is requested on both items (1 & 2)

Signed *Richard C. Julian* YAEC/FOAE

REPLY

Date Dec. 16 19 83

1. 1-RC-7-01 F0101, Station# 5-6 has been radiographed with acceptable film quality.

Film has been turned over to YAEC.

2. It is agreed that the past film quality is marginal to poor; however, it is acceptable per code. Present film quality has improved since the installation of new processor rollers, carpet in entrance way to dark room and proper maintenance and cleaning of the processor.

Signed *[Signature]* P-H

New Hampshire Yankee
January 11, 1991

ENCLOSURE 3 TO NYN-91002

COVER PAGES
TO
YAEC SURVEILLANCE REPORTS
RELATED TO RADIOGRAPHY

(See also NUREG 1425, Appendix 8, page 7)

NOTES TO ENCLOSURE 3

In accordance with a 11/16/90 telecon agreement reached between NHY and NRC OIG the cover pages of the radiography related surveillance reports for 1979 through 1983 are included. The remaining pages of each report consist of the surveillance checklist.

Originator Code: Y004
Process Type: 20-R-04-103
IMS Index: _____
Date: _____ By: _____

File Location: Q 2.6.14.330

Page ~~1~~ Page 2 of 2

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Pullman NDE

Specifics: Radiography (Film Review)

Ref. Master Check List No.:

Comments:

General:

Radiographs for 14 wells where reviewed with the following results.

*Deficiency: CBS 1201-01 (F0101) Unacceptable film processing (overdevelopment or insufficient rinsings). *(0691) (reshot 1-6-80)*

*Deficiency: CBS 1207-01 (F0101) unacceptable technique (film placement inadequate weld coverage). *(0691)*

- Observation: a. CBS 1210-01 (F0104) has a three film load, only coverage needed is weld and heat affected zone.
- b. RC 13-01 (F0101) same as above, also need R1 documented on reader's sheet.
- c. RC 58-01 (F0102) same as "a"

*Above deficiencies reported on Yankee DR #037. Please respond to observations, identifying what corrective action that is to be taken.

Formed By: W. J. Gagnon *W. J. Gagnon* Date: 12/31/79

Contractor/Contacts: D. Walker/P-H

Exit Interview: Yes No

Originator Code: Y454

File Location: Q 2.6.14.445

Record Type: 20-R-04-199

IMS Index: C. 02. 05. 31

Page 1 of 5

Date: 6/18/80 By: RCJ

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (RT)

Specifics: 1-CBS-120801, 120802, Field Welds F0104, FC202

Ref. Master Check List No.: 248-51

Comments: Surveillance conducted in RHR Vault in accordance with PPP,
IX-RT-1-W77.

Performed By: R. C. Julian

Richard C. Julian

Date: 6/18/80

Contractor/Contacts: PPP

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: 20-21-02 25-31
Date: 8/5/80 By: [Signature]

File Location: Q 2.6.14.409

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (Radiography)

Specifics: Review of PPP Radiograph 1-CBS-1226-01, F0102

Ref. Master Check List No.: 248-51

Deficiency:

With immediate corrective action. Review of radiographs indicated that repair radiograph of 1-CBS-1226-01, F0102 station marker 3-0 and 0-1 repair at "0" does not meet criteria of ASME Section V, Article 2, Para T-237, in as much as complete coverage of repair radiograph and does not correspond to the original station markers are differently identified, and subject coverage of repair radiograph is less than the original. Station markers for repair radiograph are to be the same as the original, to verify complete or satisfactory removal of discontinuity and demonstrate complete coverage.

Follow-up YAEC QA on reshoot of radiograph to be performed.

IMMEDIATE CORRECTIVE ACTION TAKEN, REF NCR # 217, RADIOGRAPH RESHOOT,
REVIEWED AND ACCEPTED.

Performed By: R. C. Julian [Signature] Date: 8/5/80 [Signature]

Contractor/Contacts: M. McCrae/PPP

Exit Interview: Yes No

Originator Code: Y004
Record Type: 2A-K-04-188
IMS Index: Q-02-01-02
IMS Index: E-01-13-01

FILE LOCATION: Q 2.6.14.562

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YANKEE ATOMIC ELECTRIC COMPANY
QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (Radiography)-P/H

Specifics: 6" Carbon/Steel (Heavy Wall) Pipe Weld Test

Ref. Master Check List No.: 248-51, Rev. 0

Comment: Observed radiographic examination of welder test qualification, on Heavy/Wall 6" carbon steel test piece, all parameters of examination were completed satisfactorily.

Performed By: R. C. Julian *R. C. Julian* Date: 10-17-80

Contractor/Contacts: P/H - M. McCrae

Exit Interview: Yes _____ No X

Originator Code: Y004
Record Type: 20-R-04-158
IMS Index: Q-02-01-02
IMS Index: G-02-05-31
Date: 12/31/80

FILE LOCATION: Q 2.6.14.580

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (Radiography) P/H

Specifics: Radiographic Review P/H

Ref. Master Check List No.: Section V, Rev. 0

Observation:

Review of radiographs on 1-CBS-1201-05 Rev. 0, F0503; station markers 1-2 indicate a linear indication, or which is interpreted as incomplete fusion. Please re-evaluate your interpretation and respond in writing to YAEC.

Performed By: R. C. Julian Richard C. Julian Date: 10/30/80

Contractor/Contacts: M. McCrae & D. Geskee

Exit Interview: Yes No

Originator Code: Y004
Record Type: 2A-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-02-05-31, G-05-01-31
Date: 12/11/80
[Signature]

FILE LOCATION: Q 2.6.14.616

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (Radiography)P-H

Specifics: (See Below)

Ref. Master Check List No.: 248-51, Rev. 0

Comment:

Reviewed radiographs dark room facilities and storage for compliance of codes and specifications. Review of radiographs and facilities were acceptable.

1-CS-369-01, F0106
1-CS-369-02, F0201
1-CS-369-10, F1001
1-CS-369-10, F1005

1-CBS-1214-06, F0601
1-CBS-1201-02, F0208
1-CBS-1202-03, F0301

Performed By: R. C. Julian [Signature] Date: 11/28/80

Contractor/Contacts: P-H/M. McRae

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-02-01-31, G-04-01-31, G-05-01-31
Date: 7/11/81
By: P.M. [Signature]

FILE LOCATION: Q 2.6.14.670

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination NDE (Radiography) P-H

Specifics: (See Comments)

Ref. Master Check List No.: Section V, Rev. 0

Comment:

Conducted surveillance of radiography by P/H personnel 1/21/81 (Second Shift), to verify technique, personnel safety, handling of radio active material during radiographic examination. All parameters were performed and conducted to a satisfactory manner.

Performed By: R. C. Julian [Signature] Date: 1/21-23/81

Contractor/Contacts: P/H - M. McRae

Exit Interview: Yes No

Originator Code: Y004
Record Type: Z-8-04-100
IMS Index: Q-02-01-02
IMS Index: G-02-03-31, G-05-01-31, G-01-03-31, G-04-01-31,
Date: 7/1/81
Pullman/Higgins

FILE LOCATION: 0 2.6.14.832

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE-RT (Review - P/H)

Specifics: See Comments

Ref. Master Check List No.: Section V, Rev. 0

Comment:

Review of Pullman/Higgins radiographs on CBS, CS, RH, RC, CO systems. Surveillance received radiographs, for legibility, correct and complete identification, density, penetrometer, and radiograph reader sheets for completeness, correctness, legibility of information.

Performed By: R. C. Julian Richard C. Julian Date: 5/1/81

Contractor/Contacts: P/H - M. McRae

Exit Interview: Yes No

Originator Code: Y864
Record Type: 28-R-64-188
IMS Index: Q-82-81-82
IMS Index: Q-81-83-11
Date: 1/7/82
Don't know

FILE LOCATION: Q 2.6.14.1001

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) P-H

Specifics: 1-RC-10-01, Field Weld F0101, F0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed third shift (0500 hour started) for review of "information" radiography on 1-RC-10-01 field weld F0101 and F0102 root pass and the first five layers. P-H Procedure 1XRT-1-W77 Rev. 3 with all results acceptable.

Performed By: S. B. Sadonky *S. B. Sadonky* 12 July Date: 7/08/81

Contractor/Contacts: P-H/R. Davis

Inter-view: Yes No

Originator Code: Y854
Record Type: 28-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-01-03-11
Date: 1/7/82
John Chan

FILE LOCATION: Q 2.6.14.1002

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography), P-H

Specifics: 1-RC-10-01, F/W F0101, F0102

Ref. Master Check List No.: Sect. V, Rev. 0

Comments:

Surveillant performed third shift surveillance (5:00 a.m. start) for review of "information" radiography on 1-RC-10-01, F/W F0101, & F0102 to P-H Procedure 1-XRT-1-W77 Rev. 3, with all results acceptable. Radiography performed using IR-192, 185 curries, with a film to source distance of 17" and a 2:15 exposure time.

Performed By: R.C. Julian Richard C. Julian Date: 7/09/81

Contractor/Contacts: F-H/P. Ramsey

Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-180
IMS Index: Q-02-01-02
IMS Index: G-01-03-11
Date: 1/7/82
By: P.M. Higgins

FILE LOCATION: Q 2.6.16.1009

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-10-01, Field Weld F01-101 and F0-102

Ref. Master Check List No.: ASME Section V, Rev. 0

Observation:

Surveillance performed third shift (0500 hour started) for review of "information" radiography on 1-RC-10-01 field weld F0101 and F0102 root pass and 1 $\frac{1}{2}$ " weld out. It was determined F0102 at the 0 to 1 position has a rejectable indication (lack of fusion). Pullman-Higgins has generated the weld repair order and the process sheet, the indication will be ground out and a visual and liquid penetrant inspection will be performed.

Performed By: S.B. Sadosky *S.B. Sadosky* *rcj* Date: 7/10/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y864
Record Type: 26-R-64-188
IMS Index: Q-82-01-02
IMS Index: G-81-83-11
Date: 1/9/82
By: Tom How

FILE LOCATION: Q 2.6.14.1020

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-10-01, Field Weld FO-101 and FO-102

Ref. Master Check List No.: ASME Section V

Comments:

Surveillance performed third shift (0500 hour started) for review of "information" radiography on 1-RC-10-01 field weld FO101 and FO102 weld material thickness is 2". It was determined FO-102 at the 0 to 1 position and 1 to 2 position has rejectable indications, this is weld repair number two. Also FO-101 has rejectable indications at the 0 to 2 position, Pullman Higgins has generated the weld repair order and the process sheet, the indication will be ground out and a visual and liquid penetrant inspection will be performed.

Performed By: S.B. Sadosky R.C. Julian Rejula Date: 7/13-14/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes X No

Originator Code: Y064
Record Type: 26-R-04-188
IMS Index: Q-02-01-02
IMS Index: C-01-03-11
Date: 1/7/82
By: Pam Shaw

FILE LOCATION: Q 2.6.14.1024

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-10-01, Field Weld FO-101 and FO-102

Ref. Master Check List No.: ASME Section V, R-0

Comments:

Surveillance performed third shift (0500 hour started) for review of "information" radiography on 1-RC-10-01 field weld FO-101 and FO-102, also reviewed radiographs for the repairs of FO-101 and FO-102 all rejectable indications are removed. Reviewed process sheet for the repairs to F-102 R-1 and F-102 R-2, no outstanding items from this review.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 7/16/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Secure Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-01-03-11, G-01-03-31
Date: 1/7/81
By: [Signature]

FILE LOCATION: Q 2.6.14.1031

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Welding & NDE/P-H
Specifics: 1-RC-10-01, F/W F-0101, F-0102
Ref. Master Check List No.: WS-1, Rev. 0

Comments:

Observed and reviewed radiographs on F-0102/repair #2, third shift (0500 start).
Rejectable indication at station marker (4-5), in process repair. Reviewed
repair process sheet. Process sheet released for repair activity.

formed By: R.C. Julian [Signature] Date: 7/17/81

tractor/Contacts: P-H/M. McCrae, E. Donald

Interview: Yes No X

Revised 7-25-79

Originator Code: Y064
Record Type: 26-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-01-02-11
Date: 1/9/82
By: Tom Elmer

FILE LOCATION: Q 2.6.14.1038

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H
Specifics: 1-RC-10-01 Field Weld F-0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed third shift (0500 hour started) for review of "information" radiography on 1-RC-10-01 field weld F0102 which has rejectable indications between station marker No. 4 and 5, and between No. 6 and 7. This is the third repair of this weld.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 7/20/81

Contractor/Contacts: P-H/R. Davis

Post Interview: Yes No

Originator Code: YF84
Record Type: 20-R-84-188
IMS Index: Q-02-01-02
LMS Index: G-01-03-11
Date: 1/7/81
YF84

FILE LOCATION: Q 2.6.14.1047

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-4-01 Field Weld F0102 & F0101

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed (0500 hour started) for review of "information" radiography on line 1-RC-4-01 field weld F0101 and F0102 for the root pass plus (5) five additional. On 7/23/81 review radiography for F0102 deposit to T/2 level which is acceptable.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 7/22-23/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: YAS4
Record Type: 28-R-84-1AA
IMS Index: Q-82-81-82
IMS Index: G-81-83-11
Date: 11/7/82
HOWE/MLL

FILE LOCATION: Q 2.6.14.1061

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-4-01 Field Welds F0101 & F0102
1-RC-10-01 Field Weld F0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed (0500 hour started) for review of radiograph for field weld F0101 and F0102 Line #1-RC-4-01 and repair of field weld F0102 line #1-RC-10-01. On 7/29/81 it was noticed a rejectable indication for field weld F0101 Line #1-RC-4-01 this indication appeared on the radiograph slot on 7/22/81, at that time it should have been removed, it was removed on 7/31/81.

Performed By: S.B. Sadosky  Date: 7/27-31/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: YPSA
Record Type: 29-2-64-188
DSE Index: Q-02-01-02
DSE Index: G-01-03-13, G-01-03-31
Date: 8/7/81
By: Paul P. Bick

FILE LOCATION: Q 2.6.14.1090

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Welding & NDE/P-H

Specifics: See Comments

Ref. Master Check List No.: WS-1, Rev. 0

Comments:

Review of radiographs and welding operations GN RC Loops A, B, D in containment #1, early morning surveillance (5:00 am start), as follows:

Loop "A", 1-RC-1-01, F0101 steam generator

8-04-81 - weld out to 4T
8-05-81 - STA 2-3 repairs excavated
8-06-81 - STA 2-3 repairs excavated
8-07-81 - repair #2 excavated, RT required
1-RC-1-01, F0102 reactor pressure vessel
8-06-81 - STA 4-5, repair #1, ok
8-07-81 - started weld out to 7/8T

Loop "B", 1-RC-4-01, F0101 steam generator

8-03-81 - STA 0-1, 3-4, 4-5, excavations ok, requires R/T to repairs.

Loop "D", 1-RC-10-01 F0101 reactor pressure vessel

8-07-81 - weld out complete, back ring to be removed for final R/T
1-RC-10-01 F0102 steam generator
8-03-81 - STA 6-7, 7-0 repair required
8-07-81 - STA 6-7, 7-0 excavation ok
8-07-81 - STA 6-7, 7-0 partial weld out of repair ok
8-07-81 - STA 6-7, 7-0 weld out of repairs to 3/4T ok

Performed By: R.C. Julian  Date: 8/03-07/81

Contractor/Contacts: P-H/M. McCrae

It Interview: Yes No

Originator Code: Y004
Record Type: 28-R-04-1A8
DPS Index: Q-02-01-02
DPS Index: G-01-03-11
Date: 1/7/82
Ram L. Moss

FILE LOCATION: Q 2.6.14.1093

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-10-01 Field Weld F0102 and 1-RC-1-01 Field Weld F0101

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed third shift for review of radiography on field weld F0102 repair, line No. 1-RC-10-01 and field weld F0101 line No. 1-RC-1-1. Rejectable indication between station marker 7-0 for field weld F0102 1-RC-10-1 and, rejectable indication between station marker 2-3 for field weld F0101 1-RC-1-01, these indications will be removed from the inside of the weld.

Performed By: S.B. Sadnsky *S.B. Sadnsky* Date: 8/11/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y684
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-01-03-11
Date: 1/7/82
Lane, Brian

FILE LOCATION: Q 2.6.14.1108

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-10-01 Field Weld F0102
1-RC-1-01 Field Weld F0101
1-RC-7-01 Fittup

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of third shift radiography of field welds F0102 line #1-RC-10-01 and field weld F0101 Line #1-RC-1-01 and base line of 1-RC-7-01 weld preps. Reviewed radiographs for 1-RC-1-01 field weld F0101 where defect was removed between sation markers 2-3, this area is satisfactory.

Performed By: S.B. Sadosky Richard Julian for SAS Date: 8/13-14/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y884
Record Type: 78-R-01-185
DB Index: Q-02-01-02
DB Index: C-01-03-31
Date: 1/16/82
FD-302 (Rev. 1-25-79)

FD LOCATION: Q 2.6.16.1113

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: See Comments

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Observed welding and reviewed radiographs on RC Loops of Unit #1, (early shift, 0500 start) as indicated below.

8-10-81 - Loop "A" 1-RC-1-01, F0102, radiographed 360° to 7/8T-Ok

8-10-81 - Loop "D" 1-RC-10-01, F0102, radiographed 360° to 3/4T-Ok

8-11-81 - Loop "A" 1-RC-1-01, F0101, radiographed STA 2-3, repair #2, repair weld-out indication to be repaired from I.D.

8-11-81 - Loop "D" - 1-RC-10-10, F0102 radiographed 360° to 3/4T - Ok

Performed By: R.C. Julian *R. C. Julian* Date: 8/10-11/81

Contractor/Contacts: P-H/M. McCrae

Interview: Yes No

Originator Code: Y664
Record Type: 29-R-04-188
DMS Index: Q-02-01-02
DMS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: W. M. Hill

FILE LOCATION: Q 2.6.14.1116

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-7-01 Field Welds F0101 and F0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Deficiency: 0960 Non Destructive Examination

The following type of discontinuities is unacceptable, incomplete fusion. Field weld F0101 radiograph exhibit incomplete fusion between station marker 2-3, this is not documented on the review sheet. Discussed this item with Mr. D. Geske and he agrees that this shall be documented, the proper corrective action was implemented and this item is closed.

Comments:

Reviewed radiography on line 1-RC-7-01 field weld F0102 for the root pass plus (5) five additional, no relevant indications.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 8/18/81

Contractor/Contacts: P-H/D. Geske

Interview: Yes No

Originator Code: Y064
Record Type: 20-R-04-188
DMS Index: Q-02-01-02
DMS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: Dave B. [unclear]

FILE LOCATION: Q 2.6.14.1117

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-7-01 Field Weld F0101 and F0102 3/4T

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of radiography activities by Pullman Higgins personnel. (0500 hours) Reviewed radiography on line 1-RC-7-01 field weld F0101 and field weld F0102 3/4T shots. Field weld F0102 is satisfactory with no relevant indication, field weld F0101 exhibit incomplete fusion between the following station markers 6-7, 7-0, 0-1. The process sheet has been generated and the control number is 287 R/1 for this repair.

Performed By: S.B. Sadosky  Date: 8/20/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y694
Record Type: 27-R-9-188
IMS Index: Q-62-81-62
IMS Index: C-81-83-31
Date: 1/16/82
Parrish

FILE LOCATION: Q 2.6.14.1127
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Non-Destructive Examination (RT)/P-H
Specifics: See Comments

Ref. Master Check List No.: Section V, Rev. 0

Comments:

Reviewed radiographs of reactor coolant piping (loops) as indicated below.
(third shift coverage)

- 8/17/81 - 1-RC-1-01 FW F0101 - 360° @ 3/4T repair 2-3.
- 8/19/81 - 1-RC-1-01 FW F0101 - STA. 1-2, 2-3 @ 3/4T RT. Ok.
- 8/19/81 - 1-RC-7-01 FW F0102 - T/2 0-1 thru 7-0 RT. Ok.
- 8/21/81 - 1-RC-12-01, FW F0101 - 360° RT of baseline.
- 8/21/81 - 1-RC-12-01, FW F0102 - 360° RT of baseline.

Performed By: R.C. Julian Richard C. Julian Date: 8/17-21/81

Contractor/Contacts: P-H/M. McCrae

Interview: Yes No

Originator Code: Y064
Record Type: 20-F-04-188
NIMS Index: G-02-01-02
NIMS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
LB Higgins

FILE LOCATION: Q 2.6.14.1133

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: RC-7-01 Field Welds F0101 and F0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of NDE activities for loop welding (hot leg loop C). Field weld F0101 the indications between station 6-7, 7-0, 0-1 all but 7" of the lack of fusion have been removed, Pullman Higgins will remove the 7" of lack of fusion and repair by welding.

The film for field weld F0102 was over processed and could not be interpreted, Pullman Higgins need to re-shoot this field weld.

Performed By: S.B. Sedosky *S.B. Sedosky* Date: 8/24/81

Contractor/Contact: P-H/R. Davis

Interview: Yes No

Originator Code: Y664
Record Type: 26-K-64-188
DCS Index: Q-82-01-02
DCS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
PO. NO. 41811

FILE LOCATION: Q 2.6.14.1154
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YANVEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-II
Specifics: RC-6-1 Baseline Pump Side Cold Leg

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of NDE activities for baseline of weld preps, cold leg line RC-6-1 no relevant indications.

Performed By: S.B. Sadosky *S. Sadosky* Date: 8/26/81
Inspector/Contacts: P-H/R. Davis
Interview: Yes No

Originator Code: Y864
Record Type: 29-R-64-18R
IMS Index: Q-02-01-02
IMS Index: G-01-03-11, G-01-03-31
Date: 11/7/81
By: Patricia Ross

FILE LOCATION: Q 2.6.14.1155

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph)/P-H
Specifics: RC-7-1 Field Weld F0101 Hot Leg

Ref. Master Check List No.: ASME V, Rev. 0

Comments:

Performed surveillance of P-H NDE activities (started 0500 hour).
Reviewed radiographic of 3/4T for field weld F0101 line RC-7-1,
no relevant indication. Reviewed charges to field instruction
#132 (reactor coolant loop piping installation and inspection),
no changes which would effect quality.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 8/31/81
Contractor/Contacts: P-H/R. Davis
Interview: Yes No

Originator Code: Y884
Reactor Type: 20-R-64-188
INS Index: Q-82-81-82
INS Index: G-81-83-31
Date: 11/18/81
By: Paul Khoss

FILE LOCATION: Q 2.6.14.1156

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography (RT), P-H
Specifics: RC Loop Radiographs

Ref. Master Check List No.: Section V, Rev. 0

Comments:

Reviewed reactor coolant loop radiographs (third shift surveillance) as noted below.

Loop "A"

8/25/81 1-RC-1-01, FO101 - 360° full weld out rejected station 7-0

8/27/81 1-RC-1-01, FO101 - 360° full weld out station 7-0 rejected inclusion still present.

Loop "B"

8/25/81 1-RC-4-01, FO101 3/4(t) - rejected Sta. 0-1.

8/27/81 1-RC-4-01, FO101 3/4(t) - rejected Sta. 0-1.

8/27/81 1-RC-6-01, FO102 360° baseline radiograph ok.

Loop "C"

8/25/81 1-RC-7-01, FO101 repair excav. 6-7, 7-0, 0-1 inclusions removed.

8/27/81 1-RC-7-01, FO101 RT of excav. 0-1.

Performed By: R.C. Julian Richard C. Julian Date: 8/25-27/81

Contractor/Contacts: P-H/M. McGree

Interview: Yes No

Form 3.3 Revised 7-25-79

Originator Code: Y664
Record Type: 20-R-64-188
INS Index: 0-02-01-02
INS Index: 0-01-03-11, 0-01-03-21
Date: 1/7/82
Frank Biall

FILE LOCATION: Q 2.6.14.1164

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph)/P-H

Specifics: RC-6-01 Line Field Weld F0102
RC-1-01 Line Field Weld F0101

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of P-H NDE activities for radiograph of RC loop welding. Reviewed film of field weld F0102 line RC-6-01 cold leg which has rejectable indication between station markers 6-7 and 7-0, the repair process sheet has been generated. Reviewed film of repair field weld F0101 line RC-1-01 no relevant indications.

Performed By: S.E. Sadosky *S.E. Sadosky* Date: 9/01/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y664
Record Type: 20-R-04-185
IMS Index: 0-03-01-02
Index: G-01-03-11, G-01-03-31
D. 1/27/81
By: Patrol

FILE LOCATION: Q 2.6.14.1166

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph)/P-H

Specifics: RC-6-01 Line, Field Weld F0102

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of P-H NDE activities for radiography of RC loop welding. Reviewed film (3/4T) of field weld F0102 line RC-6-01 cold leg loop B which has rejectable indication between station markers 1-2 (5/8"LOF) the repair process sheet has been generated.

Performed By: S.E. Sadosky *S.E. Sadosky* Date: 9/03/81

Factor/Contacts: P-H/R. Davis

Exit Interview: Yes No

Originator Code: Y684
Record Type: 2A-K-04-188
IMS Index: Q-02-01-02
Index: C-01-03-11, C-01-03-31
SI: 1/9/82
By: DATA: BULL

FILE LOCATION: Q 2.6.14.1175

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) P/H

Specifics: Inprocess Repair Field Weld F0101 Line RC-4-1 and Field Weld
F0102 Line RC-6-1

Ref. Master Check List No.: ASME V, Rev. 0

Deficiency: 530 Conformance to procedures, instructions and drawings

The Repair Process Sheet was signed off by NDE personnel for field weld F0101 line RC-4-1. The diagnostic area of interest of the radiographic film was uninterpretable for the repair. The Automatic Film Processor needs repair.

Discussed this with Pullman-Higgins management and corrective action was taken. Pullman-Higgins reshot the area of interest.

This item is closed.

Performed By: S. B. Sadosky *S.B. Sadosky* Date: 9/8/81
Contractor/Contacts: P/H - D. Geske

Exit Interview: Yes No

Originator Code: Y884
Record Type: 20-R-04-180
IMS Index: Q-02-01-02
IMS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: P. M. Sullivan

FILE LOCATION: Q 2.6.14.1177

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) P/H

Specifics: F0102 Field Weld Line RC-6-1 and F0101 Line RC-4-1
Repaired Area

Ref. Master Check List No.: ASME V, Rev. 0

Comment:

Reviewed radiography of field weld F0102 Line RC-6-1 and field weld F0101 repair, Line RC-4-1, this surveillance was performed at 0500 hr. Thickness measurements should be recorded as far as the Field Instruction Requirements T/2 minimum and 3/4T minimum on RT records.

Performed By: S. B. Sadosky

Date: 9/9/81

Contractor/Contacts: P/H - D. Geske

Was Interviewed: Yes No

Originator Code: Y004
Record Type: 20-H-04-188
IMS Index: Q-02-01-02
MS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: Edm Shaw

FILE LOCATION: Q 2.6.14.1190

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph)/P-H

Specifics: Field Weld F0101 Line RC-4-01

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Review film of incomplete fusion between station marker 4-5, the indication is not removed at this time (field weld F0101 Line RC-4-01 steam generator side). Surveillance performed at 0500 hours.

Performed By: S.B. Sadosky

Date: 9/16/81

Contractor/Contacts: P-H/R. Davis

Exit Interview: Yes No

Originator Code: Y684
Record Type: 20-11-14-1PB
MS Index: Q-02-01-02
Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: Parrish

FILE LOCATION: Q 2.6.14.1193

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph) P/H

Specifics: Field Weld F0101 Line RC-9-01

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of NDE activities for field weld F0101 line RC-9-01, weld completed but backing ring is not removed at this time. No open item from this surveillance

Performed By: S. E. Sadosky *St Sadosky* Date: 9/15/81

Inspector/Contacts: P/H - R. Davis

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-N-04-188
IMS Index: Q-02-01-02
CS Index: G-01-03-11, G-01-03-31
to: 1/7/82
By: Paul Hill

FILE LOCATION: Q 2.6.14.1198

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiograph) P/H

Specifics: Field Weld F0102 Line RC-9-01

Ref. Master Check List No.: ASME Section V, Rev. 0

Comment:

Performed surveillance of NDE activities on reactor coolant pipe welds, cold leg line RC-9-01 field weld F0102. Relevant indications appear between station markers 5-6 and 6-7 (incomplete fusion), Pullman-Higgins has generated a repair process sheet.

Performed By: S. B. Sadosky *S. B. Sadosky* Date: 9/17/81

Contractor/Contacts: P/H - R. Davis

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-42
Index: G-02-03-12, G-01-03-31
By: 11712
Parni Hall

FILE LOCATION: Q 2.6.14.1216

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) P/H

Specifics: See Comments

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of radiography activities by Pullman Higgins personnel. Reviewed radiographs on line RC-4-1 Field Weld (FW) F0101 repair, line RC-9-1 FW F0101, Line RC-9-1 FW F0102, Line RC-3-1 FW F0101, and line RC-5-1 FW F0104. The film density for line RC-4-1 FW F-101 repair is < 1.3 density tolerance, this is not acceptable. Per discussion with Pullman Higgins this film is only information to assure indication is removed, in this case the indication (L.O.F.) was not removed and radiography will be repeated.

Performed By: S. B. Sadosky *S. B. Sadosky* Date: 9/21/81

Contractor/Contacts: P/H - R. Davis, M. MacCrae

Exit Interview: Yes X No

Originator Code: Y004
Record Type: 20-R-14-188
IMS Index: Q-02-01-02
MS Index: G-01-03-11, G-01-03-31
Date: 11/7/81
By: Pat Shaw

FILE LOCATION: Q 2.6.14.1217

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) P/H

Specifics: Line RC-5-1 1/2T Field Weld F0104

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of Pullman Higgins radiography activities of reactor coolant system loop piping. Reviewed film of Line RC-5-1' Field Weld F0104 1/2T, indication (L.O.F.) between station markers 2-3, repair sheet has been generated. Also reviewed information radiographs of Line RC-9-1 station markers 5-5 field weld F0102, indication have not been completely removed at this time. Also reviewed radiographs of cavity line RC-4-1 field weld F0101 repair, indication is not removed at this time.

Performed By: S. B. Sadosky *S.B. Sadosky* Date: 9/23/81

Contractor/Contacts: P/H - R. Davis, M. MacCrae

Exit Interview: Yes X No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-01-03-11, G-01-03-31
Date: 1/7/82
By: John Brown

FILE LOCATION: Q 2.6.14.1270

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography) - P/H

Specifics: $\frac{1}{2}$ T RC-2-01 Field Weld F0104

Ref. Master Check List No.: ASME Sec. V, Rev. 0

Comment:

Performed surveillance of Pullman-Higgins NDE activities. Reviewed $\frac{1}{2}$ T radiographs for field weld F0104 line RC-2-01, station markers 3-4 has lack of fusion. Pullman-Higgins has issued repair process sheet for this indication.

Performed By:  Date: 10/6/81

Contractor/Contacts: P-H/R. Davis

Was Interviewed: Yes No

Originator Code: Y884
Record Type: 26-R-04-188
IMS Index: Q-02-01-02
TMR Index: G-01-02-11 C-01-02-31
Date: 10/7/81
Pd. Higgins

FILE LOCATION: Q 2.6.14.1272

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT


Activity: NDE (RT) P/H

Specifics: RC-11-01 Field Weld F0101

Ref. Master Check List No.: ASME Sec. V, Rev. 0

Comments:

Performed surveillance of Pullman-Higgins NDE activities. Reviewed radiographs of field weld F0101 Line RC-11-01, incomplete fusion between station markers 7-0. Pullman-Higgins has generated the Repair Process Sheet.

Performed By: S. B. Sadosky  Date: 10/7/81

Contractor/Contacts: P/H - R. Davis

Interview: Yes No

Originator Code: 7884
Record Type: 20-R-04-180
IMS Index: C-02-01-02
IMS Index: C-05-01-31, C-01-03-31, C-04-01-31, C-02-05-31
Date: 1/7/82
By: Patricia Hold

FILE LOCATION: Q 2.6.14.1320

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Examination, NDE (Radiography)

Specifics: P-H Radiographic Review (CBS, RH, RC, CS System)

Ref. Master Check List No.: Section V, Rev. 0

Comments:

NONE

Performed By: R.C. Julian *Richard C. Julian* Date: 10/27/81
Contractor/Contacts: P-H/M. McCrae
Kit Interview: Yes No

Standard Type: 25-E-64-188
Index: Q-62-01-03
Date: 11/6/81
By: Patricia L. Hall

FILE LOCATION: Q 2.6.14.133

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)

Specifics: Line RC-12-01 Field Weld F0101
Line RC-9-01 Field Weld F0102

Ref. Master Check List No.: Section V ASME, Rev. 0

Comment:

Performed surveillance of Pullman-Higgins NDE Activities for RC-12-01 Field Weld F0101 Final and RC-9-01 Field Weld F0102 Final before ISI preparation. No relevant indications appear on these films.

Performed By: S. B. Sadosky



Date: 11/4/81

Inspector/Contacts: P-H / R. Davis

Interview: Yes No

Revised 7-25-79

Originator Codes: Y054
Record Type: 25-R-54-155
IMS Index: Q-02-01-02
IME Index: Q-01-03-31
Date: 11/13/81
Form 3.3

FILE LOCATION: Q 2.6.14.1364

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: Line RC-11-01 Field Weld F0101

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Surveillance performed of NDE activities on Line RC-11-01 Field Weld F0101, incomplete fusion between station marker 7-0. The repair process sheet has been generated.

Performed By: S.B. Sedosky

Date: 11/13/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-180
IMS Index: Q-02-01-02
IMS Index: C-01-03-11, C-01-03-31
Date: 11/7/82
By: P. M. Higgins

FILE LOCATION: Q 2.6.14.1427

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE (Radiography)/P-H

Specifics: 1-RC-11-01 Field Weld F0101
1-RC-2-01 Field Weld F0104

Ref. Master Check List No.: ASME Section V, Rev. 0

Comments:

Performed surveillance of NDE activities by Pullman Higgins for the Reactor Coolant System. Reviewed information radiographs on line 1-RC-11-01 field weld F0101 3/4 T which has incomplete fusion between station marker 6-7, it appears in the safe end buttering. Pullman Higgins has generated NCR 1671 which has been dispositioned by Westinghouse. P-H to grind and repair by welding this is the third cycle.

Reviewed information radiographs for line 1-RC-2-01 F0104 incomplete fusion between station markers 3-4, NCR has been generated. These items will be followed by YAEC QA.

Performed By: S. B. Sadosky *S. B. Sadosky* Date: 12/07/81

Contractor/Contacts: P-H/R. Davis

Interview: Yes No

Originator Code: Y004

Record Type: 20-R-04-188

IMS Index: G-02-01-02

Index: G-02-05-31, G-05-01-31, G-04-01-31, H-04-02-31

date: 7/19/82

By: R. C. Julian

FILE LOCATION: Q 2.6.14.1543

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: Weekly Rt. Review

Ref. Master Check List No.: Sect. V, Rev. 0

Comment: None

Performed By: R. C. Julian

Richard C. Julian

Date: 1/18-22/82

Contractor/Contacts: P-H/M. McCrae

Exit Interview: Yes No

Originator Code: Y564

Record Type: 20-R-04-1BB

IMS Index: Q-02-01-02

IMS Index: G-05-01-31, G-02-02-31, G-02-05-31, H-04-01-31,

Date: 7/19/82

By: A. D. Rubin

FILE LOCATION: Q 2.6.14.1590

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YANVRE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiographic Review/P-H

Specifics: See Comment

Ref. Master Check List No.: 248-51, Rev. 15

Comments:

Performed RT review on following systems submitted by P-H. 34 film packages submitted, (CS, SI, CBS, SB, CO, FW, MS, RC, RH).

Performed By: R.C. Julian

Richard Julian

Date: 2/01-04/82

Contractor/Contacts: P-H/M. McFAR

Exit Interview: Yes No

Originator Code: Y004

Record Type: 20-R-04-188

IMS Index: 0-02-01-02

IMS Index: G-02-05-31, G-05-01-31, G-04-01-31

Date: 7/19/82

By: R. Dubois

FILE LOCATION: Q 2.6.14.1796

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: Weekly P-H RT Review, See Attached Sheet Page 5

Comments: Ref. Master Check List No.: ASME V, Rev 0

None

Performed By: R.C. Julian

Richard C. Julian

Date: 3/22-4/02/82

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y004

Record Type: 20-R-04-188

IMS Index: Q-02-01-02

IMS Index: G-05-01-31, G-02-05-31, G-02-02-31, G-04-01-31,

Date: 7/19/82

H-05-01-31

FILE LOCATION: Q.2.6.14.1903

Page 1 of 4

: D. DuBois

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

Ref. Master Check List No.: Section V, Rev. 0

Comments:

Reviewed radiographs on following systems CS, FW, MS, SI, CBS, COP, RH, CBS 111 film packages, approx. 550 film reviewed. Review was conducted in accordance with requirements of ASME Section V.

Performed By: R.C. Julian *R.C. Julian* Date: 4/12-23/82

Contractor/Contacts: P-H

It Interview: Yes No X

Originator Code: Y664

Record Type: 20-R-04-188

IMS Index: Q-02-01-02

IMS Index: G-02-05-31, H-05-01-31, G-02-02-31, G-04-01-31

Date: 7/19/82
R. C. Julian

H-04-02-31, G-01-03-31

FILE LOCATION: Q 2.6.14.1918

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YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Comments

Ref. Master Check List No.: 248-51, Rev. 15

Comments:

Review radiography film on the following systems performed by P-H, SB, SW, FW, SI, CBS, RH, CO, CC, MS, RC, penetrations, and end prep RT (repair verification). 39 film packages (approx. 240 film) review for conformance to ASME V and P-H Procedure, IX-RT-1-W77, IX-RT-3-W77.

Performed By: R.C. Julian Richard C. Julian Date: 4/28/82

Contractor/Contacts: P-H

Interview: Yes No X

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: 0-02-01-02
IMS Index: G-02-05-31, H-04-02-31, G-01-03-31, G-04-01-31,
ate: 7126102 G-02-02-31, G-04-05-31
by: Parv Lunkin G-05-01-31

FILE LOCATION: Q 2.6.14.1953

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Document Review/P-H

Specifics: Turnover of P-H Radiographs to IMS/DCC

Ref. Master Check List No.: 248-51, Rev. 15

Comments:

Reviewed P-H radiographs for acceptance to turnover to YAEC IMS/DCC. The following systems were found to be acceptable for content, completeness and legibility, of sequential check list #9549.

CBS-12 packages
CC-13 packages
CO-34 packages
COP-1 packages
CS-35 packages
FW-18 packages
MD-1 packages
MS-11 packages
RC-4 packages
RH-11 packages
SB-5 packages
SLX-1 packages
SI-7 packages
SW-1 packages

Performed By: R.C. Julian *Richard C. Julian* Date: 5/03/82

Contractor/Contacts: P-H

Exit Interview: Yes No x

Originator Code: Y004

Record Type: 20-R-04-188

IMS Index: Q-02-01-02

IMS Index: G-05-01-31, G-02-02-31, G-02-05-31, G-04-01-31,
ate: 7/27/82 G-01-03-31

By: Pat Duvell

FILE LOCATION: O 2.6.14.2067 ---

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

Ref. Master Check List No.: Sect. V, Rev. 0

Comments:

The following radiographs were reviewed in accordance with criteria ASME Sect. V, no discrepancies noted.

1-CS-355-06, F0601
1-CS-523-01, F0101
1-SI-251-06, F0603
1-SI-251-08, F0802
1-SI-251-08, F0801
1-SI-272-02, F0202
1-CBS-1214-03, F0303
1-RH-163-01, F0103
1-RH-163-02, F0204
1-RH-159-02, F0203
1-RH-158-03, F0304
1-RH-157-01, F0113
1-CBS-1201-05, F0507
1-CBS-1208-03, F0301
1-CBS-1210-01, F0108
FI-188-01, F0104
FI-188-01, F0119

SECOND SHIFT

Performed By: R.C. Julian Richard Julian Date: 5/19/82

Instructor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
MS Index: C-01-03-11
Date: 7/15/82
1217 7.10.82

FILE LOCATION: Q 2.6.14.2106

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: NDE/RT/P-H

Specifics: 1-RC-11-01 Field Weld F0101 Loop D

Ref. Master Check List No.: ASME Section V RT, Rev. 0

Comments:

Reviewed radiographs for the repair of the buttering steam generator Loop "D" pump side nozzle (field weld F0101 P-H).

Observation:

These radiographs did not contain penetrameter so therefore they are not qualified radiographs. Pullman agree to retake the radiograph over 5/19/82.

Performed By: S.B. Sadosky *S.B. Sadosky* Date: 5/18/82

Instructor/Contacts: P-H/R. Davis

Exit Interview: Yes No

Originator Code: Y004

Record Type: 2P-R-04-188

IMS Index: 0-02-01-02

FILE LOCATION: 0 2.5.14.2299

Index: G-04-01-31, G-02-05-31, G-05-01-31, G-02-02-31

Page 1 of 4

Date: 7/26/82 H-04-01-31

By: Pam Lurie

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Comments

Ref. Master Check List No.: 248-51, Rev. 15

Comments:

Performed RT review of P-H radiographs on following systems, per P-H IX-RT-1-W77, ASME Sect. III & V. Reviewed reader sheets for completeness, clarity, & correctness, and view film in accordance with Sect. V of ASME Code, for densities, correct or acceptable penetrometer, identification, and interruption's of film artifacts. Review completed, found to be satisfactory.

RH system - 41 film

CBS system - 32 film

C/S system - 31 film

SI system - 28 film

FW system - 81 film

Performed By: R.C. Julian

Date: 6/14-17/82

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-100
MS Index: Q-02-01-02
MS Index: G-02-05-31, G-05-01-31
Date: 7/20/82
By: Tom Kuller

FILE LOCATION: Q 2 6 14 2339

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H
Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed following radiographs for compliance to P-H IX-RT-1-W77 rev. 5, and ASME Sect. V. Review was completed with no discrepancies noted.

	No. of Film
CBS-1214-11, F1101, F1102	8
CBS-1216-03, F0301	4
1-CS-355-09, F0905	2
1-CS-360-02, F0205	3
1-CS-360-07, F0702	2
1-CS-369-08, F0804	4
1-CS-378-01, F0104	2
1-CS-378-02, F0201	2
1-FI-160-01, F0101, F0103, F0106, F0107	16

Performed By: R.C. Julian Richard C. Julian Date: 6/26/82

Contractor/Contacts: P-H

Exit Interview: Yes No

UNIT "A"

Originator Code: Y004
Record Type: 20-R-02-180
IMS Index: Q-02-01-02
Index: C-02-05-01, G-01-03-01
Date: 10-15-82
By: Angela Barker

FILE LOCATION: Q 2.6.14.2442

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

Ref. Master Check List No.: Sect. V, Rev. 0

Deficiency: (0530 - 0961)

The following observation(s) & deficiencies were noted as not in compliance with P-H Procedure IX-RT-1-W77 Rev. 5, & ASME Sect. V.

Item #1 - 1-CBS-1202-04, F0401. (A) Review of reader sheet indicates that STA 1-2, 2-3, 3-0 are in a rejected status. 4 STA's were to be reshoot 360°, with only STA. "0-1" accomplished. No acceptable film submitted for STA 1-2, 2-3, 3-0.

(B) Reader sheet (R-1) does not indicate specification.

Item #2 - 1-CBS-1213-01, F0101. Reader sheet does not reflect repair cycle R-1 as indicated on film.

Item #3 - 1-CBS-1213-01, F0301; reader sheet does not reflect necessity to view STA 0-1 by single & composite viewing.

Item #4 (A) 1-CBS-12-2-04, F0403, reader sheet does not reflect the necessity to view STA 1-2 in composite set.

(B) Original reader sheet (10-21-81) is annotated in the interpretation section "Film Indent" as 1-CBS-1202-02, F0403.

Item #5 (A) Reader sheet does not identify specification as ASME III, 1, 2, 3, B31.1, or other.

(B) Reader sheet is identified as MSFW in Unit # block.

Item #6 - 1-F1-160-01, F0114 - Reader sheet does not address artifacts on film as being evaluated.

Item #7 - F1-160-01, F0110 - penetrometer sensitivity is marginal, density not within limits -15% - +30%.

Item 8 - Observation - P-H is consistently using undersized penetrameters for specified thickness, which ASME Sect. V permits, but this practice is resulting in marginal sensitivity of penetrameters designated hole. Pullman-Higgins is requested to address each item with written response and specify what corrective action to be taken to prevent future re-occurrence.

YAE
DR # 211 WRITTEN

Performed By: R. C. Julian Richard C. Julian Date: 7/12-16/82

Contractor/Contacts: P/H - R. Davis

Exit Interview: Yes X No

FORM NO. 1
FORM TYPE: 28-8-81-108
ISSUE: 0-82-8-82
DATE: 0-82-8-82
BY: 11/1/82
D. D. [unclear]

Unit 1 X Unit 2 Unit 4
FILE LOCATION: Q 2.6.14.2832
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H
Specifics: CS-432-02, F0203

Ref. Master Check List No.: Section V, Rev. 0

Deficiency: (0961)

Radiography review by YAEC on 1-CS-432-02, F-203 was performed on 7/26/82 and rejected for unacceptable penetrameters on original, and workmanship sample radiographs, subsequently returned to P-H for re-review and correction. 7/15/82 radiograph's were re-submitted and found to be unacceptable for same reasons. Original was not corrected to reflect rejected status, and workmanship radiographs penetrameter were unacceptable. Please provide corrective action to preclude further occurrences.

D.S. #241 written.

Item open.

This report closed by SSCA - 11/02/82 - RCJ.

Performed By: R.C. [unclear] Date: 9/15/82
Reviewed/Contacted: P-H/E. Boules
Interview: Yes X No

Originator Code: Y004
Record Type: 20-R-04-188
IHS Index: 0-02-01-02
IMS Index: G-02-05-31, G-01-03-31, G-04-01-31, G-02-02-31
Date: 1/11/83
By: D. D. 2302

CHIEF 1 _____ CHIEF 2 _____ CHIEF 3 _____
FILE LOCATION: Q 2.6.14.3383
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

*NOTE: Follow-up surveillance to DR #211

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed film on following systems, for compliance to ASME Sect. V, and P-H Procedure IX-RT-1-W77, Rev. 5. Surveillance and review was completed, satisfactory.

Item closed.

SYSTEM/LINE/ISO	NO. OF SEAMS	APPROX. NO. OF FILM
CS	31	200
RC	5	30
RH	2	15
MS	19	120
F1-160	9	90
CBS	4	20
FW	24	160
SB	3	10
SI	2	15
2SW	1	10

Performed By: Richard C. Julian *Richard C. Julian* Date: 11/15-23/82

Contractor/Contacts: P-H

Exit Interview: Yes _____ No X

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: 0-02-01-02
IMS Index: 4-03-01-01
Date: 1/12/83
By: D. Dubois

Unit 1 Unit 2 Unit A

FILE LOCATION: Q 2.6.14.3519

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-II

Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed radiographs on main steam piping, approximately 100 film, on 25 weld joints. Review was in accordance with Sect. V criteria, and P-H IX-RT-1-W77, with no discrepancies noted.

Item closed.

Performed By: R.C. Julian Richard Julian Date: 12/07-09/82

Contractor/Contacts: P-II

Exit Interview: Yes No

Originator Code: Y686
Record Type: 26-2-01-188
Index: 0-02-01-02
Index: 0-01-03-31
Date: 4-11-83
By: P. Durkee

Unit 1 Unit 2 Unit A
FILE LOCATION: Q 2.6.14.3867
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H
Specifics: See Below

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Performed in-process review of radiographs on following R.C. Loop Piping repairs, and information radiographs of excavations for repair orientation & location. Radiographs were found to be acceptable with no discrepancies noted.

- RC-3-01, F0101
- RC-6-01, F0102
- RC-9-01, F0101
- RC-10-01, F0101
- RC-10-01, F0102

Performed By: R.C. Julian *R.C. Julian* Date: 1/21/83

Contractor/Contacts: P-H/E. Bowles, R. Bowles

Site Interview: Yes No

Originator Code: YAA
Record Type: 2P-H-P-188
IMS Index: 0-02-01-02
IMS Index: 0-01-03-01
Date: 4-11-83
P. Durkin

Unit 1 Unit 2 Unit A

FILE LOCATION: Q 2.6.14.3960

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-II

Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed radiographs on RC Loop piping repairs and in-process. Repair excavation of RC-10-01, F0101 was reviewed for elimination of defects, radiographs were found to be satisfactory. Review of RC-9-01, F0101 radiographs of excavation was found to be satisfactory with weld defects eliminated.

Note: That radiographs are of repair excavation therefore areas of interest were determined by composite and single viewing of excavation areas.

Item closed.

Performed By: R. C. Julian RC Julian Date: 2/3/83

Contractor/Contacts: P-H/R. Bowles

Interview: Yes No

Originator Code: YAA
Record Type: 27-0-188
IMS Index: 0-0-0
IMS Index: G-01-03-31
Date: 4-11-83
: P. Dulke

Unit 1 Unit 2 Unit A
FILE LOCATION: 0 2.6.14.4067
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: RC-6-01, F0102; RC-9-01, F0101

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Performed review of radiographs for determination of possible defects in weld fusion area on above radiographs. Discussion with P-H, Westinghouse, PSNH, and YAEC personnel as to determination of defect location and the proper repair to be made. Review of radiographs, defect location can-not precisely determine location, in conjunction with radiographs an informational ultrasonics exam. was conducted on each joint. Evaluation of information by UE&C, P-H, Westinghouse, YAEC & PSNH on going as to proper repair sequence.

Note: Both joints have been NCR'd by P-H.

Item closed.

Performed By: R.C. Julian *R. C. Julian* Date: 2/14-18/83

Contractor/Contacts: P-H/E. Bowles

Interview: Yes No

Originator Code: Y004
Record Type: 20-1-04-188
IMS Index: 0-02-01-02
IMS Index: 11-04-01-31
Date: 4-11-83
By: P. Doolittle

Unit 1 X Unit 2 Unit A

FILE LOCATION: Q 2.6.14.4113

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: RT Review/P-H

Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed the following radiographs in accordance with Sect. V. Review included verification of densities, location markers, film identity, and required information on reader sheet. Review was completed with no discrepancies noted.

Joint No.	No. of Film
FW 4600-02, F0205	6
4600-02, F0206	8
4600-03, F0301	12
4600-03, F0305	5
4600-03, F0306	5
4600-05, F0501	4
4600-05, F0525	4
4600-08, F0801	4
4600-09, F0904	16
4600-09, F0908	4
4600-09, F0912	5
4600-09, F0918	4
4600-10, F0106	9

Performed By: R.C. Julian *Richard C. Julian* Date: 2/21-25/83

Contractor/Contacts: P-H

Exit Interview: Yes No X

Originator Code: 1004
Record Type: 20-2-P-188
MS Index: 0-P-01-01
Index: U-04-01-31
Date: 4-11-83
By: P. Durkin

Unit 1 Unit 2 Unit 3
FILE LOCATION: Q 2.6.14.4132
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Comment

Ref. Master Check List No.: ASME Sect. V, Rev. C

Comments:

Reviewed P-H radiographs for compliance to ASME Sect. V, P-H Procedure IX-RT-1-W77. Review of information, completeness of reader sheet, and the requirements of film identification, markers systems, and densities were found to be satisfactory with no discrepancies noted.

System No.	Weld No.	No. of Film
FW 4600-10	F1003	8
FW 4600-11	F1104	12
FW 4601-01	F0106	8
FW 4601-02	F0204	10
FW 4601-03	F0301	10
FW 4601-04	F0402	12
FW 4601-05	F0503	10
FW 4603-05	F0502	12
FW 4603-06	F0601	12
FW 4603-04	F0402	12
FW 4604-01	F0103	14

Performed By: R.C. Julian *Richard C. Julian* Date: 2/28-3/01/83

Tractor/Contacts: P-H

Post Interview: Yes No

Indicator Code: Y025
Form type: 20-2-64-100
Index: 0-02-01-02
Index: 0-02-01-31
Date: 4/1/83
D. D. Bai

Unit 1 Unit 2 Unit A

FILE LOCATION: Q 2.6.14.4134

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Reviewed the following P-H radiographs, for compliance to ASME Sect. V, and P-H Procedure LX-RT-1-W77. Review was found to be satisfactory with no discrepancies noted.

System	Field Weld No.	No. of Film
FI-160-01	FO116	8
FI-160-01	FO142	8
FI-188-01	FO141	8
FI-188-01	FO149	8
FI-188-01	FO152	12
FI-188-01	FO153	8
FI-188-01	FO155	8

Item closed.

Performed By: R.C. Julian Richard C. Julian Date: 3/01-02/83

Contractor/Contacts: P-H

It Interview: Yes No

Originator Code: Y884
Record Type: 20-k-04-188
IMS Index: 0-02-01-02
IMS Index: H-03-01-13
Date: 4/11/83
by: O. J. Re

Unit 1 x Unit 2 Unit A
FILE LOCATION: Q 2.6.14.4212
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Comments

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Performed radiography review of the following for compliance to ASME V, and P-H procedure IX-RT-1-W77, Rev. 5. Review was completed with no discrepancies noted.

System	Field Weld	No. of Film
1-MS-4000-05	F0502	5
1-MS-4000-05	F0503	4
1-MS-4000-07	F0701	6
1-MS-4000-07	F0702	6
1-MS-4000-05	F0901	5
1-MS-4000-11	F1101	5
1-MS-4000-12	F1202	4
1-MS-4001-08	F0802	7
1-MS-4001-09	F0904	8
1-MS-4002-11	F1101	9
1-MS-4002-11	F1103	8

Performed By: R.C. Julian *R.C. Julian* Date: 3/07-09/83

Contractor/Contract: P-H

Exit Interview: Yes No X

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: 0-02-01-02
IMS Index: 11-03-01-13
Date: 4/11/83
By: R. C. Julian

Unit 1 X Unit 2 Unit A

FILE LOCATION: 0 2.6.14.4298

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Performed radiography review of P-H for compliance to ASME Sect. V & P-H Procedure IX-1-RT-W77. Review was completed satisfactorily with no discrepancies noted.

System No.	Weld No.	No of Film
1-MS-4002-09	F0904	8
1-MS-4003-01	F0101	6
1-MS-4003-07	F0701	5
1-MS-4003-07	F0703	5
1-MS-4003-08	F0803	9
1-MS-4003-08	F0801	8
1-MS-4003-08	F0802	4
1-MS-4003-08	F0804	7
1-MS-4003-10	F1002	7
1-MS-4003-10	F1004	7

Performed By: R.C. Julian *Richard C Julian* Date: 3/16-18/83

Contractor/Contacts: P-H

Exit Interview: Yes No X

4.3.2 Revised 1-01-82

Originator Code: Y994
Record Type: 28-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-02-03-31
Date: 4/11/83
By: R. Julian

Unit 1 X Unit 2 Unit A
FILE LOCATION: Q 2.6.14.4345
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Radiography Review/P-H

Specifics: See Below

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Comments:

Performed radiography review on the following radiographs for compliance to ASME Sect. V, and IX-RT-1-W77 Rev. 5. Review was completed with no discrepancies noted.

System	Field Weld	No. of Film
1-CBS-1201-07	F0702	4
1-CBS-1201-07	F0703	4
1-CBS-1202-04	F0402	8
1-CBS-1202-04	F0403	5
1-CBS-1202-04	F0404	8
1-CBS-1202-04	F0407	4
1-CBS-1202-04	F0408	4
1-CBS-1202-07	F0703	8
1-CBS-1205-01	F0105	4
1-CBS-1205-01	F0106	5
1-CBS-1205-03	F0302	8
1-CBS-1206-01	F0104	14
1-CBS-1208-02	F0201	4
1-CBS-1208-03	F0303	4
1-CBS-1208-03	F0304	4
1-CBS-1210-01	F0107	8
1-CBS-1211-02	F0206	6
1-CBS-1211-02	F0210	5
1-CBS-1211-02	F0211	6
1-CBS-1212-01	F0107	4
1-CBS-1212-01	F0110	4
1-CBS-1212-02	F0201	5
1-CBS-1212-02	F0202	5
1-CBS-1212-02	F0204	5
1-CBS-1212-02	F0209	2

Item closed.

Performed By: R.C. Julian *Richard Julian* Date: 3/21-25/83

Contractor/Contacts: P-H

Exit Interview: Yes No X

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: G-03-01-31
e: 7-12-83
(Angela Bunker)

Unit 1 X Unit 2 Unit A
FILE LOCATION: Q 2.6.14.4648
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC CFQA Office

Comments:

Performed radiography review on following radiographs for compliance to ASME Sect. V & P-H Procedure IX-RT-1-W77.

Joint #	Weld #	No. of Film
1-MS-4002-09	F0904	8
1-MS-4003-01	F0101	6
1-MS-4003-07	F0701	5
1-MS-4003-07	F0703	5
1-MS-4003-08	F0803	9
1-MS-4003-08	F0801	
1-MS-4003-08	F0802	4
1-MS-4003-08	F0804	7
1-MS-4003-10	F1002	7
1-MS-4003-10	F1004	7

No deficiencies or observations.

Performed By: R.C. Julian *R.C. Julian* Date: 5/02/83

Contractor/Contacts: P-H

Interview: Yes No X

Originator Code: Y884
Record Type: 26-R-04-188
Index: Q-02-01-02
Index: G-05-01-31, H-04-01-31
of 2-13-83
By: Angela Barber

Unit 1 X Unit 2 Unit A
FILE LOCATION: Q 2.6.14.4649
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H
Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC CPQA Office

Comment:

Completed review of P-H radiographs for compliance to ASME Sect. V & P-H Procedure IX-RT-1-W77. Review was completed with no discrepancies noted.

Joint #	FW #	No. of Film
CS-365-01	F0104	3
CS-365-01	F0108	3
CS-365-04	F0407	3
CS-365-04	F0402	3
CS-365-04	F0408	3
CS-365-04	F0409	3
CS-357-03	F0302	5
CS-357-03	F0308	4
CS-360-02	F0202	5
CS-360-02	F0204	5
CS-360-05	F0503	5
CS-328-02	F0211	5
CS-328-02	F0210	5
CS-302-03	F0308	5
FW 4609-01	F0107	4
FW 4609-02	F0201	4
FW 4608-03	F0301	4
FW 4606-16	F1603	4
FW 4616-01	F0102	5
FW 4615-01	F0102	5

No deficiencies or observations.

Performed By: R.C. Julian *R.C. Julian* Date: 5/04-06/83
Tractor/Contacts: P-H

Exit Interview: Yes No X

Originator Code: Y834
Record Type: 28-2-84-188
INS Index: 0-82-81-82
INS Index: C-83-81-31, C-81-83-31, B-84-82-31
7-15-83
(Angela Barber)

Unit 1 X Unit 2 Unit A
FILE LOCATION: 0 2.6.14.4741
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-II
Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC FQA Office

Comments:

Performed radiography review on the following, for compliance to ASME Sect. V and P-H LX-RT-1-W77. Review was completed with no discrepancies noted.

System	FW #	No. of Film
1-CS-302-03	F0308	5
1-CS-302-03	F0307	5
1-CO-4053-26	F2603	4
1-CO-4079-01	F0103	4
1-CO-4053-11	F1101	7
1-CO-4053-30	F3007	4
1-CO-4053-30	F3006	4
1-RC-13-06	F0606	4
1-RC-13-06	F0604	4

No observations or deficiencies noted.

Performed By: R.C. Julian *Richard Julian* Date: 5/16-20/83

Contractor/Contacts: P-H

Interview: Yes No X

Originator Code: Y024
Record Type: 20-k-04-188
IMS Index: Q-02-01-02
IMS Index: H-03-01-31, G-02-02-31
#: 7/12/83
D. DuBois

Unit 1 X Unit 2 Unit A
FILE LOCATION: Q 2,6,16,4964
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC FQA Office

Comments:

Performed customer review of P-H radiographs for compliance to ASME Sect. V, and P-H procedure IX-RT-1-W77. Review was completed and found satisfactory with no discrepancies noted.

Line #	Field Weld #	No. of Film
1-MS-4007-01	F0105	7
1-MS-4009-01	F0108	7
1-MS-4010-05	F0503	4
1-MS-4014-01	F0101	4
1-MS-4014-01	F0102	4
1-MS-4015-02	F0202	5
1-SI-204-04	F0401	4
1-SI-203-02	F0204	4

No observations or deficiencies noted.

Performed By: R.C. Julian Richard C. Julian Date: 6/22-23/83

Contractor/Contacts: P-H

Interview: Yes No X

Case Code: Y884
Type: 26-R-4-188
Index: Q-02-01-02

Unit 1 X Unit 2
FILE LOCATION: Q 2.6.14.5088

Index: H-01-01-31, C-02-02-31, G-01-03-31

Page 1 of 4

10-14-83
P. Wilbur

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H
Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC FQA Office

Comments:

Performed radiography review of the following radiographs for compliance to ASME Sect. V, and P-H Procedure IX-RT-1-W77. Review was completed satisfactorily, with no discrepancies noted.

Line No.	No. of Film
1-MS-4000-08, F0802	7
1-MS-4001-09, F0903	9
1-MS-4000-04, F0405	4
1-MS-4001-05, F0502	4
1-MS-4001-05, F0501	4
1-MS-4003-06, F0604	5
1-MS-4002-07, F0703	5
1-MS-4002-09, R0901	4
1-MS-4003-06, F0605	4
1-MS-4003-07, F0704	4
1-SI-203-01, F0103	5
1-RC-58-05, F0503	4
1-RC-97-03, F0305	3
1-RC-59-02, F0203	3
1-RC-15-01, F0106	3
1-RC-59-01, F0103	3
1-RC-59-02, F0201	3
1-RC-59-02, F0202	3
1-RC-13-06, F0602	5

No deficiencies or observations noted.

Performed By: R.C. Julian *Richard Julian* Date: 7/11-15/83

Contractor/Contacts: P-H

Exit Interview: Yes No X

Master Code: Y004
Record Type: 20-R-04-188
WB Index: Q-02-01-02
WB Index: G-04-01-31, G-07-05-31, G-02-02-31
Date: 10-14-83
By: P. Lillie

Unit 1 Y Unit 2 Unit A
FILE LOCATION: Q 2.6.14.5097
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC FQA Office

Comments:

Performed radiography review on the following radiographs for compliance to ASME V, and P-H Procedure IX-RT-1-W77. Review completed with satisfactory results.

Line No.	No. of Film
1-RH-180-03, SW"F"	4
1-RH-154-01, F0107	5
1-RH-154-01, F0108	5
1-RH-154-01, F0109	5
1-RH-164-02, F0212	5
1-RH-164-02, F0201	5
1-RH-163-03, F0301	4
1-CBS-1208-03, F0302	7
1-SI-201-02, F0207	5
1-SB-1310-05, F0506	2
1-SB-1310-05, F0507	3

No deficiencies or observations noted.

Performed By: R.C. Julian *Richard Julian* Date: 7/16/83

Contractor/Contacts: P-H

Exit Interview: Yes No X

Originator Code: Y884
Record Type: 28-E-84-188
IMS Index: Q-82-W1-82
IMS Index: G-42-25-31, G-45-41-31
Date: 10/15/83
By: D. O. B.

Unit 1 Unit 2 Unit A

FILE LOCATION: Q 2.6.14.5323

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC CFQA Office

Comments:

Performed radiography review on the following, for compliance to ASME Sect. V & P-H Procedure IX-RT-1-W77. Review was completed with no discrepancies noted.

Line #	FW #	No. of Film
1-CBS-1205-01	F0101	4
1-CBS-1205-02	F0203	4
2-CBS-2-1214	F014	4
2-CBS-2-1214	F017	4
1-CS-302-02	F0201	5
1-CS-302-02	F0202	4
1-CS-303-02	F0204	4
1-CS-303-02	F0208	4
1-CS-303-02	F0209	4
1-CS-303-03	F0305	4
1-CS-303-04	F0408	4
1-CS-318-04	F0405	3
1-CS-328-01	F0104	5
1-CS-355-12	F1201	5
1-CS-355-12	F1203	5
1-CS-357-05	F0501	4
1-CS-360-10	F1001	3
1-CS-360-10	F1003	3

No deficiencies or observations.

Performed By: R.C. Julian Richard C. Julian Date: 8/15-17/83

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y884
Record Type: 28-R-64-188
Index: G-82-01-02
Index: G-85-01-31, B-84-01-31
Date: 10/15/83
By: R. C. Julian

Unit 1 Unit 2 Unit A
FILE LOCATION: Q 2.6.14.5364
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
FIELD QA GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC FQA Office

Comments:

Performed radiography review of the following radiographys for compliance to ASME Sect. V, & IX-RT-1-W77. Surveillance was completed satisfactorily with no discrepancies noted.

Line #	F.W. #	No. of Film
1-CS-365-01	F0107	2
1-CS-365-01	F0109	3
1-CS-365-01	F0110	3
1-CS-365-04	F0403	3
1-CS-365-04	F0406	3
1-CS-369-07	F0704	6
1-CS-374-02	F0208	5
1-CS-374-02	F0209	5
1-CS-374-02	F0210	5
1-CS-378-02	F0203	4
1-CS-523-02	F0204	5
1-CS-523-02	F0205	4
1-CS-523-02	F0206	3
1-FW-4606-01	F0109	4
1-FW-4606-14	F1402	4
1-FW-4606-16	F1604	4
1-FW-4607-04	F0405	9
1-FW-4607-15	F1503	4
1-FW-4607-16	F1604	4
1-FW-4608-17	F1703	4
1-FW-4608-17	F1704	4
1-FW-4608-17	F1705	4
1-FW-4609-01	F0113	4
1-FW-4609-18	F1803	8

Performed By: R. C. Julian *Richard C. Julian* Date: 8/20/83

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y004
Record Type: 20-R-04-188
IMS Index: Q-02-01-02
IMS Index: H-03-01-31
Date: 10-15-83
P. Dabku

Unit 1 Unit 2 Unit A

FILE LOCATION: Q 2.6.14.5519

Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
CONSTRUCTION FIELD QUALITY ASSURANCE GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: ASME Sect. V, Rev. 0

Location: YAEC CFQA Office

Comments:

Performed radiography review of the following radiographs for compliance to ASME Sect. V, and IX-RT-1-W77. Review was completed with no discrepancies noted.

Line No.	FW	No. of Film
1-MS-4001-03	F0306	4
1-MS-4002-06	F0606	4
1-MS-4001-12	F1228	4
1-MS-4001-13	F1328	4
1-MS-4001-15	F1528	4
1-MS-4002-05	F0502	9

No observations or deficiencies noted.

Performed By: R.C. Julian Richard C Julian Date: 9/07-09/83

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y004
Record Type: 26-2-24-188
IMS Index: Q-22-01-02
IMS Index: H-03-01-31, G-01-03-31, G-04-01-31, C-02-05-31,
Date: 10-15-83
P. Wilke

Unit 1 X Unit 2 Unit 3
FILE LOCATION: Q 2.6.14.5607
Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
CONSTRUCTION FIELD QUALITY ASSURANCE GROUP
SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H
Specifics: Radiography Review

Ref. Master Check List No.: Sect. V, Rev. 0

Location: YAEC CFQA Office

Comments:

Performed radiography review on the following radiographs for compliance to ASME Sect. V, and P-H IX-RT-1-W77. Review completed with no discrepancies noted.

Line Number	FW#	No. of Film	Line Number	FW#	No. of Film
1-MS-4002-05	F0502	11	1-SB-1301-05	F0504	5
1-MS-4002-13	F1328	4	1-CBS-1206-02	F0201	5
1-MS-4002-16	F1628	4	1-CBS-1206-02	F0202	4
1-MS-4003-13	F1328	5	1-CBS-1212-02	F0208	4
1-MS-4003-14	F1428	5	1-CBS-1219-01	F0102	5
1-MS-4005-03	F0304	9	1-CBS-1224-02	F0202	5
1-MS-4007-01	F0102	10	1-CC-712-04	F0404	3
1-MS-4009-01	F0104	9	1-CO-4042-01	F0103	6
1-MS-4011-01	F0102	5	1-CO-4049-05	F0506	14
1-MS-4013-02	F0203	10			
1-MS-4014-01	F0106	6			
1-MS-4014-02	F0202	6			
1-MS-4014-02	F0203	11			
1-MS-4014-05	F0501	4			
1-MS-4016-02	F0201	10			
1-MS-4003-05	F0509	4			
1-MS-4005-06	F0604	8			
1-MS-4005-06	F0612	5			
1-MS-4002-08	F0802	6			
1-MS-4003-06	F0602	4			
1-MS-4002-08	F0803	5			
1-MS-4005-06	F0613	4			
1-MS-4005-11	F1104	8			
1-MS-4005-21	F2102	9			
1-RC-21-04	F0401	4			
1-RH-155-02	F0206	8			

No observations or deficiencies noted.

Performed By: R.C. Julian *R. Julian* Date: 9/17-23/83

Contractor/Contacts: P-H

Interview: Yes No X

Originator Code: Y004
 Record Type: 20-R-04-188
 IMS Index: Q-02-01-02
 MS Index: H-04-02-31
 Date: 10-15-83
 By: P. Diller

Unit 1 Unit 2 Unit A
 FILE LOCATION: Q 2.6.14.5610
 Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
 CONSTRUCTION FIELD QUALITY ASSURANCE GROUP
 SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H
 Specifics: Radiography Review

Ref. Master Check List No.: Sect. V, Rev. 0

Location: YAEC CFQA Office

Comments:

Performed radiography review on the following radiographs for compliance to ASME Sect. V, and P-H IX-RT-1-W77. Review completed with no discrepancies noted.

Line Number	FW#	No. of Film
1-CO-4065-02	F0201	5
1-CO-4059-02	F0601	5
1-CO-4053-15	F1501	15
1-CO-4053-06	F0605	5
1-CO-4053-08	F0810	4
1-CO-4053-09	F0901	13
1-CO-4053-10	F1002	8
1-CO-4053-10	F1009	8
1-CO-4053-15	F1503	11
1-CO-4053-15	F1504	7
1-CO-4053-24	F2401	4
1-CO-4053-25	F2503	6
1-CO-4053-26	F2601	4
1-CO-4053-26	F2602	4
1-CO-4053-28	F2802	4
1-CO-4053-30	F3002	4
1-CO-4055-01	F0102	8
1-CO-4055-01	F0103	5
1-CO-4057-01	F0104	6
1-CO-4058-01	F0103	5
1-CO-4058-01	F0104	5
1-CO-4079-01	F0104	4
1-CO-4059-08	F0803	13

No observations or deficiencies noted.

Performed By: R.C. Julian *Richard Julian* Date: 9/24/83

Contractor/Contacts: P-H

Exit Interview: Yes No

Originator Code: Y884
 Record Type: 26-R-4-188
 IMS Index: Q-62-01-02
 IMS Index: H-04-01-31, G-05-01-31, H-04-01-31
 Date: 10-15-83 H-03-01-31, G-04-01-31
P. Dukes

Unit 1 Unit 2 Unit A
 FILE LOCATION: Q 2.6.14.5611
 Page 1 of 4

YANKEE ATOMIC ELECTRIC COMPANY
 CONSTRUCTION FIELD QUALITY ASSURANCE GROUP
 SURVEILLANCE REPORT

Activity: Control of Special Processes/P-H

Specifics: Radiography Review

Ref. Master Check List No.: Sect. V, Rev. 0

Location: YAEC CPQA Office

Comments:

Performed radiography review on the following radiographs for compliance to ASME Sect. V and P-H IX-RT-1-W77. Review completed with no discrepancies noted.

Line Number	FW#	No. of Film	Line Number	FW#	No. of Film
1-CO-4059-09	FO903	5	1-FW-4609-18	F1801	4
1-CO-4059-09	FO904	6	1-FW-4631-02	FO203	4
1-CO-4059-11	F1101	5	1-FW-4631-02	FO205	4
1-CO-4059-11	F1102	5	1-FW-4631-14	F1404	5
1-CO-4059-12	F1208	8	1-MS-4000-04	FO403	4
1-CO-4060-01	FO101	5	1-MS-4010-04	FO404	4
1-CO-4060-02	FO202	5	1-MS-4001-05	FO503	5
1-CO-4061-03	FO303	9	1-MS-4002-03	FO506	8
1-CO-4059-12	F1203	16	1-MS-4005-04	FO403	5
1-CO-4061-03	FO305	16	1-MS-4005-12	F1204	8
1-CS-351-03	FO301	3	1-MS-4005-20	F2004	12
1-CS-351-03	FO302	3	1-MS-4010-16	F1601	4
1-CS-366-04	FO401	2	1-MS-4010-16	F1603	4
1-CS-366-05	FO502	5	1-MS-4011-02	FO203	8
1-CS-369-07	F705	4	1-MS-4012-02	FO202	12
1-CS-377-02	FO204	5	1-MS-4014-05	FO502	12
1-CS-432-03	FO301	5	1-MS-4014-07	FO702	8
1-CS-524-01	FO103	5	1-MS-4015-02	FO201	7
1-CS-524-01	FO104	5	1-MS-4017-02	FO202	8
1-CS-524-01	FO105	5	1-RH-154-01	FO113	5
1-CS-524-01	FO106	5	1-RH-154-01	FO114	5
1-FW-4600-01	FO103	12			
1-FW-4600-02	FO201	9			
1-FW-4601-02	FO203	10			
1-FW-4609-09	FO901	5			

No deficiencies or observations noted.

Performed By: R. C. Julian Richard C. Julian Date: 9/25/83

Contractor/Contacts: P-H

Interview: Yes No

New Hampshire Yankee
January

ENCLOSURE 4 TO NYN.

SUMMARIES OF YAEC AUDIT REPORTS
DEALING WITH PULLMAN-HIGGINS RADIOGRAPHY

(See also NUREG 1425, Appendix 8, page 2)

New Hampshire Yankee
January 11, 1991

ENCLOSURE 4 TO NYN-91002

SUMMARIES OF YAEC AUDIT REPORTS
DEALING WITH PULLMAN-HIGGINS RADIOGRAPHY

(See also NUREG 1425, Appendix 8, page 2)

NOTES TO ENCLOSURE 4

In accordance with an 11/16/90 telecon agreement between NHY and NRC OIG, summaries of P-H radiography-related audits are provided. Full audit documentation is available at the site for review.

YAEC SEABROOK AUDIT REPORT
NO. SA363CS095

PLACE: PULLMAN-HIGGINS, SEABROOK STATION, SEABROOK, NEW HAMPSHIRE

DATES: JUNE 3-6, 1980

PURPOSE: AUDIT OF SPECIAL PROCESS AND INSPECTION PORTIONS OF QA PROGRAM

AUDITORS: YAEC

*PHILIP A. OIKLE, QUALITY ASSURANCE ENGINEER (ATL)
*RICHARD C. JULIAN, FIELD QUALITY ASSURANCE ENGINEER,
(AUDITOR IN TRAINING)

UE&C

JOHN WARNER, NDE LEVEL III (PRESENT TO REVIEW P-H RADIOGRAPHS)

THOSE CONTACTED: PULLMAN-HIGGINS

*J. R. TOWNSEND, RESIDENT CONSTRUCTION MANAGER
*J. J. CORCORAN, ASSISTANT RESIDENT CONSTRUCTION MANAGER
*RICHARD G. DAVIS, FIELD QUALITY ASSURANCE MANAGER
DAVID L. WALKER, QUALITY ASSURANCE SUPERVISOR
RAYMOND R. DONALD, QUALITY CONTROL SUPERVISOR
*BRUCE WILLARD, TRAINING OFFICER
CHARLES GASKELL, QUALITY ASSURANCE ENGINEER, WELDING
JOSEPH GODLESKI, QUALITY ASSURANCE ENGINEER, RECORDS
JAMES SUMNER, WELD INSPECTOR
WENDELL RYALS, WELD INSPECTOR
GLEN SIMMONS, GENERAL FOREMAN
WALTER KENNEY, AREA FOREMAN
KENNETH ACOX, WELD SPECIALIST - PROCESS SPECIALIST
*J. E. GODFREY, QUALITY ASSURANCE SPECIALIST

*ATTENDED EXIT INTERVIEW

I. SUMMARY:

This audit was the second in a series of mini-audits to be performed on Pullman-Higgins' QA Program implementation during 1980, and covered the areas of Special Processes and Inspection.

In general, Pullman-Higgins was found to be in compliance with the portions of their program audited. However, six deficiencies were identified during the course of this audit in the areas of NDE and Inspection and Test personnel certifications, welding procedure and qualification records and out-of-specification radiographs.

II. DISCUSSION:

- A. The audit was performed using check lists generated from Pullman Power Products' Quality Assurance Manual and implementing procedures. The auditors' questions, however, were not limited to the contents of the check lists.
- B. Mr. John Warner, NDE Level III for UE&C, was present during part of the audit for the purpose of randomly reviewing completed radiographs taken of piping field welds.
- C. A formal exit interview was conducted by the auditors concerning the deficiencies revealed with the P-H personnel noted on page 1 of this report. The audit deficiencies were presented and acknowledged by those present. P-H QA Manager indicated that corrective action had already begun on several of the cited deficiencies.
- D. Details of the audit deficiencies are covered in the attachment section of this report.

III. OUTSTANDING ITEMS:

- A. Items closed out by this report:
 1. None
- B. New items requiring QA follow:
 1. SSCA No. 0305, Timely review of Welder Qualification Status Log not performed.
(09-705-2)
 2. SSCA No. 0306, Personnel certification documentation for B. Willard not correct.
(09-705-2)
 3. SSCA No. 0307, Welding personnel not aware of nearest location of weld procedures.
(09-705-2)
 4. SSCA No. 0308, NDE certification files for R. Wise not complete.
 5. SSCA No. 0309, Pullman-Higgins certification procedure does not address certification of personnel performing holiday testing.
(10-705-1)

6. SSCA No. 0310, Radiographs reviewed were deficient for the following:
- a. Film from field weld (FW0103) on line 1-S1-250-01, Revision 0, has density less than 2.0.
 - b. Film from FW0101 on line CBS-1202-C1 had code rejectable indications.
(09-705-3)

Philip A. Cible 7/14/80
Philip A. Cible Date
Quality Assurance Engineer

PAO/pf
Attachment
cc. WJMiller/WPJohnson
BBBeckley
JDeVincentis
JWSingleton

The contents of this report have been reviewed for items which could require reporting by 10CFR21 and 10CFR50.55(e). The report did ___/did not contain reportable items.

Roland E. Gullette for 7-15-80
Quality Assurance Manager Date

SSCA No.	0316
Report No.	SA361CS095
Audit Date:	6/2-6/80
Auditor(s):	P. A. Oikle

REQUIREMENT:

RT Procedure IX-RT-1-W77

- a) Radiographs taken with an isotope shall be minimum of 2.0 density.
- b) Paragraph 15.2 references acceptance criteria.

DEFICIENCY:

- a) Contrary to the above, film taken on weld 1-S1-250-01, Revision 0, FW0103, had a density <2.0 in the area of interest.
- b) Film viewed from CES-1202-01, Revision 1, View 0-1, FW0101 (0-1), has Code rejectable indications.

RECOMMENDATION:

Reshoot or repair as necessary to meet Code and procedure requirements.

PULLMAN-HIGGINS REPLY:

For Item a) of the audit report, Paragraph 8.1 of IX-RT-1-W77, Revision 3, states that composite viewing may be used for areas in which the transmitted film density is less than 2.0. The R.T. reader sheet was so marked for composite viewing for the areas that were less than 2.0, and according to our procedure, is acceptable.

For Item b) of the audit report, the indication mentioned was interpreted as internal root concavity and considered acceptable. Following the YAEC audit, the indication was ultrasonically examined and was found to be within the weld, making the weld rejectable. A Weld Repair Order for F0101, R-1 has been initiated as of this date.

SSCA No.	0310
Report No.	SA363CS095
Audit Date:	6/3-6/80
Auditor(s):	P. A. Oikle

REQUIREMENT:

RT Procedure IX-RT-1-W77

- a) Radiographs taken with an isotope shall be minimum of 2.0 density.
- b) Paragraph 15.2 references acceptance criteria.

DEFICIENCY: (SB-9939, dated 7/15/80) (SB-10020 dated July 25, 1980)

- a) Contrary to the above, film taken on weld 1-S1-250-01, Revision 0, FW0103, had a density <2.0 in the area of interest.
- b) Film viewed from CBS-1202-01, Revision 1, View 0-1, FW0101 (0-1), has Code rejectable indications.

RECOMMENDATION:

Reshoot or repair as necessary to meet Code and procedure requirements.

PULLMAN-HIGGINS REPLY:

For Item a) of the audit report, Paragraph 8.1 of IX-RT-1-W77, Revision 3, states that composite viewing may be used for areas in which the transmitted film density is less than 2.0. The R.T. reader sheet was so marked for composite viewing for the areas that were less than 2.0, and according to our procedure, is acceptable.

For Item b) of the audit report, the indication mentioned was interpreted as internal root concavity and considered acceptable. Following the YAEC audit, the indication was ultrasonically examined and was found to be within the weld, making the weld rejectable. A Weld Repair Order for F0101, R-1 has been initiated as of this date.

YAEC EVALUATION AND VERIFICATION:

Response is acceptable.

The auditor verified that: (a) the reader sheet was revised to require composite viewing in the areas where film density was less than 2.0, and (b) repair process sheet for line CBS-1202-01, Weld F0101, R-1, had been prepared.

This item is considered closed.

YAEC SEABROOK AUDIT REPORT
NO. SA565CS184

DOCUMENT HAS 137
NUMBER OF PAGES

PLACE: PULLMAN-HIGGINS, SEABROOK STATION, SEABROOK, NEW HAMPSHIRE

DATES: NOVEMBER 30 - DECEMBER 10, 1981

SCOPE: AUDIT OF SELECTED PORTIONS OF PULLMAN-HIGGINS' QUALITY ASSURANCE PROGRAM AND IMPLEMENTING PROCEDURES

AUDITORS:

YAEC

PHILIP A. OIKLE, SENIOR QUALITY ASSURANCE ENGINEER (ATL)
DONALD E. GROVES, SENIOR QUALITY ASSURANCE ENGINEER (ATM)
FREDERICK A. BEAKE, SENIOR QUALITY ASSURANCE ENGINEER (AIT)

PSNH

GARY UPHAM, MAINTENANCE FOREMAN (OBSERVER)

THOSE CONTACTED:

PULLMAN-HIGGINS

E. G. DAVIS, QA MANAGER
E. R. DONALD, QA SUPERVISOR
E. WISE, ACTING QC SUPERVISOR
C. A. SCANNEL, CHIEF FIELD ENGINEER
M. NEWTON, QA TECHNICIAN
M. MACCRAE, NDE SUPERVISOR
B. SANTLER, LEAD DRAFTING ENGINEER
S. HARRINGTON, OFFICE ENGINEER
D. HUNT, QA ENGINEER, RECORDS
K. MARTIN, QC INSPECTOR, NDE
E. BOWLES, QC INSPECTOR, NDE
J. M. PELLERIN, QC INSPECTOR, VISUAL
B. GRAHAM, QC INSPECTOR, PNEUMATIC/HYDRO
S. GLAZIER, QA SPECIALIST, WELDING/PROCESS
N. COLLINS, QA SPECIALIST, WELDING/PROCESS
W. LEMIEUX, QA SPECIALIST, WELDING/PROCESS
J. MILLS, QA SPECIALIST, WELDING/PROCESS
P. HOULE, QA SPECIALIST, WELDING/PROCESS
P. GEMMEL, QA SPECIALIST, WELDING
R. JOHNSON, QA ENGINEER

I. SUMMARY

The subject audit was performed on selected portions of Pullman-Higgins' Quality Assurance Program and Implementing Procedures. Fourteen (14) audit deficiencies were identified. The audit team concluded that the majority of the deficiencies identified were the result of personnel working to verbal instructions contrary to the requirements of approved procedures and/or personnel not adequately familiar with procedural requirements in their area of responsibility.

The auditors recommended a more comprehensive indoctrination, training, and assessment program be established and that procedures, where appropriate, be revised to reflect actual practice within the guidelines of project requirements.

II. RESULTS

- A. 1. The audit was performed using the checklists generated from: P-R approved procedures and applicable project documents. Areas focused on during the audit included, but were not limited to, special processes, inspection, test control, handling, storage, shipping, QA records, and audits.
2. Although deficiencies were revealed in most of the areas audited (see attachments), the major concern of the auditors was in the areas of nondestructive examination and welding. Typical examples included radiographs not fully meeting code requirements, liquid penetrant examination not conducted in full compliance with approved procedures, weld rod controls not in compliance with approved procedures, and welding not in accordance with drawing specifications.
- B. During the audit portion, a review was made of the results of the last three audits of the Pullman Power site QA group by their Quality Engineering Department (Williamsport, PA), and it was noted that these audits resulted successively in 19, 28 and 36 deficiencies. The cover letter for the report of the audit conducted the week of May 4, 1981 (28 deficiencies) contained a recommendation that an internal audit program be established at the site.

In reviewing the proposed implementing procedure (JS-XVIII-3 "Quality Site Requirement") and in discussions with cognizant PPP personnel the following concerns were noted:

1. The procedure establishes a surveillance program vs. the recommended audit program.
2. The individual assigned to perform this activity reports to the PPP site QA Manager.
3. There is no requirement that reports of the activity be forwarded to PPP home office for their information.
4. The procedure has not been submitted to UE&C for review/approval thus further delaying implementation.

In addition, it was revealed that the above noted PPP Corporate Office audit deficiencies are closed out based solely on written responses from the field. There is no actual verification of corrective action implementation until the following yearly site audit, thus not providing a timely verification and close-out.

- C. Based on the overall results of the audit, the auditors feel that more Corporate support to the field is necessary, among other things, to effect more timely verification of corrective action, faster turn-around time on procedure revisions and providing a system of

interim changes to field procedures to minimize the effect on work at the site.

It is strongly recommended that P-H take appropriate measures to better assess the effectiveness of initial training and subsequent recertification of personnel.

D. An exit interview was held with P-H personnel at which time the results of the audit and auditors' concerns were discussed.

III. OUTSTANDING ITEMS SUMMARY:

A. Items closed out by this report.

1. None

B. New items requiring QA follow-up:

1. SSCA No. 0483, Latest drawing revision not on grind process sheets.
(09-705-2)
2. SSCA No. 0484, Required holes in penetrometer not visible.
(09-705-2)
3. SSCA No. 0485, Improper film interpretation.
(09-705-2)
4. SSCA No. 0486, Liquid Penetrant Procedure not followed.
(09-705-2)
5. SSCA No. 0487, Other contractors welding returned to P-H ASME ovens.
(09-705-2)
6. SSCA No. 0488, Holding oven temperature not checked per procedure.
(09-705-2)
7. SSCA No. 0489, Storage temperature specified for portable ovens does not meet AWS requirements.
(09-705-1)
8. SSCA No. 0490, Procedure requirement not clear.
(09-705-1)
9. SSCA No. 0491, Instructions for Hold Points not adequately defined.
(06-705-1)
10. SSCA No. 0492, Procedure does not reflect actual practice on rigging accessories.
(13-705-2)
11. SSCA No. 0493, Pre-test Review Form not signed prior to test.
(11-705-2)
12. SSCA No. 0494, Lead letter B not attached to film cassette.
(09-705-2)

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13. SSCA No. 0495, Weld on pipe hanger undersized.
(09-705-2)

14. SSCA No. 0496, Weld reinforcement exceeded Code.
(09-705-2)

Philip A. Oikle 12/31/81
Philip A. Oikle Date
Senior Quality Assurance Engineer

Donald E. Groves 12/31/81
Donald E. Groves Date
Senior Quality Assurance Engineer

Frederick A. Beske 12/31/81
Frederick A. Beske Date
Senior Quality Assurance Engineer

PAO/fsf

Attachments

- cc: G. F. McDonald
- A. M. Shepard/W. P. Johnson
- J. DeVincentis
- J. W. Singleton
- B. B. Eackley
- C. Upham, PSNH
- F. Cauldwell/R. G. Davis

The contents of this report have been reviewed for items which could require reporting by 10CFR21 and 10CFR50.55(e). The report did ___/did not contain potentially reportable items.

Gerald F. [Signature] 12/31/81
Quality Assurance Manager Date

ATTACHMENT

2 of 15

SSCA No. 0484

Report No. SA565CS184

Audit Date: Nov. 30 -

Dec. 10, 1981

Auditor(s): P. A. Oikle

REQUIREMENT:

P-H Procedure IX-RT-1-W77, Par. 3.1.7, states in part, "The essential hole in the penetrameter(s) shall be delineated in the radiography as required in Appendix E."

DEFICIENCY:

Contrary to the above requirement, P-H approved repair radiograph designated SC-355-05, FOS01, R-1 (0° shot), did not delineate the essential hole in the penetrameter as required and, therefore, does not meet P-H procedure and ASME Code Section III requirements.

RECOMMENDATION:

Reshoot above radiograph to meet required penetrameter sensitivity. Assure affected NDE personnel are fully aware of P-H procedure and code requirements.

PULLMAN-HIGGINS REPLY:

The radiograph in question was reshot. However, the film interpreter continues to maintain that the required sensitivity had been met per code requirements. Section V, Article 2 of ASME Code, Para. T-261 says, "Radiography shall be performed with a technique of sufficient sensitivity to display the penetrameter image and the specified b- . ." Relative to this shot, sufficient sensitivity displayed both

YAEC EVALUATION:

Response is acceptable. Deficiency will remain open pending verification of corrective action implementation.

YAEC VERIFICATION: F. Beake, 2/12/82

The radiograph that was reshot was reviewed and found acceptable. Item closed.

YAEC SEABROOK AUDIT REPORT
NO. SA73RCS284

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1579
3

PLACE: PULLMAN-HIGGINS, SEABROOK STATION, SEABROOK, NEW HAMPSHIRE

DATES: JUNE 20-28, 1993

PURPOSE: QUALITY ASSURANCE AUDIT OF PULLMAN-HIGGINS

AUDITORS: YAEC

- *FREDERICK A. BEAKE, SENIOR ENGINEER, CONSTRUCTION QUALITY ASSURANCE (ATL)
- *JAMES J. MCARDLE, QUALITY ASSURANCE ENGINEER (AUDITOR-IN-TRAINING)
- *CLAIR WALTER, QUALITY ASSURANCE ENGINEER (AUDITOR-IN-TRAINING)
- *F. W. ZINNEVICH, SENIOR ENGINEER, CONSTRUCTION QUALITY ASSURANCE (EXIT ONLY)

PSNH

- *PETER UPSON, SENIOR ENGINEERING ANALYSIS (OBSERVER)

PULLMAN-HIGGINS

- *JOHN J. CORCORAN, RESIDENT CONSTRUCTION MANAGER
- *A. D. NANCE, CHIEF FIELD ENGINEER
- *R. G. DAVIS, QUALITY ASSURANCE MANAGER
- *K. A. SWISHER, QUALITY ASSURANCE SUPERVISOR
- *L. B. SNYDER, LEAD SITE AUDITOR
- J. SEXTON, TRAINING OFFICER
- *R. R. DONALD, ASSISTANT QUALITY ASSURANCE MANAGER
- *E. BOWLES, NDE SUPERVISOR
- M. NEWTON, QUALITY ASSURANCE SUPERVISOR
- D. HUNT, QAE RECORDS
- L. DEYOUNG, DCC SUPERVISOR
- P. GRASEWICZ, LEAD ENGINEER
- D. WATERS, AUDITOR
- R. WISE, TRAINING OFFICER
- M. TERPENING, RT LEVEL II
- R. SIZEMORE, QUALITY ASSURANCE SPECIALIST
- M. SMITH, QUALITY ASSURANCE SPECIALIST
- S. ARNEIL, QUALITY ASSURANCE SPECIALIST

- *ATTENDED EXIT INTERVIEW

1. SUMMARY:

- A. The subject audit was performed to verify personnel compliance to and system adequacy of the Quality Assurance Program and implementing procedures, and to evaluate the effectiveness of implementation by responsible personnel.

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- P The audit resulted in the identification of eleven (11) deficiencies and two (2) observations. The most serious deficiencies were the two in the Document Control Area: (1) The hanger was signed off to the wrong revision, and (2) The ECAs were not logged upon controlled drawings. The second item represents a repetitive finding requiring a written response within 5 days. Immediate corrective action was requested to resolve these deficiencies and to prevent recurrence.

II. EVALUATION:

The audit revealed that adequate systems of control are procedurally defined for Pullman-Higgins' scope of work. However, they appear to be lacking implementation in the areas of Document Control and the logging of ECAs upon the drawings. This lack of effective implementation is considered a direct result of inadequate indoctrination and training.

III. DISCUSSION:

- A. The Seabrook Station Quality Assurance Manual, Procedure 9.1, and supplemental checklists from applicable procedures from the Pullman-Higgins QA Program and construction procedures were utilized in performing the verification phase of the audit.
- B. The audit process consisted of sample analysis and verification of objective evidence to assure adequacy of and compliance to the following procedures:
 1. II, QA Program
 - a. P-H Procedure II-2, Revision 4, NDE Qualification and Certification
 - b. P-H Procedure II-4, Revision 5, Inspection and Testing Personnel Qualification and Certification
 2. VI, Document Control
 - a. P-H Procedure VI-4, Revision 4, Document Control
 - b. P-H Procedure VI-5, Revision 13, Control of Process Sheets and Weld Rod Requisition
 3. VII, Control of Purchased Material
 - a. P-H QA Manual, Section VII, Control of Purchased Material
 4. IX, Special Processes
 - a. P-H QA Manual, Section IX, Control of Special Processes

- b. P-H Procedure IX-1, Revision 14, Hilti Inspection
- c. P-H Procedure IX-MT
- d. P-H Procedure IX-PT
- e. P-H Procedure IX-RT
- 5. XIV, Inspection, Test, and Operating Status
 - a. P-H QA Manual, Section XIV, Inspection, Test, and Operating Status
- 6. XVI, Corrective Action
 - a. P-H Procedure XVI-2, Revision 6, Corrective Action
- C. The exit interview was conducted on June 28, 1983, at which time the deficiencies and observations were discussed in detail. The audit team requested immediate interim corrective action in the two (2) areas of significant concern.

IV. RESULTS:

- A. The audit verification activities identified a total of eleven (11) deficiencies and two (2) observations. None of the deficiencies noted represent a serious breakdown in the Quality Assurance Program. The following is a breakdown as applicable to each of the six areas that were audited.
- B. Four (4) deficiencies were identified in the area of Document Control of which two (2) are serious deficiencies; three (3) deficiencies are in the area of QA Program; two (2) deficiencies and one (1) observation are in the area of Corrective Action; and two (2) deficiencies and one (1) observation are in the area of Special Processes.

V. OUTSTANDING ITEMS:

- A. SSCA items closed out by this report:
 - 1. SSCA No. 0849
 - 2. SSCA No. 0851
- B. New SSCA items requiring QA follow-up:
 - 1. SSCA No. 0843, Hanger signed to correct revision but hanger is not built to this revision.
(06-705-3)

2. SSCA No. 0844, ECAs not logged on applicable drawings.
(06-705-2)
3. SSCA No. 0845, Procedure not followed in Area of process sheets.
(06-705-2)
4. SSCA No. 0846, Corrective action not responded to within time frame allotted.
(16-705-2)
5. SSCA No. 0847, Unsatisfactory response on CAR not referred to next higher level of management.
(16-705-2)
6. SSCA No. 0848, NRC Radiation Safety Examination not part of the RT specific examination.
(02-705-2)
7. SSCA No. 0849, Eye examination J-1 block not completed. (Item corrected and closed out during audit.)
(02-705-2)
8. SSCA No. 0850, No evidence that examination is closed book with 2-hour time limit.
(02-705-2)
9. SSCA No. 0851, Radiographic film views incorrectly identified. (Item corrected and closed out during audit.)
(09-705-2)
10. SSCA No. 0852, OJT records do not contain the date or title of signer.
(09-705-2)
11. SSCA No. 0853, Rod Room daily log does not indicate status of process sheets turned in.
(06-705-2)
12. SSCA No. 0854, Radiography has two different penetrameters.
(09-705-4)

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13. SSCA No. 0855, CARs #65 through #75 do not have date initiated.
(16-705-4)

A. M. Shepard for 7/21/83
Frederick A. Beake Date
Senior Engineer
Construction Quality Assurance

A. M. Shepard for 7/21/83
James J. McArdle Date
Quality Assurance Engineer

A. M. Shepard for 7/21/83
Clair Walter Date
Quality Assurance Engineer

FAB/pf
Attachments

The contents of this report have been reviewed for items which could require reporting by 10CFR21 and 10CFR50.55(e). The report did ___/did not contain potentially reportable items.

Arthur M. Shepard 7/21/83
Quality Assurance Manager Date

ATTACHMENT

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SSCA No. 0854

Report No. SA738CS284

Audit Date: 6/20-28/83

Auditor(s): J. J. McArdle

OBSERVATION:

Radiographic test report for 1-CBS-1201-07, Weld #F0702, indicates that two #10 penetrators were used. Review of RT film shows one #10 penetrator on the base metal and one #12 penetrator on a shim. Both penetrators are within density limits and cover all areas of the weld and base material. This is an isolated case.

P-H REPLY:

1-CBS-1201-07, F0702, RT Test Report shows two #10 penetrators were used. Film shows that #10 and #12 penetrators were used. Reader sheets have been changed to reflect the right penetrators.

YAEC EVALUATION:

Response is acceptable. Deficiency will remain open pending verification of corrective action implementation.

YAEC VERIFICATION: (JJM, 8/25/83)

Reader sheet for subject film corrected 7/18/83 by F. R. Bowles. Correct penetrator ID placed on reader sheet.

This item is closed.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 5 TO NYN-91002

TBA DATA REQUEST
FOR
SEABROOK PRUDENCE AUDIT
HISTORY OF WELD REJECT DATES

THE UNITED ILLUMINATING COMPANY
SEABROOK PRUDENCE AUDIT
DOCKET NO. 86-01-08

TBA DATA REQUEST NO. 235
PAGE 1 OF 1

Request:

Please provide history of weld reject rates on the project.
Pipe and cadweld.

Response:

A history of piping weld rejection rates, as a result of radiographic testing, is attached. Documentation indicating cadweld rejection rates, including the daily cadweld inspection reports, are available for inspection at the Seabrook site.

January 6, 1987

R.T. REJECT RATES

Monthly Rates and Yearly Recaps

<u>1979</u>	<u>NEW WELDS</u>	<u>REPAIRS</u>	<u>TOTALS</u>
	18/ 7 = 38.9%	5/ 1 = 20.0%	23/ 8 = 34.8%
<u>1980</u>			
1-1-80 to 1-31-80	15/ 6 = 40.0%	5/ 3 = 60.0%	20/ 9 = 45.0%
2-1-80 to 2-28-80	11/ 2 = 18.2%	2/ 1 = 50.0%	13/ 3 = 23.1%
3-1-80 to 3-31-80	13/ 9 = 69.2%	6/ 3 = 50.0%	19/12 = 63.2%
4-1-80 to 4-30-80	17/ 2 = 11.8%	2/ 2 = 100%	19/ 4 = 21.1%
5-1-80 to 5-31-80	14/10 = 71.4%	6/ 3 = 50.0%	20/13 = 65.0%
6-1-80 to 6-30-80	8/ 1 = 12.5%	13/ 5 = 38.5%	21/ 6 = 28.6%
7-1-80 to 7-31-80	20/ 6 = 30.0%	10/ 3 = 30.0%	30/ 9 = 30.0%
8-1-80 to 8-31-80	23/ 1 = 4.3%	1/ 0 = 0%	24/ 1 = 4.2%
9-1-80 to 9-30-80	15/ 6 = 40.0%	6/ 2 = 33.3%	21/ 8 = 38.1%
10-1-80 to 10-31-80	20/ 4 = 20.0%	11/ 2 = 18.2%	31/ 6 = 19.4%
11-1-80 to 11-30-80	25/ 9 = 36.0%	8/ 5 = 62.5%	33/14 = 42.4%
12-1-80 to 12-31-80	12/ 3 = 25.0%	3/ 2 = 66.7%	15/ 5 = 33.3%
1980 Recap	193/59 = 30.6%	73/31 = 42.5%	266/90 = 33.8%
<u>1981</u>			
1-1-81 to 1-31-81	32/ 7 = 21.9%	1/ 0 = 0.0%	33/ 7 = 21.2%
2-1-81 to 2-28-81	22/11 = 50.0%	3/ 1 = 33.3%	25/12 = 48.0%
3-1-81 to 3-31-81	45/15 = 33.3%	11/ 3 = 27.3%	56/18 = 32.1%
4-1-81 to 4-30-81	69/11 = 15.9%	16/ 6 = 37.5%	85/17 = 20.0%
5-1-81 to 5-31-81	34/ 3 = 8.8%	22/ 5 = 22.7%	56/ 8 = 14.3%
6-1-81 to 6-30-81	17/ 1 = 5.9%	10/ 4 = 40.0%	27/ 5 = 18.5%
7-1-81 to 7-31-81	48/ 9 = 18.8%	13/ 2 = 15.4%	61/11 = 18.0%
8-1-81 to 8-31-81	63/12 = 9.0%	20/ 3 = 15.0%	83/15 = 18.1%
9-1-81 to 9-30-81	58/13 = 22.4%	16/ 4 = 25.0%	74/17 = 23.0%
10-1-81 to 10-31-81	74/23 = 31.1%	22/ 7 = 31.9%	96/30 = 31.3%
11-1-81 to 11-30-81	56/14 = 25.0%	12/ 1 = 8.3%	68/15 = 22.1%
12-1-81 to 12-31-81	68/27 = 39.7%	7/ 3 = 42.9%	75/30 = 40.0%
1981 Recap	586/146 = 24.9%	153/39 = 25.5%	739/185 = 25.0%

R.T. REJECT RATES

Monthly Rates and Yearly Recaps

<u>1982</u>	<u>NEW WELDS</u>	<u>REPAIRS</u>	<u>TOTALS</u>
1-1-82 to 1-31-82	62/25 = 40.3%	19/ 6 = 31.6%	81/31 = 38.3%
2-1-82 to 2-28-82	84/21 = 25.0%	18/12 = 66.7%	102/33 = 32.4%
3-1-82 to 3-31-82	78/17 = 21.8%	23/ 7 = 30.4%	101/24 = 23.8%
4-1-82 to 4-30-82	125/27 = 21.6%	18/ 7 = 38.9%	143/34 = 23.8%
5-1-82 to 5-31-82	111/42 = 37.8%	35/ 9 = 25.7%	146/51 = 34.9%
6-1-82 to 6-30-82	145/37 = 25.5%	52/22 = 42.3%	197/59 = 29.9%
7-1-82 to 7-31-82	145/33 = 22.8%	56/22 = 39.3%	201/55 = 27.4%
8-1-82 to 8-24-82	107/30 = 28.0%	38/16 = 42.1%	145/46 = 31.8%
8-25-82 to 9-25-82	170/65 = 38.2%	50/15 = 30.0%	220/80 = 36.4%
9-26-82 to 10-26-82	108/32 = 29.6%	61/17 = 27.9%	169/49 = 29.0%
10-27-82 to 11-27-82	131/28 = 21.4%	55/19 = 34.5%	186/47 = 25.3%
11-28-82 to 12-28-82	25/ 8 = 32.0%	28/12 = 42.9%	53/20 = 37.7%
1982 Recap	1291/365 = 28.3%	453/164 = 31.4%	1744/529 = 30.3%
<u>1983</u>			
12-28-82 to 1-31-83	110/18 = 16.4%	98/24 = 24.5%	208/42 = 20.2%
2-1-83 to 2-28-83	97/20 = 20.6%	26/ 7 = 27.0%	123/27 = 22.0%
3-1-83 to 3-31-83	99/21 = 21.2%	23/ 3 = 13.0%	122/24 = 19.7%
4-1-83 to 4-30-83	68/ 4 = 5.9%	32/ 9 = 28.1%	100/13 = 13.0%
5-1-83 to 5-31-83	138/21 = 15.2%	72/14 = 19.4%	210/35 = 16.7%
6-1-83 to 6-30-83	111/15 = 13.5%	27/ 3 = 11.1%	138/18 = 13.0%
7-1-83 to 7-31-83	115/ 5 = 4.3%	14/ 2 = 14.3%	129/ 7 = 5.4%
8-1-83 to 8-31-83	129/20 = 15.5%	6/ 1 = 16.7%	135/21 = 15.6%
9-1-83 to 9-30-83	79/11 = 13.9%	8/ 2 = 25.0%	87/13 = 14.9%
10-1-83 to 10-31-83	148/16 = 10.8%	22/ 2 = 9.0%	170/18 = 10.6%
11-1-83 to 11-30-83	120/18 = 15.0%	19/ 4 = 21.1%	139/22 = 15.8%
12-1-83 to 12-31-83	86/ 9 = 10.5%	23/ 3 = 13.0%	109/12 = 11.0%
1983 Recap	1300/178 = 13.7%	370/74 = 20.0%	1670/252 = 15.1%

R. T. REJECT RATES
Monthly Rates and Yearly Recaps

1984

	<u>NEW WELDS</u>	<u>REPAIRS</u>	<u>TOTALS</u>
1-1-84 to 1-31-84	73/10 = 13.7%	21/5 = 23.8%	94/15 = 16.0%
2-1-84 to 2-29-84	70/8 = 11.4%	23/2 = 8.7%	93/10 = 10.3%

New Hampshire Yankee
January 11, 1991

ENCLOSURE 6 TO NYN-91002

EXTRACT FROM MANAGEMENT PERFORMANCE EVALUATION
FOR
WOLF CREEK GENERATING STATION

NOTES TO ENCLOSURE 6

This enclosure is provided for comparison only. Note that at Wolf Creek, weld rejection rates for large welds requiring radiography ranged from a high of 50% to a low of 20%.

8.3.1.2 WOLF CREEK
MANAGEMENT PERFORMANCE
EVALUATION

MANAGEMENT PERFORMANCE EVALUATION



WOLF CREEK GENERATING STATION

KANSAS GAS AND ELECTRIC COMPANY
KANSAS CITY POWER & LIGHT COMPANY
KANSAS ELECTRIC POWER COOPERATIVE, INC.

MAY 1984

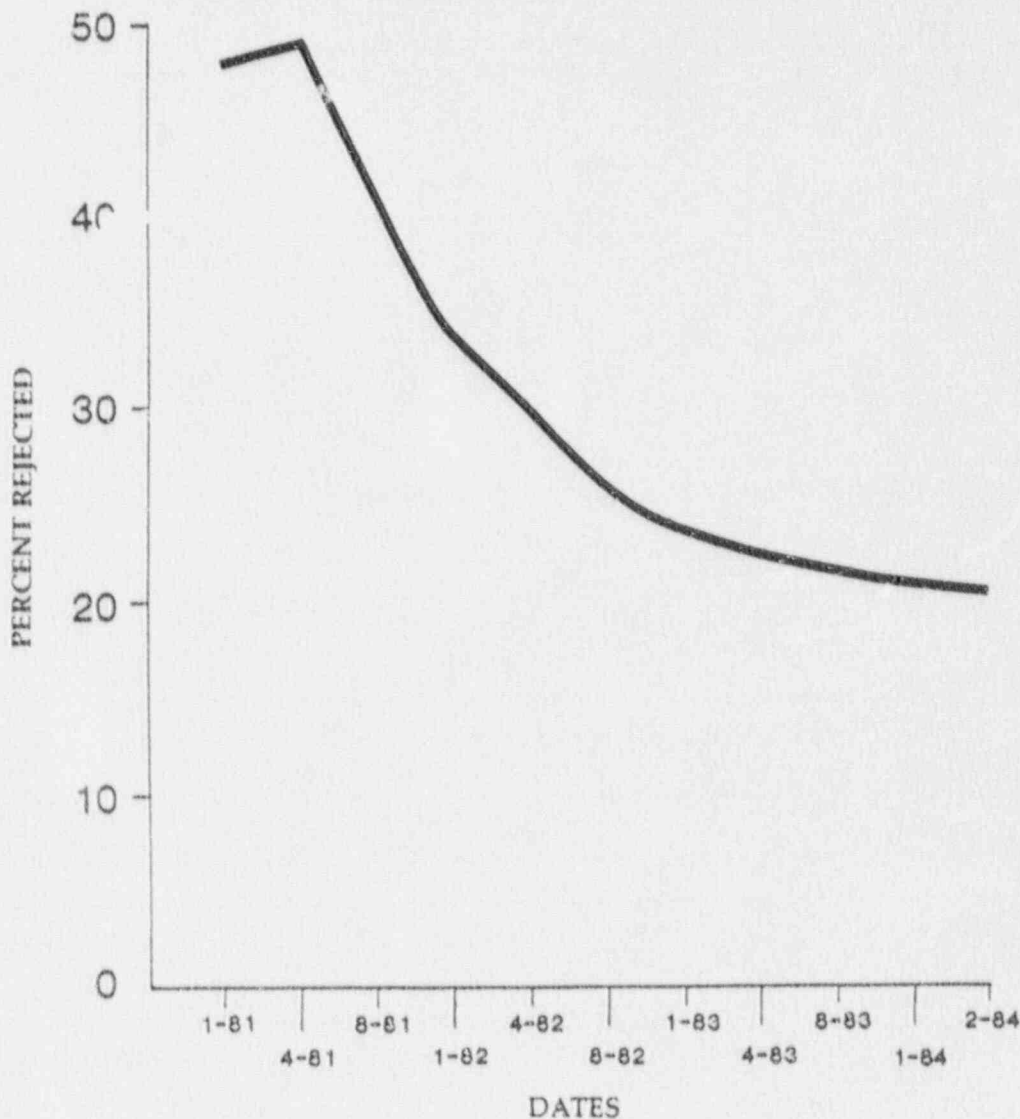
VI. CONSTRUCTION MANAGEMENT

- The weld reject rate for pipe welds requiring radiography was unacceptable in 1980.

The Owners and Daniel brought independent, offsite groups to study the welding program in 1980 in order to improve performance. Management changes were made in the Daniel welding group in early 1981. Exhibit VI-49 indicates the significant improvement in the weld reject rate that occurred from 1981 through the end of the project. Exhibit VI-37 indicates that welding productivity for Wolf Creek was better than the average for comparable nuclear projects.

EXHIBIT VI-49

LARGE WELD REJECTION RATE



New Hampshire Yankee
January 11, 1991

ENCLOSURE 7 TO NYN-91002

SEABROOK PROJECT MANAGEMENT PRUDENCE AUDIT
BY PICKARD, LOWE & GARRICK, JULY 1986

BACKUP DOCUMENT, SEC. 3.6

NOTES TO ENCLOSURE 7

These documents attest to early executive management awareness and action regarding P-H welding and weld rejection rates.

SEABROOK PROJECT MANAGEMENT PRUDENCE AUDIT

Backup Documents
Section 3.6

SEABROOK STATION
Engineering Office:
20 Turnpike Road
Westborough, MA 01581

July 11, 1980
SB-9930
Q2.1.4

Mr. W. C. Tallman, President
Public Service Company of New Hampshire
1000 Elm Street
Manchester, NH 03105

Dear Mr. Tallman:

Quarterly Seabrook Project Quality Assurance Evaluation Report

During the second quarter of 1980, design, procurement, fabrication, and construction activities continued subject to the controls of the Seabrook Project Quality Assurance Program. A summary of my review of these activities and my evaluation of the Program effectiveness is presented in this Quarterly Evaluation Report.

It is my judgement that the Seabrook Project Quality Assurance Program is effective and is continuing to provide assurance that the plant equipment and systems will operate satisfactorily in service. My judgement is based on the results of Yankee Atomic Electric Company (YAEC) reviews of Project Contractors (United Engineers and Constructors and Westinghouse) engineering, procurement, construction, and quality assurance documents, the results of YAEC audits and surveillance of suppliers and site constructors, and the results of Nuclear Regulatory Commission site inspections.

The procedures in use by YAEC and the Project Contractors are well established and are providing the controls necessary for safety-related work. Although some procedural and hardware deficiencies are being identified during independent reviews, surveillance and audits, these actions have been effective in identifying problem areas and in initiating remedial action. Where corrective action has not been as prompt as desired, supplementary interim controls have been provided. The extensive UE&C design verification audit initiated in 1979 continued throughout the past quarter, and corrective action taken for deficient areas has been satisfactory. Where vendors and one site constructor performance has been inadequate, their Programs have been supplemented by UE&C and YAEC direct participation. For these cases we are emphasizing the need for more appropriate corrective action. These cases are addressed below.

It is anticipated that during the current quarter vendor surveillance and auditing of vendors and constructors will be maintained at approximately their present levels.

In evaluating the Quality Assurance Program effectiveness, the following are considered to be significant:

1. Nuclear Regulatory Commission (NRC) Office of Inspection and Enforcement (I&E)

During the second quarter of 1980, NRC I&E performed three inspections at the construction site. One of these (80-05) was limited to environmental matters. Two of the nonconformances identified during that inspection are being resolved. These involved local conditions of improper disposal, erosion, and effluent turbidity. A third nonconformance, involving permanent settling basin discharge turbidity in excess of that permitted, is presenting a problem and has yet to be resolved.

An inspection (80-04), made by two inspector specialists and the Project Reactor Inspector prior to his assumption of duties as the Seabrook Project Resident Inspector, identified one noncompliance involving the omission of an examination from field weld repair process sheets. Actions have been taken to resolve this item and the two unresolved items also reported. During this inspection, the Reactor Inspector reopened items involving questionable Cadwelding operations and inspections reported by I&E in the past. He will review the measures being taken and their effectiveness to assure the adequacy of current corrective action. This is discussed in 4. below.

Since assuming his duties as the Seabrook NRC I&E Resident Inspector, Mr. A. Cerne has worked closely with Mr. J. Singleton, YAEC Field Quality Assurance Manager. Weekly meetings are held to review his open items and a monthly interview is planned to summarize the information he intends to include in his Monthly Inspection Report. In the interview on June 27, for his forthcoming Report (80-06), he identified one noncompliance involving a lack of acceptance criteria for inspection of eye and anchor bolt grouting. The criteria has since been established and the grouting involved has been reinspected and found acceptable. Mr. Cerne identified several areas he intends to investigate further (unresolved items) and closed several items reported previously.

2. Yankee Atomic Electric Company Audit Program

In the past quarter YAEC participated in audits and surveillances essentially as scheduled and at pre-selected in-process witness points. These included:

- a. YAEC internal audits (three)
- b. An audit at each of the Project Contractors' home offices
- c. Audits of selected vendors (five)
- d. Audits of plant construction site organizations (twelve)
- e. Surveillances at vendor witness points (nineteen)
- f. Surveillances of site activities (approximately one hundred and fifty)

YAEC also reviewed UESC audit and surveillance reports for both vendors and constructors, including nonconformance reports and vendor notification reports for deficiencies.

These activities have provided the information needed to judge the adequacy of the controls established, the degree of compliance, and the quality of plant equipment and systems. They are discussed in 3. and 4. below.

3. Equipment Supplier Quality Assurance

From the results of the activities mentioned above, which include the results of inspections of equipment and documentation received at the construction site, it is evident that most suppliers are in satisfactory compliance with Project requirements. Where shop surveillance or site inspections have indicated a need for supplier corrective actions, appropriate actions have, in most cases, been taken by the supplier. Where this has not been the case, UE&C surveillance has augmented the vendor inspection program. The adverse conditions noted have been or are being corrected. These include:

- a. Dravo Pipe Fabricators - Hardware and documentation deficiencies continued to be identified by UE&C personnel at what we feel is an abnormally high rate. These have recently included violations of minimum pipe wall thickness requirements and lack of fusion for radiographed joints which had been accepted by Dravo inspectors.

Questionable conditions of piping received at the construction site have recently been reported by the plant piping installer (Pullman-Higgins). These are being evaluated to assure proper interpretation by Pullman-Higgins and appropriate corrective action.

Dravo overall performance is being reviewed by UE&C.

- b. PX Engineering - Several unsatisfactory conditions have been identified, requiring rework and document upgrading. Items being produced by this supplier have required essentially one hundred percent re-inspection.
- c. Velan Valve - The bonnet wall thickness was found to violate minimum wall requirements for several valves. Two other valves failed to pass leak tests.
- d. Buffalo Forge - Cooling equipment testing procedures and personnel qualification procedures require upgrading. Some performance test results have not been acceptable for this reason.
- e. Corner and Lada - Because of the large amount of detail to be dealt with in fabricating and documenting, a UE&C resident inspector has been assigned to this shop. The documentation and hardware (component supports) dimensional deficiencies he has identified are of the type and number that are reasonable for this point in production.

- f. Brand-Rex - Unauthorized cable jacket repairs had been made and ends had been incorrectly sealed.
- g. Gould, Brown-Boveri - Several deficiencies identified in 1977 remain open because the corrective action was not taken, as scheduled, during recent switchgear modification.
- h. Westinghouse - Tampa - Arc strikes noted on steam generators are to be removed and the areas are to be reinspected.
- i. Westinghouse - Pensacola - Implementation of procedures should be improved. Thirteen procedural deficiencies were noted during a joint-utility audit.

4. Plant Construction Activities

a. Perini Power Constructors (PPC)

Early in the quarter, in-depth redundant inspections by YAEC and UE&C FQA personnel of work performed by Perini revealed that some inspections performed by Perini personnel accepted conditions which were not in compliance with specification and ASME Code requirements. Because the actions by Perini to preclude repetition of deficient conditions were not effective, Management actions were initiated by UE&C and YAEC. The actions taken at the executive level are ongoing and have resulted in agreements to make organizational changes within Perini as well as other commitments in the areas of staffing, training, and disciplinary actions. Perini has not fulfilled all of these commitments to date.

UE&C and YAEC have established a Supervisory Support Group (SSG) to work with Perini QA Inspection Supervisors at the site. The SSG consists of two YAEC and two UE&C QA engineers whose prime objective is to assist Perini supervisors in: avoiding construction and inspection errors, improving the effectiveness of Perini's QA Program and personnel, and taking positive steps to preclude repetitive problems. The SSG is continuing to function at the site. PPC has become dependent upon the SSG and has been less than expeditious in implementing changes requested by the SSG.

YAEC and UE&C executive management personnel have met with PPC Corporate Management personnel on two different occasions and have dictated that positive actions must be taken immediately to achieve the required results.

UE&C Field QA personnel are continuing 100% redundant inspections of work performed by PPC to assure the quality of work in process.

b. Pullman-Higgins (P-H)

Although P-H has performed welding operations on relatively few joints requiring radiographic examination (less than 200), they have experienced

a rejection rate of 38% which required repair and, in some cases, two to three repair operations per joint to achieve radiographic quality welds. This high rejection rate is attributed to the inexperience of the welders and an ineffective training program. YAEC, UE&C, and P-H staff personnel are evaluating the options available to increase the quality level. The option chosen will be expedited.

YAEC audits of P-H during this reporting period also identified deficient conditions in the documentation substantiating the qualification of nondestructive examination procedures and personnel. Minor errors in welding procedure qualification documentation were also noted. The documentation problems identified have been or are in the process of being corrected.

c. Fischbach-Boulos-Manzi-NH (FBM-NH)

YAEC and FBM QA and Construction management level personnel held a meeting to re-emphasize the QA requirements of the project. All personnel in attendance agreed that the systems and procedures approved by the Construction Manager will continue to be followed until improvements and/or refinements to the procedures are submitted and approved by the Construction Manager. Some welding problems related to fillet weld size of cable tray supports were identified by YAEC surveillance and audit activities and have since been corrected.

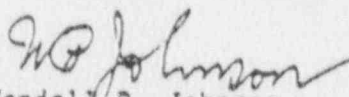
d. Pittsburgh Des Moines (PDM) and Pittsburgh Testing Laboratories (PTL) continued to perform their scope of work responsibilities satisfactorily.

e. YAEC and UE&C Field QA personnel are continuing to perform their second level surveillance activities effectively.

UE&C surveillance activities have become more hardware-oriented during this quarter and as a result a greater number of deficient conditions have been identified and corrected during in-process work rather than after the fact.

Very truly yours,

YANKEE ATOMIC ELECTRIC COMPANY


Wendell P. Johnson
Vice President

/ja

cc. JETribble
DEVandenburg
DNRerrill
BBBeckley

These standard procedures are described in QA-4 of the UE&C/PSNH Project Quality Assurance Procedures Manual (Ref. 3.6-12). PLG reviewed UE&C standard specifications and the inspection procedures of Fischbach-Boulos-Manzi and Perini Power Constructors, Inc. (Refs. 3.6-19 and 3.6-20). It determined that these procedures used accepted industry inspection methods and contained detailed inspection criteria. Hold points were identified that required verification and signoff by quality control before resumption of work. Implementation of these inspection procedures was the object of continued surveillance by UE&C and YAEC. PLG considers the inspection program developed for the Seabrook project to be complete, detailed and comprehensive.

Of equal importance in the evaluation of inspection programs is the training and qualification of inspectors and their supervisors. Contractor training requirements are established in the UE&C/PSNH Project Quality Assurance Procedures Manual, Procedure QA-2-2 (Ref. 3.6-12). These procedures outline responsibilities and training methods and include site contractor supervision as shown in Field General Construction Procedure FGCP-13, Rev. 0 (Ref. 3.6-21). It is significant that training requirements were imposed on supervisory personnel because this does not represent code or regulatory requirements, but rather still higher self-imposed quality assurance standards.

In addition, training and indoctrination programs for all site personnel--management to craft--were initiated on the project as early as 1974 (see, e.g., QA-2-2, Rev. 1, dated 1974 (Ref. 3.6-12) and YAEC memoranda documenting management indoctrination such as Ref. 3.6-22). At that time, it was not common within the industry to carry out such comprehensive indoctrination and training programs. PLG considers the training and indoctrination program an example of the strong management initiative that contributed to the good quality results at Seabrook.

A particular aspect of inspection that was the subject of frequent attention was the interpretation of the American Welding Society code. Mr. McDonald advised PLG that the project had been stringent in the interpretation of

American Welding Society weld inspection requirements. This was prudent because it was not until 1985 that the industry could get the NRC to agree to a more relaxed interpretation of the code.

Quality Surveillance Program Implementation

PLG reviewed a sample of project quality surveillance programs. PLG's review of the YAEC and UE&C procedures and an evaluation of surveillance reports indicates that surveillance activity was thoroughly preplanned and extensively implemented. Master checklists (e.g., Ref. 3.6-23) were prepared, covering industry codes and standards, regulatory guides and bulletins and the quality control and quality assurance procedures of site contractors. From these master checklists, individual surveillance checklists were prepared for current site activities. These surveillance checklists appear especially well prepared and documented.

YAEC quality assurance performed some 9,000 surveillances of 27 different contractors, as well as surveillances of UE&C and PSNH and self-surveillances. UE&C performed some 80,000 surveillances and inspections of electrical, instrumentation and control, and civil/mechanical construction activities. It has also conducted some 5,000 surveillances of vendors and material suppliers. This extensive surveillance program has provided the project with an excellent evaluation of the contractors' performances.

Based on PLG's experience, the number and the quality of the surveillances performed on the Seabrook project were greater than the usual industry standards. PLG concludes from reviewing the master checklists and completed surveillance reports that both surveillance tools were well planned and utilized that they represent a positive contribution toward the excellent project quality results.

weekly quality assurance managers meetings were held and chaired by YAEC quality assurance personnel. This meeting included all quality assurance managers of site contractors and UE&C quality assurance personnel. This meeting is where various quality assurance managers interface directly to solve problems and to monitor corrective actions.

The vast majority of quality assurance problems, however, were resolved on a day-to-day basis by means of inspection and audit reports, surveillance reports, and other corrective actions taken by the various quality assurance organizations. YAEC and UE&C prepared monthly reports that summarize open items and provide a means to identify problems and to verify that problems are being resolved.

The following are illustrations of management actions taken as a result of quality assurance problems.

- On June 20, 1980, J. Vought, the UE&C resident construction manager, was informed by J. Herrin, the PSNH site manager, that "the quality of pipe welding which we have been getting at Seabrook Station is cause for serious concern." The rejection rate for radiographed safety-grade welds performed by Pullman-Higgins was 38% in June 1980. The rejection rate for weld repairs was 50% for the same period. Herrin also stated (Ref. 3.6-26):

We recognize that the end product will be top quality. This is our acceptance standard for quality assurance and nothing less will be tolerated. However with the amount of rework required to achieve acceptable quality based on the welding performance we have experienced to date, we are really facing a major cost factor which is forcing the welding costs to increase.

- On July 8, 1980, UE&C responded in a letter (Ref. 3.6-27):

United Engineers has been analyzing the weld radiograph rejection rate trends during the past five (5) months. We have interfaced with Pullman-Higgins on several occasions discussing the problems stemming from weld rejections their causes and probable solutions.

After many hours of discussions between Pullman-Higgins and UE&C, it was mutually agreed upon that the following corrective actions would be initiated:

- Establish an evaluation and surveillance program to determine who the superior welders were.
- Upgrade the offsite welders school by providing an additional instructor and by the exchange of information on welding problems.
- Hire additional welding supervisors to train, evaluate and assist welders in the field to improve techniques and ability.
- Implement the use of automatic welding systems.

When the program began in 1980, the reject rate was nearly 35%. In 1981, this rate dropped to less than 25%, which is approximately the industry average. However, through the continued emphasis on welder performance and weld quality, this rejection rate was lowered to 15% in 1983 and to 12% in 1984, as stated in discussions between PLG and R. Kountz, the UE&C welding superintendent. T. Poliquin indicated that the increased usage of automatic welding of piping 6" and larger ultimately lowered the machine weld rejection rate to about 1%. PLG found aggressive management actions by PSNH, YAEC and UE&C to accomplish these improvements. For example, UE&C contacted most unions east of the Mississippi and local unions in the state of Washington to attract qualified welders to the Seabrook project. These activities were properly coordinated with the New Hampshire area local union jurisdiction as well as the union's national representatives in Washington, D. C. In other action, UE&C authorized Pullman-Higgins to visit the United Association/National Contractors Association sponsored welding schools in Terre Haute, Indiana and Cleveland, Ohio to ensure that students were receiving proper training in x-ray welding and site procedures (Ref. 3.6-28). The independent evaluation of project engineering and construction activities conducted in the fall of 1982

A
B
C
D

Overall Conclusions Versus Criteria

In assessing management's implementation of the quality assurance program, PLG concludes that the quality and quantity of the surveillance and audit activities of YAEC and UE&C were important to the overall management success of the quality assurance program. The full support and involvement of PSNH upper management in the quality assurance program was also a significant contributor to its success.

PLG has determined that implementation of the Seabrook quality assurance program was effective and thorough. PLG concludes that the quality assurance activities of PSNH, YAEC and UE&C were timely, well considered and good practice and therefore reasonable and prudent.

3.6.5 EXTERNAL AUDITS AND INSPECTION RESULTS

Evaluation Criteria

The results of independent external audits and inspections during the course of a project also can, when appropriate, provide an important additional consideration in the evaluation of quality assurance management. PLG reviewed those audits and inspections of quality assurance regularly conducted by external organizations on Seabrook and other nuclear power projects. This review covered NRC resident and regional inspections, NRC licensee appraisals and Institute of Nuclear Power Operations evaluations. See Section 3.1.5 for a summary of audits and reviews conducted of the Seabrook project.

NRC Inspections

NRC inspections of quality assurance programs are an important measure of their efficacy. These inspections begin early in the project, usually soon after construction has begun. The NRC effort for the Seabrook project began with inspections conducted by inspectors from the NRC Regional Office

(Region 1, King of Prussia, Pennsylvania). The inspectors are well trained, usually in the engineering discipline in which they have the most expertise.

As projects increase in activity, resident or full-time inspectors are assigned to them. The Seabrook project has had a full-time resident inspector assigned and at the site since early 1980. Currently, there are three resident inspectors including the senior inspector.

The function of the NRC inspector is to inspect the work, examine the records and observe installation of materials and equipment to assure that the licensee is meeting its commitments and licensing requirements. These NRC inspections are an important element in the process of granting an operating license to the utility. The results of these inspections must demonstrate that the safety of the public is being protected. If this cannot be demonstrated, the project may be shut down by the NRC or the project may be canceled because the utility failed to meet design and quality requirements. NRC inspections represent an important assurance that design and quality requirements are met.

The systematic assessment of licensee performance is a yearly assessment by the NRC of the performance of a project's quality assurance program and licensing activity. Section 3.5 and Figure 3.5-7 discuss such assessments and should be reviewed at this point for background information. These assessments cover all aspects of project performance, not solely quality assurance, although most aspects relate to the quality of the final product. Therefore, SALP report conclusions are indicative of quality assurance performance.

PLG's analysis of the NRC SALP reports (see Section 3.5) indicates that the NRC conducted 117 inspections of the Seabrook project. These consisted of approximately 12,035 man-hours of actual onsite inspections by resident inspectors, regional inspectors and teams of experts. These inspections resulted in 81 noncompliances, or 1 for every 149 man-hours of inspection, an impressively low value (see Figure 3.6-6). These noncompliances do not necessarily reflect defects. Violations are classified in accordance with

to PLG and, more importantly, to the NRC. In this section, the results achieved at Seabrook are compared in a limited way to other experience in the nuclear industry.

Evaluation Criterion

Because of the limited nature of the comparisons that can be made, the criterion selected for such an effort is very simple; i.e., how do the Seabrook quality results compare with other experience in the nuclear industry?

Comparisons with the Experience of Other Nuclear Power Projects

PLG made its comparisons in two different ways. The first is with respect to quality assurance problems that have emerged on some other projects. The second is with respect to the need for and existence of NRC enforcement actions.

Some nuclear projects such as Marble Hill, Midland and Zimmer have experienced quality assurance problems that contributed to their ultimately being abandoned. A 1985 Salomon Brothers report (Ref. 3.6-39) states that Consumers Power has apparently abandoned its Midland project with a sunk cost to the utility of \$3,400,000,000. The Zimmer project, as reported in Forbes magazine (Ref. 3.6-40), could not be licensed because its safety and quality could not be established; the nuclear island is being abandoned with a sunk cost of \$1,779,000,000 (Ref. 3.6-39). Other projects, such as Comanche Peak, Diablo Canyon and South Texas, have suffered long delays because of the need for quality verification. The Seabrook project has experienced none of these particular quality assurance problems. In PLG's judgment, this is because of the attitude toward quality at Seabrook and the effectiveness of project quality assurance and implementation.

For nuclear projects on which the performance of quality assurance functions is not satisfactory, the NRC issues stop work orders and assesses civil monetary penalties. Such actions are not uncommon within the nuclear

PLG found that PSNH has monitored the Seabrook project quality assurance management activities subsequent to April 1984 via its oversight function and role as the applicant. PLG notes that the results of the NHY quality assurance management activities have apparently been satisfactory to date. Therefore, PLG concludes that the actions of PSNH during this period were reasonable and prudent.

3.6.8 SUMMARY

This section has evaluated the more important aspects of quality assurance management for the Seabrook project. In each aspect examined, PLG found that the decisions and actions by PSNH, YAEC and UE&C management were timely, well considered and good practice. PLG's overall conclusion is that quality assurance management was therefore reasonable and prudent.

PLG has the following observations regarding quality assurance management:

- The end result of the Seabrook project--the quality of the product--is excellent by all indicators available to PLG and, more importantly, to the NRC.
- YAEC played an important role, organizing and implementing an effective overall project quality assurance program. It carried out well conceived and extensive surveillances and audits, and achieved impressively high-quality results--one of the major highlights of overall project performance.
- There is clear evidence of the PSNH top management's commitment to, and personal involvement in, the quality assurance program from the start of the project and in the results. This involvement shows up in the program's results and was an important factor in the successful quality assurance program at Seabrook.

- PLG determined that the records management system, although complex and sometimes difficult to use, meets regulatory requirements. Changes initiated in late 1983 should improve the system by making it easier to use.
- More than 90% of the ratings received by the project in the NRC SALP reports reflect either high level or satisfactory performance by management in the achievement of desired results.
- The NRC has not issued any stop work orders or assessed any civil monetary penalties for Seabrook. PLG ascribes this to the project participants' diligence in assuring quality.

Quality assurance management was a very strong element of the Seabrook project.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 3 TO NYN-91002

LETTER DATED MAY 8, 1989
STEPHEN COMLEY TO SAMUEL CHILK

~~8905160105~~ 10 pp

NOTES TO ENCLOSURE 8

Mr. Wampler's name was first brought to the NHY's Employee Allegation Response (EAR) Program's attention by this letter from Stephen B. Comley. Page 2 of the attachment states: "In 1982 and 1983, a piping weld inspector falsified 2400 inspections. After he was arrested some of the welds were re-inspected, but nearly half of them were never physically reexamined; many were inaccessible by then. A Level III weld inspector, who was hired after the inspection scandal to examine records and weld x-rays, found that fully 20 percent of the welds he inspected had failed. He was fired, he believes, because he found so many faulty welds."

The resulting EAR Program investigation revealed the following: a) there had been no failures of any welds examined by the individual referred to b) the Level III inspector (Mr. Wampler) was not hired because of the "scandal." The individual involved had falsified surface examination records; Wampler was performing a Level III review of radiographic films - completely different examinations, c) a 20% radiographic weld reject rate for a project the size of Seabrook was not unusual or unexpected (see pg. 3.6-37 of PLG Report 0447, Enclosure 7). The Seabrook Project reject rates have been plotted since 1979. Anyone associated with welding and radiography on the Seabrook Project, from the craft person to the highest level of executive management, had some idea what the project welding/radiographic reject rate was, and d) Joseph Wampler was fired for Unsatisfactory Job Performance and for no other reason. See Seabrook press release. (Enclosure 10).

We The People
of the United States, Inc.

Stop Chernobyl Here

DOCKET NUMBER

DATE UNTIL

50-443/444-01

Bill Gynor

'89 MAY 10 P 3 13

May 8, 1989

Mr. Samuel Chilk
Secretary
Nuclear Regulatory Commission
1 White Flint North
16th Floor
1155 Rockville Pike
Rockville, Maryland 20852

SERVED MAY 10 1989

Dear Mr. Chilk,

Enclosed is testimony for inclusion in the records of the licensing proceedings for the Seabrook Station Nuclear Power Plant in New Hampshire (docket #50-443/444). The enclosed (NRC) documents, demonstrates that Seabrook Station has been built using counterfeit defective components. The NRC has not required Seabrook Station's owners to find and replace the counterfeit components; instead the agency has lowered the engineering safety standards.

The enclosed report also enumerates other safety violations in the plants construction which in combination with the defective materials will create a serious danger to public health and safety if Seabrook Station is allowed to operate.


We The People opposes NRC decision #89-7 as of May 3, 1989, to grant Seabrook Station an operating license. Such a decision compromises public safety, violating the NRC Congressional mandate to protect the public.

Furthermore, a decision to allow operation undermines public confidence in the agency itself. Licensing Seabrook Station is the most recent incident of ill-advised decisions on the NRC's part. For example, last January the agency allowed the Pilgrim Nuclear Plant in Plymouth, Massachusetts, to restart, despite extreme opposition by the public and by the state. Pilgrim has not yet been able to reach full power. In fact, it has had to shut down seven times since January due to one emergency or another. Some of the accidents in the last six months have also resulted in worker contamination.

The NRC's reputation now may be damaged beyond repair in the public's eyes. A majority now agree with Massachusetts Attorney General Shannon's opinion that "the NRC should change its name to the Nuclear Advocacy Commission."

The agency is trampling the rights of the American people and in the process is cracking the democratic foundation on which the United States is built. The enclosed information proves that Seabrook Station will endanger the public if the NRC insists on allowing it to operate. If you ignore this information and persist in licensing the plant, you will prove, beyond a shadow of a doubt, that the NRC is a disgrace to this country.

Sincerely,


Stephen B. Comley
Executive Director

We The People
of the United States, Inc.
Stop Chernobyl Here

A catastrophic nuclear power plant accident in the U.S., worse than Three Mile Island or even Chernobyl, is imminent. Such an accident will most likely be caused by mechanical failure due to the tens of thousands of substandard parts and materials, falsely certified as safe, recently discovered to be installed in a majority of U.S. nuclear plants (1).

Materials have been counterfeited in two ways: cheap imports were falsely marked or certified to say they were made in the U.S. and meet required safety standards, and used parts were refurbished to appear new then falsely labelled and certified as having passed safety tests. These substandard materials currently fall into three broad categories: piping materials, fasteners, and electrical components. However, the possibility that other categories of materials are involved cannot be dismissed. The counterfeit parts frequently do not meet the standards engineers require to ensure nuclear plant safety. Seabrook Station has received materials in all three categories.

In 1985 Nuclear Regulatory Commission (NRC) testimony put the likelihood of a devastating nuclear plant accident at 45 percent every 20 years, a probability in itself unacceptable. The probability has now multiplied substantially. It was not until 1988 that extensive installation of counterfeit materials in nuclear plants was uncovered. The NRC is well aware of the serious danger to public safety posed by these substandard materials. But the agency has caved in under nuclear industry pressure. Instead of requiring detection and replacement of substandard counterfeit parts, the NRC has lowered nuclear plants safety standards, so the counterfeit parts now meet the revised standards.

To protect public safety, it is of particular importance to prevent operation of Seabrook Station in New Hampshire. Substandard parts built into that plant, in combination with faults in the plant's construction, create a high probability of a serious accident if it is activated.

During an NRC-ordered inspection, Seabrook Station's owner reported that at least 369 suspect piping fixtures had been found at the plant as of August 25, 1988 (2), but said the fixtures met required safety standards. However, a chemical analysis of Seabrook Station fixtures in October, 1988, by an independent

laboratory, revealed that some materials tests had failed to meet safety requirement. Several flanges in the "service water" system require replacement (3).

Dravo, a piping supplier, and Pullman-Higgins, the plant's contractor which installed the piping (until the company was fired in 1984), were both listed as recipients of counterfeit piping in NRC documents (4).

Seabrook Station was plagued with piping safety problems long before the revelations of counterfeit piping became a concern in 1988. In 1982 and 1983, a piping weld inspector falsified 2400 inspections. After he was arrested some of the welds were re-inspected, but nearly half of them were never physically re-examined; many were inaccessible by then (5). Level II weld inspector who was hired after the inspection scandal to examine records and weld x-rays, conducted only 20 percent of the welds he inspected, had failed (6). He was fired, he believes, because he found so many faulty welds. In 1984, a Seabrook Station welder informed the NRC that welds in Dravo piping were flawed, but the NRC concluded they were not a safety concern (7). *see Wang*

fact
In 1985, an inspector trainee failed the test to qualify as an Authorized Nuclear Inspector (ANI) but performed inspections for Seabrook's insurance company. The ANI is a role critical to Seabrook Station's legally insured status. The insurance company dropped an investigation undertaken of this violation, and the NRC accepts Seabrook Station's contention there was no wrongdoing (8).

The NRC consistently exhibits a lax attitude toward safety by allowing these and other safety violations to stand, with only a token glance at evidence provided by the utility, on the assumption that backup systems and other inspections would cover for any breakdowns.

These past problems are significant because the NRC decided that installed counterfeit materials which had passed weld inspections should be left in place, hoping that weld inspection programs would have uncovered any substandard counterfeit piping installed (9). But those programs were riddled with problems, and throughout construction, inspectors were unaware of the counterfeit materials.

Seabrook Station received safety-related electrical components supplied by an Illinois firm engaged in counterfeiting according to an April, 1988, NRC notice (10). Two months later, during a raid of California electrical supply companies engaged in counterfeiting, one of the companies owners told a U.S. Marshal that substandard circuit breakers had been sold to nuclear plants throughout the U.S. (11) for the last ten years (12). General Electric and Westinghouse labels were among the false labels affixed to these electrical components (13), a type used in nuclear plant safety systems (14). When the Diablo Canyon nuclear plant checked circuit breakers bought from the California companies, every circuit breaker tested by the plant failed (15).

According to Thomas Murley, NRC Director of Nuclear Reactor Regulation, the agency knew of substandard fasteners sold to nuclear plants for two years before the NRC ordered any action taken (16). A Maryland nuclear plant had used commercial grade fasteners in safety systems; when the fasteners were tested, 339 of 1539 failed (17). The NRC ordered a very limited testing program: plants had to test 10 safety and 10 non-safety fasteners in their warehouses (18). Seabrook Station construction was completed two years ago, and the problem has been public knowledge for a least that long, so it is unlikely flawed fasteners would be found in the warehouse; more likely they have already been built into the plant.

Assumptions of nuclear plant safety are based on several factors: redundancy, meaning backup systems will compensate for failures in main systems; and extensive inspection program that guarantee quality construction. Yet Seabrook Station's flawed inspection program, the substandard counterfeit materials built into the plant, and a series of NRC documents and statements belie the conclusion the nuclear plant is safe.

A failure of a non-safety system could "challenge safety systems," meaning it could trigger a safety system failure, the NRC noted in an August, 1988, memo (19). The process for upgrading non-safety components for use in safety systems, a common practice, is flawed, according to another NRC document (20). Materials inspections by the NRC itself do not work, admitted the NRC's own Thomas Murley (21). He also said that once a percentage of components with a specific model number had been tested, there was no requirement for testing further orders of that model number

(22). Vendors of supplies and equipment to nuclear plants do not always carry out required inspections correctly, the NRC warned in June, 1988 (23). Guarantees that the nuclear plants are built safely are based on vendor certifications:

The NRC refuses to take a position protecting public health and safety. The NRC's attitude was demonstrated by the agency's initial effort to pass on responsibility for dealing with the counterfeit electrical components to the industry (24) and manufacturers (25). Additionally, after several months of fumbling for a solution to the counterfeit piping problem, the NRC, under industry pressure, cancelled its order that the counterfeit, substandard materials be found and replaced (26).

The NRC also delayed for long periods of time before notifying nuclear plants of the various types of counterfeit materials distributed to them. In the case of the fasteners, the agency delayed for several years (27). The NRC knew about the California counterfeit circuit breakers for three months before the agency notified possible recipients of the problem (28), and waited a full eight months before requiring any inspections for flawed circuit breakers (29). In the case of the counterfeit piping materials, the NRC was aware of the of the problem as early as January, 1988 (30). But the agency actually knew about it earlier and did not notify nuclear plants until May 6 (31). By the fall, the NRC had dropped any requirement for further investigation by nuclear plants of piping problems (32).

In all cases, the actions the NRC required are inadequate. The agency lowered safety standards for nuclear plants (33) to accommodate the unsafe conditions. Corrupt NRC policies have set the stage for a major disaster. Since the agency will not avert this disaster, it is up to the people of this country and the elected officials who represent them to intervene, both to prevent activation of Seabrook Station, and to fully investigate the NRC.

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New Hampshire Yankee
January 11, 1991

ENCLOSURE 9 TO NYN-91002

EXTRACTS FROM TRANSCRIPT OF DEPARTMENT OF LABOR
PROCEEDINGS: JOSEPH D. WAMPLER
VS. PULLMAN HIGGINS, MARCH 19, 1984

NOTES TO ENCLOSURE 9

All underlined transcript material is by Mr. Wampler. These citations consist of direct and indirect referrals to the YAEC 100% review of radiographic film and, on transcript pages 219-220, Mr. Wampler's statement that he was not aware of any film-review violations.

AS
OFFICIAL TRANSCRIPT OF PROCEEDINGS

BEFORE THE

U.S. Department of Labor

OFFICE OF ADMINISTRATIVE LAW JUDGES

CASE No. 84-ERA-13

In the Matter of:

JOSEPH D. WAMPLER

VS

PULLMAN HIGGINS COMPANY

Place Portsmouth, N. H.

Date March 19, 1984

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Court Reporting Services

1600 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22209

1 Q Do you recall whether or not you included this as an
2 exhibit in the copy of your complaint to the Labor Board?

3 A I don't remember if I submitted that.

4 MR. WOICCAK: If I may, your Honor, I have a
5 copy of the complaint that Mr. Wampler submitted and it
6 refers to Attachment No. 4, Site Level III Duties and
7 Responsibilities, September 27, 1983. Although Mr. Wampler
8 might not remember it, I believe it is already a part of the
9 record and I would ask you at some point to refer to that.

10 JUDGE DI NARDI: Yes. That document is already
11 in evidence as Attachment No. 4 to ALJ Exhibit No. 5. The
12 document is dated September 27, 1983?

13 MR. WOICCAK: That's the one.

14 JUDGE DI NARDI: The document is already in
15 evidence.

16 Q Could you tell us what a Site Level III does? What does
17 that mean?

18 A Well, technically, I oversee all Non-Destructive
19 Inspection on Seabrook performed by Pullman-Higgins. There
20 are different areas in Non-Destructive Inspection starting at
21 a Level I, who is an individual just starting out in a
22 business. There are a certain amount of hours and months
23 that they are required to have training and formal education.
24 Then from there you move to a Level II.

25 A Level II is required to have more training

1 and education, more on the job training. Basically a Level II
2 performs the functions as dictated by a Level III. He can
3 calibrate, he can perform the job.

4 The Level III which takes anywhere between
5 five and fourteen years to become, he reviews all procedures,
6 writes techniques, dictates the inspection medium to be used,
7 how it is to be used, any safety requirements that go with
8 that. He also oversees all of these functions.

9 At Seabrook I had no direct supervision.
10 However, I had the final authority or technical responsibil-
11 ity for all of the NDE. I would interface with Yankee with
12 radiographic interpretation.

13 Q Excuse me, Mr. Wampler. For the record, when you refer
14 to Yankee, what do you mean?

15 A Yankee Atomic. They are basically the Owner's
16 Representative for Seabrook Station.

17 Q Okay?

18 A Part of my job was to Level III review of all radiographs
19 by Pullman-Higgins, which was one hundred per cent review.
20 I had to review every radiograph that went through the
21 Department for completeness, paperwork, if in fact the
22 defects had been called out, if there were any for complete-
23 ness prior to going up to Yankee for their approval.

24 I wrote a lot of letters to the State of
25 New Hampshire, dealt very heavily with the Manager of

1 Q Directly above him I believe you said was Mr. Davis?

2 A Yes, sir.

3 Q Did you work with those people on a daily basis with
4 regard to your functions and their functions?

5 A Yes, sir.

6 Q They were all located at Seabrook, correct?

7 A Uh hum.

8 Q At some time after your arrival at Seabrook, were you
9 assigned certain tasks with regard of reading of the x-ray
10 reports or the x-rays themselves, excuse me?

11 A Yes. The first two jobs were to complete an NRC finding
12 on ultrasonics that they had done and to review film.

13 Q With regard to the reviewing of the film, what were you
14 given and what were you told about it?

15 A Well, as it started, it was catch up on production film
16 and then start on the backlog film. Everyone showed me about
17 three file cabinets and said, here, you are going to have a
18 good time, all this film is backlog film.

19 So, I started very slowly going through that
20 trying to get into Yankee.

21 Q Tell us about this backlog film? What was it and why
22 do you refer to it as backlog film?

23 A It was film that was shot either months before I was
24 there or when they were without a Level III on site, they
25 would bring in Corporate but they weren't keeping up with

1 the film that was going through the Department. There was
 2 film in there dating back to 1981, 1982. A lot of it was
 3 1983, early 1983. It was all film that was shot. Lines
 4 were supposedly accepted and they were just waiting on the
 5 film for my review to go to Yankee Atomic.

6 Q What was your understanding with regard to whether or not
 7 that film had ever been reviewed by a Site Level III?

8 MR. BROTH: Objection. Your Honor, at this
 9 time I believe we are reaching the area that I alluded to
 10 earlier in my opening remarks regarding expanding the scope
 11 of this hearing beyond the scope of the complaint filed by
 12 Mr. Wampler with the Department of Labor. That complaint is
 13 detailed and specific in its allegations regarding any and
 14 all potential violations of Rules and Procedures and that
 15 may or may not have taken place at Seabrook Station. It in
 16 fact states that the facts of the complaint are as follows,
 17 by alluding to, suggesting, or attempting to raise at this
 18 time the suggestion that other violations of rules and
 19 procedures may or may not have taken place. Mr. Wampler
 20 is seeking in effect to re-open a closed investigation
 21 beyond the Statute of Limitations for raising such arguments.

22 He had thirty days from his date of termination
 23 to file a complaint, he did so. He had thirty days during
 24 the investigation period to consult with his Counsel, to
 25 speak and present evidence and materials to the Department

1 Q Did you proceed to do it?

2 A Yes, sir, I did. I started reviewing film on a non-stop
3 basis. I started finding excessive rejects. My own
4 estimation of excessive is anything over five per cent.

5 They were rejecting up to nineteen to twenty per cent on my
6 own review. I went to my boss and informed him of that.

7 Q When you say boss, by name who are you referring to?

8 A Mr. Davis.

9 Q What if anything did you tell Mr. Davis about your
10 findings?

11 A I told him that we were going to be in trouble because
12 if my reject rate was at nineteen to twenty per cent, Yankee's
13 is going to a lot higher. He said, we will worry about it
14 when it gets here.

15 Q What did you do after that?

16 A I went back to reviewing film and logging it in my book.
17 Any of the packages that required Non-Conformance Reports
18 were put into a separate compartment because I wanted to get
19 the bulk of the film completed and into Yankee Automic's
20 hands. That's what I was told to do, that's what I was going
21 to do. So, the discrepant film packages that I found, if I
22 could handle it as a paperwork error, I handle it as a paper-
23 work error, initialed the paperwork and sent it on its way.
24 Anything that was more than a paperwork error, if it was
25 re-x or if there was an indication in the weld that I didn't

1 like, I put it off to the side and then reviewed it again.
2 If it was a rejectable indication, then as soon as the bulk
3 of the film was into Yankee Atomic's hands, then I would
4 sit down and write Non-Conformance Reports rather than have
5 Yankee Atomic write Deficiency Reports.

6 My point on it was that I would rather find
7 it than have Yankee Atomic write us Deficiency Reports.

8 Q Could you summarize for us the types of findings that
9 you have made with regard to these x-rays?

10 A There were numerous paperwork errors, there were some
11 lack of fusion rejects, there were some porocities, there
12 was some ground film which is unacceptable for a Code. The
13 film was required to be archival quality and if it was
14 brown it was not archival quality, you cannot read the weld.
15 There were some views of a weld that we couldn't even read
16 the weld. It was so blown out that you couldn't really read
17 the weld. Those were put into packages for later on. Some
18 of them were for re-x's which we were doing when I left.]

19 I had put a couple on the list and said, okay, I want you to
20 go out and re-shoot this weld because I couldn't read the
21 film, and it wasn't just me. I had Michael Drew and
22 Eddie Bolls, every once in a while we'd all three sit down
23 and put our heads together and try to figure out what we
24 were going to do with some of the film. Sometimes we didn't
25 agree. Like I told them, if they'll convince me that I am

1 The biggest hang-up that we had was if we were in a turnover
2 where we wanted to turn a complete system over, we wanted
3 to make sure that the radiographs were complete. Some of
4 them were in that area but some again weren't.

5 Q I would like to direct your attention to early December
6 of 1983. Do you recall any specific conversations with
7 Mr. Davis with regard to the x-rays?

8 A Yes. I spoke to him about the excessive reject rate and
9 the fact that we were getting a lot of film back from
10 Yankee on Deficiency Reports, and I was informed point blank
11 that this was going to reflect on me, that I wasn't complet-
12 ing my job since I was a Level III, and that it was my
13 responsibility and that it would reflect rather negatively
14 on myself.

15 Q What response if any did you make to that statement?

16 A I asked him how it could reflect on me. I wasn't even
17 here when I shot the welds. He said, it's your job. But I
18 said, I wasn't here. All I am trying to do now is cover
19 the Company and try and perform what I can to get things
20 done according to Code.

21 Q Now, if these situations with the welds were not corrected,
22 what effect if any would that have on the project?

23 A Well, it could have a detrimental effect on the project
24 if you had a line come apart. Some of them weren't that
25 gross. It was definitely not to Code and what the final

YAEC
DR 527

1 Q A delay, a backlog in reviewing those films, that is
2 not a violation of anything, is it?

3 A Not that I know of. There is about 2,000 other packages
4 of film that were returned to them from Yankee and what I
5 was trying to do is stop it from going to Yankee to come
6 back.

7 Q My question to you, sir, was whether a delay or backlog
8 in films to be reviewed is a violation of any regulation
9 or procedure that you are aware of?

10 A No.

11 Q No one told you to go and look at those films and passed
12 films that you thought were improper, did they?

13 A No. I was just told to get them done.

14 Q You were just told to get them done?

15 A Yes.

16 Q Your job was to get them done?

17 A Yes.

18 Q They required Site Level III review?

19 A Yes.

20 Q There had been four or five months prior to your employ-
21 ment where there had been no one there to review them?

22 A Yes.

23 Q Is it fair to say that with ongoing Radiographic Testing
24 being performed a backlog was going to develop?

25 A It shouldn't develop.

1 A No, not necessarily on those items, on techniques
2 employed, on fact of diladensity, on the fact of artifacts,
3 on the fact of film interpretation, I was the final word for
4 those and I informed him that diladensity wasn't allowed,
5 I informed him that we had to watch our techniques. I
6 informed him that we had to watch artifacts. There was a
7 lot of things that were technically going on because I was
8 catching it from Yankee Atomic.

9 So, I would give it back to the Supervisors
10 of that particular area. It just so happened that Larry's
11 area, Radiography, was catching hell from Yankee Atomic.

12 Therefore, I am in the middle. It is my job
13 to try and stop that. That's exactly what I was trying to
14 do is to stop Yankee Atomic from coming after Pullman because
15 I was still a Company Employee.

16 Q Is it fair to say you saw that as your job as to inter-
17 pose yourself or to instruct Larry Steele as to ways that he
18 could modify his operation to take the heat off the Company
19 as far as Yankee was concerned?

20 A Sure. To provide a Code acceptable Radiograph, that's
21 all anybody asked for.

22 Q You saw that as your obligation to instruct Mr. Steele
23 on those?

24 A As Technical Authority, yes. That was my obligation. I
25 was technically responsible for the NDE's, therefore, yes.

1 the press would have with regard to the resolution of today's
 2 case because they were obviously here, they were obviously
 3 interested in it, and I felt that it was only fair that we
 4 work out a joint statement and that there would be no further
 5 statements by either the Company or Mr. Wampler with regard
 6 to the resolution of this case. But there was certainly no
 7 suggestion by me that Mr. Wampler would hide any Safety Violations
 8 because none have been hidden.

9 Anything that he knows about has been reported.
 10 In fact, it is part of our case that that was the reason
 11 that he was fired.

12 JUDGE DI NARDI: All right. As an Officer of
 13 the Court, Mr. Woicak, the Court is satisfied with your
 14 offer of proof as to the terms of the settlement proposal.

15 MR. WOICAK: Thank you, your Honor.

16 Q One final question, Mr. Wampler, just to be clear and to
 17 clarify a statement made by your Counsel. The film that you
 18 talked about on direct examination, there is no violation
 19 that you are aware of in having a backlog of films to be reviewed,
 20 that's correct?

21 A Correct.

22 Q There is no violation that you are aware of that has
 23 occurred in the reviewing of the film by Pullman Power
 24 products and by Pullman-Higgins?

25 A No that I am aware of.

1 Q You are not aware of any violations in reviewing the
2 film that has occurred at any other level at the site?

3 A No.

4 Q You are not making an allegation now of any violation
5 or procedures in regard to x-ray films?

6 A No.

7 Q You made no such allegation to the Department of Labor
8 Investigator as part of your complaint filed earlier this
9 evening?

10 A No.

11 Q The only allegation you presented to the Department of
12 Labor Investigator, the only potential violation that you've
13 discussed here today is the Barrier Question, isn't that
14 correct?

15 A Say that again?

16 Q The only potential violation of any rule or procedure
17 that you discussed with the Department of Labor Investigator
18 that you placed in your Complaint, and that you discussed
19 here today was the Barrier Safety Question, is that correct?

20 A Yes.

21 MR. BROTH: No further questions. Thank you,
22 your Honor.

23 JUDGE DI NARDI: Before you rest with the
24 witness, Mr. Broth, I have before me RX-2. Sometime earlier
25 in the proceeding you had RX-2 as the February 7, 1984 letter

New Hampshire Yankee
January 11, 1991

ENCLOSURE 10 TO NYN-91002

PORTSMOUTH HERALD PRESS CLIPPINGS

Seabrook station case

Fired safety official withdraws appeal

By NEIL J. COTE
Staff Writer

Lawyers for a former Seabrook Station safety official and the company that fired him apparently reached a private settlement yesterday.

The safety official, Joseph Wampler, was appealing a U.S. Department of Labor ruling that his dismissal from Pullman-Higgins, a Pennsylvania firm that's a major Seabrook Station contractor, was solely due to job performance.

Hearings on the matter got underway Monday morning before Administrative Law Judge David W. DiNardi, and were scheduled to continue yesterday at a Holiday Inn conference room.

But instead, lawyers for Wampler and Pullman-Higgins spent most of the morning conferring privately and phoning other parties. Finally at 11 a.m., both sides returned to the conference room and suc-

cessfully requested a continuance. Edward Wolccak, attorney for Wampler, told DiNardi that the parties would continue discussions privately.

In a joint statement, the lawyers announced that Wampler had withdrawn his appeal of the Labor Department ruling, but offered little explanation on how the decision came about.

"According to Mr. Wampler, the case arose after he and the com-

pany had a difference of opinion regarding the proper interpretation of safety rules concerning non-destructive testing, which like many regulations, can be read in more than one way," the joint statement read. "Mr. Wampler and the company have resolved their differences in this case."

The statement, however, seemed like a watered-down version of the prior day's testimony, as Wampler had said he was fired for

trying to enforce safety procedures that were of little concern to Pullman-Higgins. Wampler had said that the company maintained a careless attitude toward the exposure of Iridium 92, a highly-hazardous radioactive substance that technicians repeatedly were in contact with, and that Higgins-Pullman was lax in its safety tests and record-keeping. According to Wampler's Monday testimony, perhaps 20 percent of welds the company was responsible for were faulty.

Wolccak also had told DiNardi Monday that Pullman-Higgins was most remiss in its enforcement of safety precautions, and that his client's superior was a construction crew that cared far more about completing the project than how safe it was or wasn't.

Lawyers for Pullman-Higgins maintained that Wampler was fired because he was insubordinate and unwilling to maintain a satisfactory working relationship with other management employees. The lawyers also accused him of being willing to keep mum about any safety matters in return for a cash settlement.

Accounts of Wampler's firing and appeal had received heavy play in the state's media, but Wolccak and Pullman-Higgins lawyers, Mark Broth and Edward Shoemaker, said in their joint statement that facts were repeatedly distorted.

"Mr. Wampler and the company regret that many of the accounts of this case in the media were inaccurate and that Mr. Wampler and his attorney were misquoted regarding important aspects of this case," the statement said. "The safety questions have been reviewed by appropriate state and federal agencies and no violations have been found."

News stories about the dispute broke last week, but Wampler and Wolccak told DiNardi Monday that they didn't solicit the media's attention. Wampler, who was quoted in a Herald story Sunday, said he never spoke to the writer, Dwight Adams, but Adams claims otherwise.

Adams says Wampler called The Herald on March 13, and that the fired safety official spoke to him on two other occasions. According to Adams, Wampler called him at his home March 14, and asked him to speak with Wolccak.

A reporter at another newspaper says he received an anonymous call last week, and that the caller suggested he contact Wolccak.

Wampler, however, refused to speak with reporters yesterday, merely nodding or shaking his head when questions were asked.

Portsmouth Herald, Wednesday, March 21, 1984

Feature
weekly

Ex-Seabrook worker claims violations

Rx6
3 ruling reserved

By DWIGHT ADAMS
Staff Writer

SEABROOK — Joe Wampler, like many people who have lost their jobs, felt wronged when he was handed the pink slip. He was fired, he says, only because he was doing his job correctly. He vowed to do everything he could to get his job back. The lawsuit sounds familiar, but Wampler's story has more serious implications, partly because he has pursued it as far as the U.S. Department of Labor's doorstep and also because of the nature of his work. On Monday, March 19, Wampler

will be able to speak his piece before an administrative law judge in a public hearing at 10 a.m. at the Holiday Inn, Portsmouth. Here is his side of the story. Wampler was a certified, site-level III, non-destructive inspector at Seabrook Station's nuclear power plant before he was fired on Jan. 3. That was four months after he started work for Pullman-Higgins of Williamsport, Pa., a major contractor at the site. His job, as he describes it, made him responsible for radiation safety in his work area, which meant inspecting the welds on metal pipes

and supports used in construction of the plant, as well as supervising the technicians who x-rayed those welds to check for defects. Wampler noticed an employee repeatedly violating safety standards by entering the restricted X-ray area and as his superior ordered him to stop. When the employee refused to do so, Wampler promptly reported the incidents to his superiors. However, instead of being complimented, Wampler was fired soon after for causing "dissension" between management and workers, according to Wampler.

Wampler, 34, has spent at least 12 years doing non-destructive inspection, which is also used in the airline and defense industries. It is a technique employed whenever a weld has to be checked thoroughly, without damaging it in the process. The weld is actually photographed with gamma rays and then inspected for any cracks. To do that the camera uses Iridium-92, a radioactive substance which is exposed for varying lengths of time needed to photograph the weld. That's where the danger lies. "It's radioactive and it's dangerous," said Wampler's at-

torney, Edward R. Woiccek, Thursday. "The source can certainly kill someone if he's been exposed to it too long." While the rod of Iridium-92 is held inside the camera, no radiation can escape to the outside, Woiccek said. However, once it's cranked from the camera and exposed to film to photograph a weld, the technician and helper need to carefully control the radiation which is released. Exposures can take anywhere from

seconds to as long as five hours, depending on the thickness of the weld. The most common way, according to Woiccek, is for technicians to erect a radiation barrier, usually a rope with signs encircling the restricted x-ray area and keeping everyone else out. Before setting up a barrier, technicians first calculate how far the barrier must be from the source, depending on the amount of Iridium used and the length of exposure. They also periodically monitor the surrounding area with meters to check radiation levels. While x-raying of a weld is occurring, no one else is allowed to enter the restricted area, Woiccek said. If that unprotected person could be directly exposed to radiation. When Wampler one day noticed a supervisor repeatedly entering the restricted area, without the technicians performing the weld even aware of the violation, he ordered the supervisor to stop.

The supervisor, for whatever reason, refused to obey Wampler's orders. Wampler then went to his superiors on three separate occasions — at one point talking to three of them at the same time — but the supervisor continued to violate the restricted area. Finally, in desperation, Wampler asked the eight technicians working on his shift to sign a statement confirming that his charges were correct. All but one technician voluntarily signed the petition, Woiccek said. Shortly after, five of those seven were fired. Wampler was fired the next working day after that. "We feel it was one of the reasons he was fired because he caused dissension between management and the workers and yet seven of the technicians supported him. Joe Wampler was fired and he was fired doing his job."

Jack Corcoran, residential construction manager for Pullman-Higgins at the Seabrook site offered comment when asked about Wampler's charges, because the matter is now pending. However, John B. Cavanagh, spokesman for Public Service Co. of

New Hampshire, the majority owner of the Seabrook plant released the following statement on Friday. "We are advised by legal counsel of the contract that the Department of Labor, after a thorough investigation, determined on Feb. 7, 1984 that Mr. Wampler was fired for unsatisfactory job performance and for no other reason. The upcoming hearing is Mr. Wampler's appeal of the Feb. 7 ruling by the U.S. Department of Labor." Wampler questions the objectivity of the investigation, since he says he or Woiccek never talked with the Department of Labor representative and has decided to press his appeal further.

In the next round, a public hearing has been scheduled for Monday at 10 a.m. in front of David W. DiNardi, an administrative law judge from Boston, who will hear arguments and the evidence of the case, before ruling. A second hearing has been scheduled for Tuesday morning, if needed. Woiccek said he wants to prove that Wampler was wrongfully fired and then try to get him reinstated at his former position with back pay. If Wampler is still unsuccessful, Woiccek added that a lawsuit filed against Pullman-Higgins could be "a distinct possibility."

Safety to Page 6a

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January 11, 1991

ENCLOSURE 11 TO NYN-91002

PULLMAN POWER PRODUCTS
RT STATUS SHEET

NOTES TO ENCLOSURE 11

This document, developed by P-H, was used to report the unadjusted reject rate to United Engineers (UE&C), Seabrook Station's Construction Managers. These extensive reports are not required by any construction code or standard. They were used by P-H and UE&C, as each description explains, to manage radiographic pipe welding at Seabrook Station. Page 4 of this enclosure most likely is the last contribution Mr. Wampler made to Seabrook Station construction (unadjusted) reject rate. This P-H rate (19.88%) is accumulative from 1979.

DATE: Dec 29-30, 1983

Thursday & Friday

FULLMAN POWER PRODUCTS
R.T. STATUS SHEET

SYSTEM/LINE/ISO.	F.W. #	REPAIR NO. #	WELDER I.D.	BLDG.	DIMETRICS/ INFO./RESHOT	RESULTS	CONTROL #
2 CBS-1226-1	F014	0	SM	Unit 2	✓	accept	
CS-303-03	F309	1	GN	PAB	✓ pull weld xxx-4572	accept	
CS-374-2	F050	0	GN	PAB	✓	accept	
FW 4631-19	F1904	0	PP	MSAW	✓	accept	
	F1909	0	PP		✓	accept	
	F1910	0	PP		✓	accept	
FW 4634-01	F106	Info	MS		✓	reject	
FW 4634-03	F303	1	✓ RE	TRUB	✓	accept	
RC 59-05	F503	1	✓ F5	Cont.	✓	accept	
RH 16402	F215	0	YD	Valve	✓	accept	
"	F216	0	YD	Valve	✓	reject	2280
SB 1310-05	F513	0	TS	Cont	✓	accept	
CS-357-05	F506	0	GV	PAB	✓	reject	2283
CS 362-01	F108	0	SL	Cont.	✓	accept	
CS-374-2	F049	0	GN	PAB	✓	accept	
RC-15-07	F709	0	K5	Cont	✓	reject	2282
RC-59-05	F502	0	F5	Cont.	✓	accept	
SI 20201	F103			Info	✓ on exca.	reject	
RC 49-01	F103	1	✓ 3S	Cont	✓	reject	2281

Happy New Year!

Keep up the good work in "1984"

R.T. WELD REPAIR PROBLEM REPORT

	YS./LINE/ISO.	WELD #	SIZE	THE.	WELD LENGTH	DEFECT SIZE	STA.#	TYPE DEFECT	WELDER	I.D.	REMARKS
7	R+1 16205	F216	3	216	11	1/8	01	CPD	T. Curran	YD	
8	CS 35705	F506	4	237	14	1 3/8	35	RC/LOF	Harwin	GV	
9	RC 1507	F709	3	438	11	1/2	34	2030	Good	K5	
13	RC 4901	F103	14	1406	44	1/2	12	PILOF	Good	35	

R.T. WELDER REJECTION RATE

	WELDER'S NAME	I.D.	NEW JTS.	REJ.	REJ. %	REP.	REJ.	REJ. %	COMMENTS
12	Harwin	5M	34	6	17.2	2	0	0	IN
	Harwin	FR	40	10	25	2	2	15%	IR
	Harwin	GN	57	10	17.5	14	3	21%	IN IR
	Harwin	PP	14	14	100	29	6	20.7	3N
	Kimmer	RF	19	3	15.8	20	11	22	IR
	Kastner	B	16	1	6.3	1	1	100	IN
	Teague	YD				2	1	50	2R
12.31.83	Harwin	5L	69	8	11.6	15	3	20	IN
	Hall	3S	42	2	4.8	17	2	11.8	IR
	Teague	FS	61	10	16.4	13	2	15.4	IN
	Harwin	GN	58	10	17.2	14	3	21.4	IN
	Harwin	5V	89	12	14.6	6	0	0	IN
	Good	15	54	6	11.1	24	4	13.3	IN

X-RAY WELDER REJECT RATES & TOTALS

ID	NAME	J T S.	R E J. C.	1/2	1/3	1/4	R E J. C.	TOT'L WELDS	TOT'L REJ'S	#	R E P. P.	R E J. C.	#
	MORTIER	21	2	1	2	1		25	2	82	5	1	20
	GOFF S.	31	2	7		4		42	2	48	17	2	118
SL	HEDBERG	65	8	4				69	8	116	15	3	20
A47	GOFF B.	50	3	5		3	1	58	4	112	3	0	0
AD	GLEASON	7	2	2				9	2	222	8	0	0
B33	PATRIOTTI	34	1	1				35	1	222	4	0	0
C82	SHAFFNER	5						5	0	0	1	0	0
D16	DAVIS	28	1	8	1			37	1	221	8	1	125
EC	HANSELL	11		5			2	16	2	129	4	0	0
F5	LAPLANTE	59	10	2				61	10	164	13	2	154
FR	HEDLEY	5	1					5	1	20			
GD	BUTLER	56	4	6			1	62	5	82	7	0	0
GH	DAIGLE	10	14	4			1	73	15	205	15	2	134
GN	HEBERT	56	12	2				58	13	172	4	3	214
GV	LARKIN	86	12	3			1	89	13	146			
HE	THIBADEAU	67	4	12		1		80	4	5	12	1	10
J5	HEMOND	40	7	2	3			45	7	155	3	0	0
	DOW	36	4	4			1	40	5	125	10	5	0
	KIODO	15	1	2		1		18	1	56	1	0	0
	MOORE	53	2	2	2	1		64	9	14	4	1	25
PP	DOBSON	83	12	7	3		2	114	14	27	6	202	
RF	KINMONS	16	3	2	1			19	3	150	50	11	22
RJ	LYON	42	7	21	1			64	7	107	21	1	45
RN	O'NEAL	40	6	8			2	48	8	117	3	0	0
RP	CARROLL	25	4	3				28	4	142	1	0	0
RY	CASSELLA	55	3	7		3	1	65	4	62	29	2	69
TG	REYNOLDS	50	6	3	1			57	6	107	8	1	125
TS	KASHNICKI	5	1	9	1	1		16	1	63	1	1	100
VP	HACHEZ	20	4	5	2			43	4	95	7	6	122
VX	SMITH	20	2	1				27	2	74			
XD	PHELPS	32	5	14	4		4	50	9	18	56	9	164

X-RAY WELDER REJECT RATES AND TOTALS..

	JTS.	REJ.	1/2	1/3	1/4	REJ.	TOT. WLD.	TOT. REJ.	%	REP.	REJ.	%
CARRYOVERS (COMB.)	1212	148	172	22	16	12	1422	124		291	58	
	191	406	495	56	42	10	2284	556		696	175	
TOTALS	2903	554	3335	24	145	122	3706	720	19.5	1087	23	43
DIMETRIC JOINTS*							135	50	37%	15	5	33%

*Welders not known or accept reject cannot be accurately attributed.

WELDER REJECT RATE 19.88%

Total R.T. Welds to Date (Not including Repairs) 3413

Total R.T. Welds in a repair Cycle..... 54

Total inches R.T.'d to Date..... 137,297 1/2

Total inches Rejected to Date..... 3452

Reject Rate in inches of Weld..... 2 5/8

New Hampshire Yankee
January 11, 1991

ENCLOSURE 12 TO NYN-91002

MEMORANDUM RE: RADIOGRAPHED WELD ACCEPTANCE
January 11, 1991 10, 1984

MEMORANDUM

TO J. J. Corcoran Pullman-Higgins January 10, 1984
COMPANY OR LOCATION DATE

FROM W. J. Taylor UE&C FILE W-1080 PPP 1391
COMPANY OR LOCATION

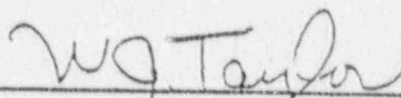
SUBJECT Radiographed Weld Acceptance

No Response Required

Pullman-Higgins weldors and welding staff are commended for their exceptionally fine performance on radiographed welds during the 1983 calendar year. A total of 1670 welds were radiographed during the year with only 252 being rejected. This resulted in a 15.1 percent reject rate for the year. This represents a 51.3 percent improvement over the yearly average of 31.0 percent kept since 1979 and a 39.6 percent improvement over the best yearly reject rate of 25.0 percent established in 1981. This achieved approximately a 50 percent reduction in the number of welds requiring repair welding.

Please extend UE&C's acknowledgement of this accomplishment and our appreciation to your staff, weldors, and pipefitters for their fine efforts in obtaining this high level of weld quality. Jointly, we (management, supervision and craft) should be and are proud of this achievement. We recognize the exceptionally fine skills of our weldors and are proud to have the finest weldors available employed here at Seabrook Station.

We, again, extend our congratulations and gratitude for a job well done. We are looking forward to equally impressive results in 1984.



W. J. Taylor

WJT/RAK/sam

cc: A. M. Ebner
E. M. Hayes
R. A. Kountz
G. T. Pittman
E. R. Degan
P. B. Bohan
R. J. DiStefano

New Hampshire Yankee
January 11, 1991

ENCLOSURE 13 TO NYN-91002

R. T. REJECT RATES

CRITERIA FOR DETERMINING REJECT RATES

NOTES TO ENCLOSURE 13

UE&C Construction Weld Engineering explained to the EAR Program that this criteria was used by UE&C only to determine Seabrook Station overall RT reject rates. Examples: a) P-H reject rate (unadjusted) was 19.88% as reported on page overall of Enclosure 11 for 1983, and b) UE&C, as construction manager, reported a reject rate for 1983 of 15.1%. This was the result of the adjustment delineated in the criteria for determining reject rates.

December 29, 1982

R.T. REJECT RATES

I. Criteria for Determining Reject Rates

- A. Only the results on welds in the final welded condition shall be utilized in determining reject rates.
 1. Grind repairs which are rejected shall not be counted against the new, repair or weldor reject rates.
 2. Grind repairs of surface conditions which were not defects but resulted in unacceptable indication on the original film and are acceptable on the subsequent radiograph(s) shall have the reject deducted from the applicable reject rates. (Weldor, new or repair rates). This grind repair shall not be utilized in determining the reject rate for repairs.
 3. In-process information shots (accepted or rejected) shall not be counted against the new or repair weld reject rate. Rejects shall be counted against the weldor.
 4. Information shots on excavations (accepted or rejected) shall not be counted towards the reject rates.
 5. Welds which have been repaired to the final welded condition which contain the original or new defects shall be counted against the repair weld reject rate. Rejects for original defects shall not be charged against the weldor.
 6. Welds rejected because of base materials defects only, shall not be charged against any of the reject rates.
- B. Joints shall be only counted in the reject rates when all radiography is complete including reshots. This will prevent joints from being counted twice.
- C. Repairs to base materials shall be counted as repairs and not new welds. The repairs (accepted and rejected) will be counted towards the repair reject rates.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 14 TO NYN-91002

EXTRACTS FROM DEPARTMENT OF LABOR PROCEEDING
RICHARD CRAM VS. PULLMAN HIGGINS

(UNDERLINED MATERIAL BY JOSEPH D. WAMPLER)

NOTES TO ENCLOSURE 14

In May, 1984, Mr. Wampler was a witness in a separate Department of Labor Case (84-ERA-17). In these excerpts of the transcript, Mr. Wampler provides evidence of the YAEC 100% review.

1 UNITED STATES DEPARTMENT OF LABOR
2 Office of Administrative Law Judges

3 In the Matter of:) *ACME*
4)
5)

6 Richard Cram,)
7)

8 Claimant,)
9)

10 vs.)

Case No. 84-ERA-17

11 Pullman-Higgins Co.,)
12)

13 Employer.)
14)

Holiday Inn
Portsmouth, New Hampshire

Tuesday,
May 8, 1984

15 The above-entitled matter came on for hearing,
16 pursuant to notice.

17 BEFORE: HONORABLE CHESTER SHATZ
18 Administrative Law Judge

19 APPEARANCES:

20 On behalf of the Claimant:

21 LESLIE NIXON, ESQ.
22 Brown & Nixon
23 80 Merrimack Street
24 Manchester, New Hampshire

25 On behalf of the Employer:

MARK T. BROTH, ESQ.
Gallagher, Callahan and Gartrell
214 North Main Street
Concord, New Hampshire

1 JUDGE SHATZ: Tech. Ops.?

2 A. Tech Operations, yes.

3 Q. Can you tell me generally what the workload was for the
4 radiographers, or are you aware, first of all, of what the
5 workload was for the radiographers on the third shift while
6 you were employed at Pullman-Higgins?

7 A. Their daily workload, they had a small backlog they were
8 basically trying to keep up with. I was adding to it on a
9 daily basis that did not show up --

10 Q. What do you mean when you say you were adding to it?

11 MR. BROTH: Let him finish that answer.

12 A. Well, I was adding -- as I was reviewing prior packages
13 of film prior to my arrival at Seabrook, I would find
14 problems with the film, and I would just, rather than -- the
15 backlog was production oriented, my film was to sell off the
16 welds. I had the final authority over the welds, and if I
17 didn't like it, what I would do is, I would put the film
18 package back in and have it reshot. There was quite a few of
19 those but it never showed up on the backlog. My reject rate
20 and Yankee Atomic, who represent the owner of Seabrook, they
21 were doing the same thing; they would return film to me, I
22 would review it, if I agreed with them, then we would have
23 the technicians go back out and reshoot the weld, so we had
24 quite a few welds in the backlog.

25 JUDGE SHATZ: So that was in addition to the

1 ongoing work that was being done?

2 THE WITNESS: Yes, it was.

3 Q. Had that situation changed at all around the time at
4 which Mr. Cran was terminated?

5 A. As I see it, it was getting worse. It was getting worse
6 in a way that the production backlog --

7 MR. BROTH: Objection, there's no question pending.

8 THE WITNESS: She asked if it was worse.

9 MR. BROTH: He answered that question.

10 JUDGE SHATZ: He said it was worse.

11 Q. All right, why do you say that it was worse -- or as you
12 see it?

13 A. Well, Yankee Atomic was reviewing the film at an
14 accelerated rate, and I was reviewing it at an accelerated
15 rate which wasn't keeping up with theirs, but we started to
16 add more --

17 JUDGE SHATZ: To be reshot?

18 THE WITNESS: To be reshot, yes, sir.

19 JUDGE SHATZ: Now, when you had to have these
20 things reshot, as you call it, do you fill out a formal work
21 order?

22 THE WITNESS: No, sir, I would just hand them the --

23 JUDGE SHATZ: The film, and say, this has got to be
24 done over.

25 THE WITNESS: What we would do is we would write

New Hampshire Yankee
January 11, 1991

ENCLOSURE 15 TO NYN-91002

BESTCO REPORT #58023

APRIL 10, 1985

PAG
RCJ FILE



brand examination services
& testing co.
essex plaza, p.o. box 818
essex, connecticut 06426
(203) 767-2113

April 10, 1985

Mr. Wendell P. Johnson
Vice President
New Hampshire Yankee Division
P.O. Box 700
Seabrook, NH. 03874

Dear Mr. Johnson:

Enclosed, please find a copy of BESTCO Report #58023 which contains the results of my evaluation of the radiographic review program at Seabrook Power Station.

I appreciate the opportunity to be of service to New Hampshire Yankee.

Very truly yours,

A handwritten signature in cursive script that reads "Charles J. Hellier".
Charles J. Hellier
Vice President

CJH:sl

Enc.

cc: Mr. Jerry McDonald,

brand examination services & testing co.

BESTCO Report
#58023
for
New Hampshire
Yankee

Prepared by Charles J. Hellier
Charles J. Hellier, P.E.
Level III Certificate
EI-683

brand examination services & testing co.

Introduction

An extensive review and evaluation of the New Hampshire Yankee Radiographic Review Program has been completed pursuant to the direction of the New Hampshire Yankee Vice President Mr. W.P. Johnson at the Seabrook Nuclear Station.

Questionable items were presented to the utility Level III for clarification were ultimately resolved.

The utility card index system was utilized to provide easy access and retrieval of the vendor and site radiographs which were stored in the QA records vault.

The purpose of the review was to confirm the existence of a controlled radiographic system and to evaluate the effectiveness of the review system.

Evaluation

A series of radiographs were selected from the card index file to determine traceability to the vault location. All sets were located with relative ease and the radiographs from each set were evaluated. Two views disclosed indications on a weld area that had been repaired. There were no notations on the reader sheets that addressed these conditions.

Subsequent evaluation of the surfaces of these welds were made by New Hampshire Yankee QA personnel and the indications were in fact confirmed to be surface and so documented.

brand examination services & testing co.

All other radiographs in the sets were acceptable.

In addition, a series of vendor radiographs that were in question were evaluated.

In general the writer agreed with the findings of the New Hampshire Yankee review. The recommended action to dispose of these questionable radiographs was logical and technically justifiable.

Conclusion

Based on interviews, evaluation of the stored vendor and production radiographs and the disposition of the questionable vendor radiographs, it is the opinion of the writer that the radiographic review program is technically effective and efficient. The programs implementation is slightly, but necessarily on the conservative side.

Upon completion of the plant, a meaningful system of accountability and traceability should continue to be in place.

Recommendations

The one area of concern that occurred during this evaluation, was the lack of documentation for the two weld areas that had been repaired and still revealed indications. The indications were confirmed to be surface. It is recommended that a representative sample of repaired areas be evaluated to assure this condition is not prevalent.

No further recommendations are deemed necessary at this time.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 16 TO NYN-91002

UE&C HANDWRITTEN REPORT ON REVIEW OF RADIOGRAPHS

NOTES TO ENCLOSURE 16

In response to the UE&C Site Construction Manager, UE&C Corporate Home Office placed two Nondestructive (NDE) Level III individuals at Seabrook to review PH completed radiographs. This handwritten report summarized that the interpretations of radiographs for acceptance/rejection by Pullman-Higgins personnel were satisfactory and in compliance with Code and specifications, with a few exceptions.

The exceptions listed were deemed items that, if corrected would increase productivity and decrease unnecessary expenditures. UE&C Corporate Level III determined the radiographic film interpretation to exceed the requirements of the applicable Codes.

JAW

As requested a review of Pullman Higgins
radiographs was performed during the period of
January 13, 1983 thru February 28, 1983.
During this effort the following quantities
of radiographs were reviewed.

- A. Total weld joints - 216
 - B. Total weld views - 840
 - C. Total required double film - 1,680*
- * Multiple film load not included.

The following is a summary of this
review. The interpretation of radiographs
for acceptance/rejection by Pullman Higgins
personnel were satisfactory and in compliance
with code and specification with the following
exceptions.

It was noted that during this
review that approx. 1% of the 1,680 double views
reviewed were rejected by a former Pullman
site radiographer. These radiographs were
acceptable as determined by UFGC interpretation
and were rejected as a result of executing
requirements above and beyond the code.

The next step is to coordinate with the

The following conditions were noted. Individually their effects are minor, however, collectively all of the conditions are cause for a decrease in production.

1. During review of RC loop film, it was noted that locking rings were still installed up to the final radiograph, causing difficult interpretation. Locking rings should be removed as soon as possible.
2. It was noted that the same type film is being used for multiple film exposures, and not different types as required.
3. Excessive amount of films are being used to perform panoramic views. When less film can be used for complete coverage.
When the given number is used.
4. Radiographers should use less film for information radiographs.
5. Radiographic screens should be visually inspected for cracks. Cracks were noted in film which are caused by small cracks in screens.

2. In several instances additional films were used when only two films were required.
7. In a few instances light grinding is being considered a repair.
8. In two radiographic views a repair was made after the original radiograph was accepted.
9. It was also noted that non repair areas are being reradiographed in addition to repaired areas requiring additional exposures.

In summary all of the above conditions would be corrected by adherence to procedures/techniques and closer supervision.

VEFC and Pullman Diggins Personnel responsible for radiographic results and interpretation should establish a closer working relationship.

It is recommended that VEC establish a periodic review of radiographs and problem areas identified by Pullman Diggins or VEC in an effort to correct the problems as noted, and decrease the unnecessary expenditures caused by these problems, and increase productivity.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 17 TO NYN-91002

W. HINZ MEMO AND DRAFT

These documents were found in November of 1990 by the EAR Program. They were developed by Pullman-Higgins ASNT Level III (radiography) to support his investigation of the Padavano NCR. This P-H Level III terminated his employment in early June of 1983 (Wampler was hired by P-H in August of 1983.)

INVESTIGATION BASED ON NCR 4490

Research of Isotope Utilization Logs, Source Survey Cards, and Dosimeter Records show that J. Padovano was involved, as part of a group effort, in the radiographing of 473 joints.

In 374 cases he functioned as a radiographer's assistant with other assistants as part of a three to five man crew under the direction of a Level II or Level III Lead Radiographer.

In the remaining 99 cases he functioned as a Level II Radiographer accompanied (Federal Safety Requirements) by other Radiographers and assistants.

In all cases his work was assigned by the NDE Supervisor, the actual radiograph was witnessed or directed by other Radiographers/Assistants, the film was unloaded and processed by the designated film processor, interpreted and evaluated for acceptance by the film interpreter, reviewed by the Site Level III, reviewed by the ANI (ASME Film), and finally reviewed by the YAEC film reviewer for customer acceptance.

He was not involved with the processing or interpretation/evaluation of any radiographs, eliminating the possibility of penetrameter enhancement. The attached chart shows the overall structure of the radiography program & why J. Padovano's participation would not have a negative effect.

Again, as with his MT & PT inspections, the majority of his work was in the Turbine I area is under B.31.1 Code Classification.

1

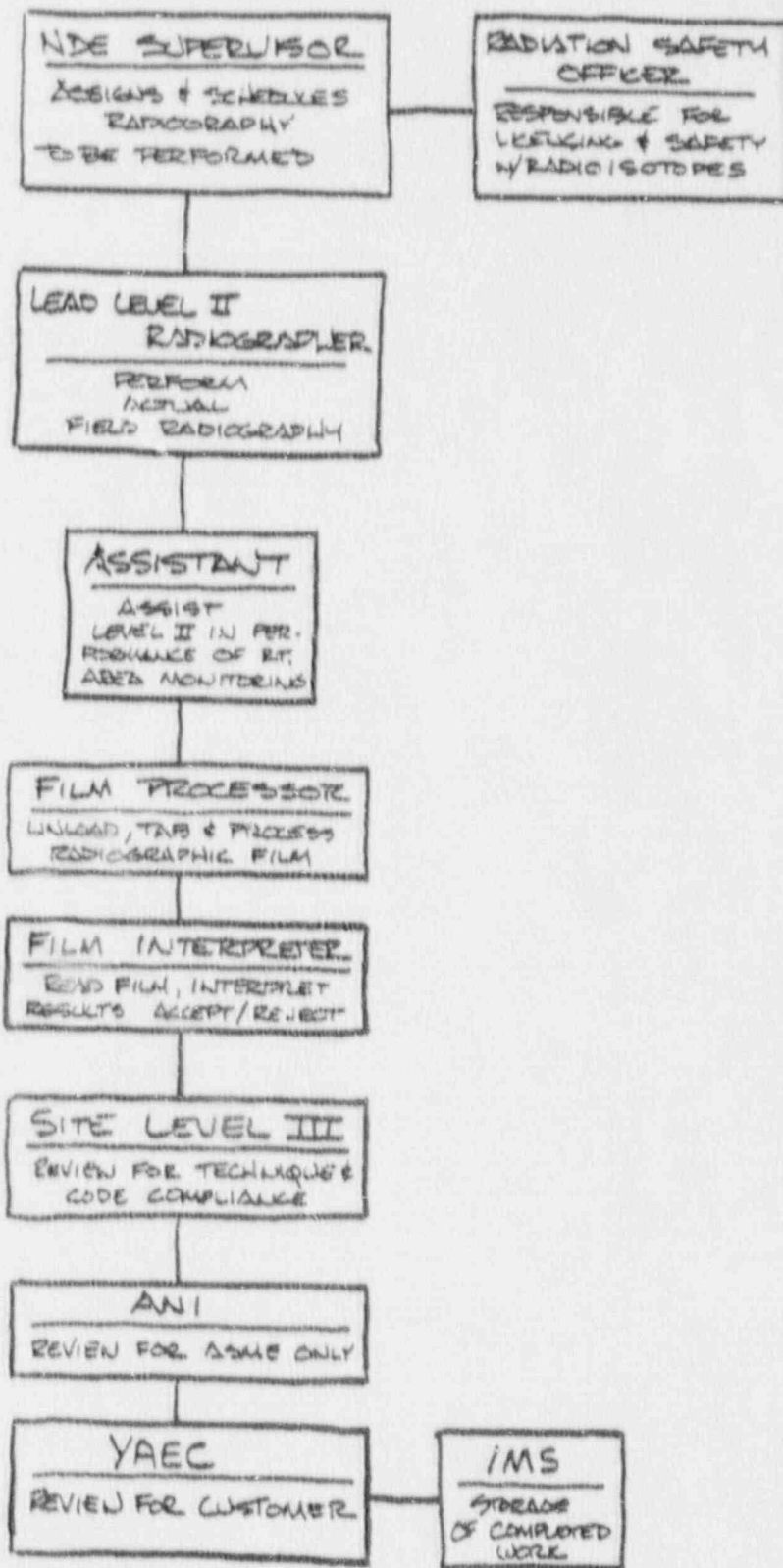
W. Hinz

INDEX - RADIOGRAPHY PERSONNEL

R - PHIL RAMSEY	RT LEVEL III
P - JAMES PASOVANO	RT LEVEL II, ASST.
L - ANDREW LASSWELL	ASSISTANT
Mc - MICHAEL MACCRAE	FILM INTERPRETER, RSO
H - MICHAEL HOLLOW	RT LEVEL II
M - KURT MERTZIN	RT LEVEL II, ASST.
D - MARGA DANIELS	RT LEVEL II
G - THOMAS GRANHAM	RT LEVEL II, ASST.
Dy - ROBERT DOVAL	RT LEVEL II, ASST.
Ng - LANCE NOLBY	ASSISTANT
O'N - JOHN O'NEAL	ASSISTANT
Br - RICHARD BOWLES	RT LEVEL II
T - MICHAEL TERPENING	RT LEVEL II
Hinz - WILLIAM HINZ	RT LEVEL III, RSO

"*" INDICATES WHERE PASOVANO WAS CREW
LEAD LEVEL II.

STRUCTURE

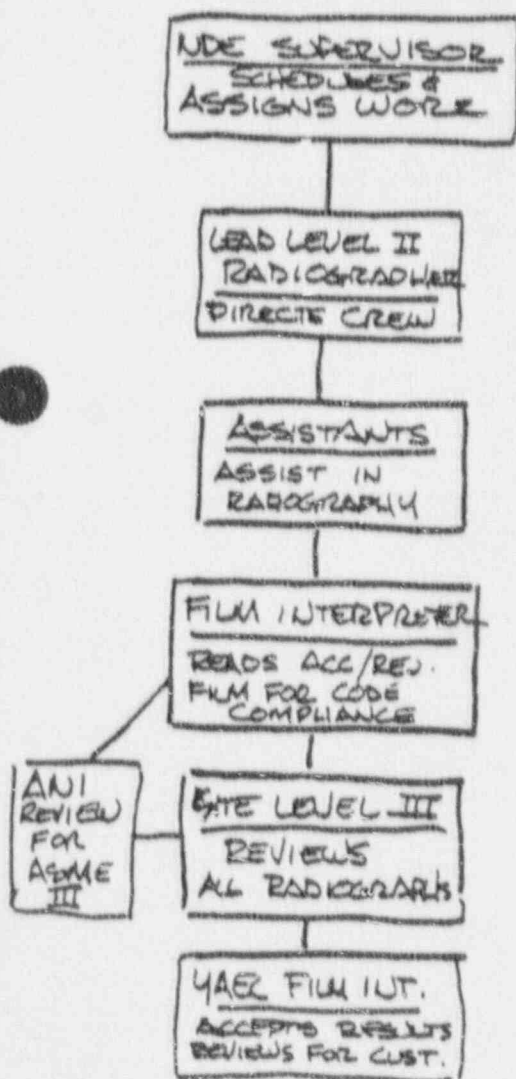


Again, as with his MT & PT INSPECTIONS THE MAJORITY
OF HIS WORK WAS IN THE TURBINE AREA UNDER B.31.1
CODE CLASSIFICATION.

W. HINZ

JIM WAS INDIRECTLY INVOLVED WITH THE RADIOGRAPHY OF APPROXIMATELY 473 JOINTS.

THE REASONING BEHIND "INDIRECTLY" CAN BE EXPLAINED BY THE DIAGRAM BELOW.



JIM WAS AN INSIGNIFICANT FACTOR IN THE RADIOGRAPHIC INSPECTION PROCESS FOR THE FOLLOWING REASONS.

1. HIS WORK WAS ASSIGNED & SCHEDULED BY THE NDE SUPERVISOR.
2. IN 374 CASES OF 473 HE WAS FUNCTIONING AS AN ASSISTANT W/ OTHER ASSISTANTS AS PART OF A 3 TO 5 MAN CREW UNDER THE DIRECTION OF A LEVEL II OR III LEAD RADIOGRAPHER.
3. FILM WAS READ AND REPORTS COMPLETED, RESULTS ACCEPTED OR REJECTED BY THE DESIGNATED FILM INTERPRETER.
4. FILM REVIEWED BY SITE LEVEL III
5. FILM REVIEWED BY ANI (ASME III)
6. FILM REVIEWED FOR CUSTOMER BY QAEC FILM INTERPRETER.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 18 TO NYN-91002

MEMORANDUM DATED JULY 14, 1981

W. GAGNON TO R. E. GUILLETTE

AND

MEMORANDUM DATED AUGUST 7, 1981

J. NAY, JR. TO R. E. GUILLETTE

July 14, 1981

E. Cuffinelli

W. J. Gagnon

File

Q 1.1.4

Planning and Scheduling

Mechanical group assignments and tasks listed, is a breakdown of what is typically addressed during a calendar month.

Surveillance

1. Scheduled Safety Related Surveillance - 62
2. Unscheduled Safety Related Surveillances - 10
3. NSRS Scheduled Surveillance - 12
4. NSRS Unscheduled Surveillance - 20
5. Second and Third Shift Surveillance - 12
6. Automatic Welding Coverage
7. Home Office Audit Assistance
8. Additional surveillance activities are to commence in the immediate future for Grinnell Fire Protection and Johnson Controls.

Technical Functions and Responsibilities

1. RT Film Review for P/H, PDM and other suppliers
2. Daily NRC Inspection Sheet Review
3. Contractor Procedure Review
4. P/H Repair Process Sheet Review
5. Contractor NCR Reporting Review (SSC & 211)
6. NCR Disposition Review
7. Engineering Document Review (see, see etc)
8. Check List Generation and Maintenance
9. NRB Actions
10. NSSS and Westinghouse Interface Actions.
11. Documentation Review prior to IMS turn-over.
12. Interfacing with Start-Up on BIP Packages
13. Welding information support for other disciplines.
14. Resolution of NRC questions and assistance during I & E inspection activities.
15. Assistance to American Nuclear Insurers Inspectors.

General Administration Activities

1. Weekly SSCA Update and Review
2. Weekly Scheduling Activity
3. Training Session Attendance
4. Formal Meeting Attendance
5. Follow-up to NRC Blue Sheets
6. Procedure, Instruction and Drawing Maintenance
7. Indoctrination, Orientation and Training of new personnel
8. General clerical and reporting functions.

MEMORANDUM

Pg. 1 of 1

TO	R.E. Guillette	YAEC	DATE	August 7, 1981
FROM	J. Nay Jr.	YAEC	FILE	Q 1.1.6
		COMPANY OR LOCATION		

Subject RT Film Review

In addition to the routine review of RT film our group reviews on site for P.D.M. and P-H, an approximate backlog of vendor film which requires review is 30,000 + pieces.

Vendor items include piping, weldment, castings, etc.

J. Nay Jr.
 J. Nay Jr.

JFN/psr

New Hampshire Yankee
January 11, 1991

ENCLOSURE 19 TO NYN-91002

CONSTRUCTION APPRAISAL TEAM

INSPECTION NO 50-443/84-07

DATED AUGUST 29, 1984

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

Docket No. 50-443

AUG 9 1984

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

RECEIVED
AUG 31 1984

SEABROOK PROJECT

Gentlemen:

Subject: Construction Appraisal Team Inspection 50-443/84-07

This refers to the ~~NRC Construction Appraisal Team~~ (CAT) inspection conducted by the Office of Inspection and Enforcement (IE) on April 23 - May 4, 1984 and May 14-25, 1984 at the Seabrook Station in Seabrook, New Hampshire. The inspection covered construction activities authorized by NRC Construction Permit CPPR-135.

The CAT Inspection Report No. 50-443/84-07 was sent to you as an enclosure to a letter from the Director of the Office of Inspection and Enforcement dated July 18, 1984. In that letter Mr. DeYoung stated the need for your utmost attention to correct the deficiencies which have resulted from an ineffective management of interfaces. We not only concur with that position, but also point out that our most recent Systematic Assessments of Licensee Performance (SALP) for Seabrook Station (reference: Region I letters to PSNH dated December 7, 1983 and May 17, 1984) reinforced the need for both the effective management of interfaces and the comprehensive implementation of a corrective action program.

Appendix A to the IE letter identified program weaknesses, and is used, in part, with this letter. Appendix B to the IE letter documents potential enforcement items. Based on these CAT inspection results, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the enclosed Appendix A, Notice of Violation. These violations have been categorized by severity level in accordance with the revised NRC Enforcement Policy (10 CFR 2, Appendix C) published in the Federal Register Notice (49 FR 8583) dated March 8, 1984. You are required to respond to this letter and in preparing your response, you should follow the instructions in Appendix A.

Item 4 of the Appendix B to the IE letter is considered unresolved pending the presentation of evidence that the material listed in Section VI.B.1.6 of the CAT report is both correct and traceable.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosures 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.

Response to the NRC is required by September 28, 1984. G.F. McDonald to provide draft response to A. Legendre by September 25, 1984. cc: J. DeVincentis, W.P. Johnson, G.F. McDonald, A.M. Shepard R.J. DeLoach, ~~S.H. Singleton~~, G.R. Gram, G.S. Thomas, J. Stacey, T.M. Cizeuskas, G. Tsouderos, W.N. Fadden, T.F. B4.2.7, Projects, NRC Chrono, W. Hall, G. Kingston, R. Sweeney, W & UE&C(SB-18326) info.

Bolted structural steel connections in the containment annulus steel were found to be below minimum torque values. Structural steel member size, configuration, connections and bolt qualification testing were found acceptable. It was identified that the design of certain pipe whip restraints had not properly considered the design loading from other supports attached to the restraint structure.

A problem previously identified by the applicant, relating to concrete expansion anchor bolts for piping and electrical supports, was identified. This problem involved torque values below the specified QA check torque. The previous corrective actions were not successful in maintaining the proper amount of bolt torque.

Welding and Nondestructive Examination

Welding and nondestructive examination activities were generally found to be conducted in accordance with applicable codes and specifications. Few deficiencies were identified by the NRC CAT inspectors in this area. However, a number of examples were identified where completed vendor structural welds did not meet the acceptance criteria specified by the Architect-Engineer. The applicant has performed an engineering evaluation concerning this problem and concluded that the welds are adequate for the intended application.

In the area of nondestructive examination, the NRC CAT inspectors reviewed samples of radiographic film in final storage in the vault. As the applicant's program does not provide for a review of radiographs by the applicant's NDE organization prior to their storage in the vault, samples of film were selected that had been reviewed by the applicant's organization, as well as film that had not been reviewed prior to vault storage. No deficiencies were identified with the radiographs that had received the applicant's review; however, deficiencies were identified by the NRC CAT inspectors with the radiographs which had not been reviewed by the applicant.

Material Traceability and Controls

In general, the project material traceability and controls program was found to be acceptable. Problems were identified regarding traceability of anchor bolt/nut assemblies, equipment mounting bolts and nuts, flange fasteners, and the use of indeterminate fastening materials in seismic bolting applications.

Design Change Controls and Corrective Action Systems

The design change control activity was generally found to be in conformance with applicable requirements. The problems identified were determined to be specific cases and not an indication of a failure of the design change control system to function as intended. The specific problems identified included one ANSI piping installation with incorrect dimensions, one ECA not followed by a revision after engineering rejection and the issuance of an ECA without including the affected drawings.

New Hampshire Yankee
January 11, 1991

ENCLOSURE 20 TO NYN-91002

ATTACHMENT 2 TO CHAIRMAN CARR'S
DECEMBER 19, 1990 RESPONSE
TO KOSTMAYER ET AL

JAN 0 1981

ATTACHMENT 2

MEMORANDUM FOR: T. E. Murley, Regional Administrator, Region I
FROM: R. W. Starostecki, Director, Division of Project and Resident Programs
SUBJECT: NRC FOLLOW-UP - SEABROOK NDE FALSIFICATION

On May 4, 1983 Region I was notified, by Public Service Company of New Hampshire, in accordance with 10 CFR 50.55(e), of the questionable performance of material and weld surface nondestructive examinations (NDE) by one contractor technician. Prior to any determination of falsification, the licensee's internal investigation revealed that NDE procedures had been violated. This information was sufficient to cause the contractor to terminate the subject technician and place on hold all 2,399 nondestructive examinations performed by the individual, until re-examination and disposition could be performed. It is noted that although only 33% of the suspect NDE work was performed on safety-related welds, the licensee decided to evaluate all 2,399 cases. As a result of this incident in May, I personally contacted the Executive Vice President of PSNH, Mr. David Merrill, and emphasized to him the need for a thorough and complete reassessment of all work done by the falsifier. PSNH acknowledged that they had already taken steps in this matter. Additional meetings were also held with both PSNH and YAEC to discuss the performance in general of the subject contractor.

As part of our effort we have been reviewing a number of licensee-initiated reports as well as conducting independent inspections. Upon completion of the OI effort we were able to conclude that there was no management complicity. However, IE staff expressed their interest by telephone and my staff has kept them fully informed and advised.

By memo dated December 21, 1983 IE requested certain actions relative to the Seabrook NDE falsification issue. Our prior actions appear to have adequately anticipated the IE concerns since we also had the same concerns last May. However, it is disheartening to note that telephone discussions on this very topic were not sufficient and resources had to be diverted to prepare additional documentation several months after we have conducted meetings with the licensee and on-site inspections on the topic. In an environment where resources are extremely strained and where the subject plant is in the midst of a volatile public hearing, I question the motivation to divert inspection resources to prepare more 'paper' in light of the fact that the information is already available and documented. More recent inspection efforts will be documented shortly.

Review, by resident and regional inspectors, independently, of the audit program, in existence at the time of the incident indicated that the program was being conducted in accordance with NRC requirements and PSAR commitments. The contractor NDE staff organizationally reports to the contractor Field QA Manager. Contractor QA auditors, located on-site, and licensee (thru their agent - Yankee Atomic Electric Company, YAEC) auditors conduct periodic audits

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Memo to T. E. Muri

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of the contractor NDE program. A key operation in providing assurance of QC field activities is the YAEC surveillance program. Specifically, YAEC NDE personnel have been and still do conduct 100% review of contractor accepted radiographs. Also, YAEC QA inspectors conduct both random and scheduled surveillances of field NDE work. An example of this activity is appended to the subject investigation report, in that a YAEC surveillance report documents an earlier identified violation of the conduct of a liquid penetrant examination by the offending NDE technician. In this case, the work was nonsafety-related and corrective action consisted of re-conduct of the examination and verification that the technician was knowledgeable of the procedural requirements. It should also be noted that the original NDE falsification problem was identified by the contractor when another NDE technician identified a concern with the offending technician's acceptance of a weld. Followup of that concern through the contractor's program led to the 10 CFR 50.55(e) report.

The re-examination of previously accepted work is not considered to be required for an effective audit program. Yet in this case, which involved random and periodic falsification, it appears that a re-examination program may have been the only quantitative method to establish the existence of a problem. As one of the corrective actions, the licensee has instituted a sample NDE re-examination program. Although this action is beyond any regulatory requirement and beyond the norm of NDE activities observed in the nuclear construction industry the licensee did institute this effort and we strongly encouraged the initiative at senior management levels.

Subsequent to the identification of the NDE falsification, the licensee committed to the following actions relative to oversight of NDE activities. These commitments are documented in Inspection Report 80-443, 444/83-06, and were discussed during a June 7, 1983 meeting.

- A sample re-inspection of other contractor NDE technician work with results confirming that the problem was restricted to the one individual.
- Increased contractor supervisory field checks and independent auditing.
- Increased licensee surveillance of NDE activities on all shifts.
- Establishment of a licensee program for "information only" NDE to be performed by an independent contractor to verify that ongoing NDE work has been and is being satisfactorily performed and correctly evaluated.

While the current NDE audit program may be more prescriptive and better directed to the identification of NDE problems, we do consider the former NDE audit program to have been consistent with existing QA guidance and to have been effectively implemented by the licensee.

EXCERPT FROM RESPONSE TO DR. MYERS' REQUEST OF JUNE 19, 1990 (3 sheets)

Request 2 (questions 1, 2 & 3 of June 19, 1990):

1. (paraphrased) In my May 29 memorandum I requested that I be provided the procedures that, prior to implementation of Procedure #5 in May 1984, governed the YAEC 100% radiograph review. The May 29 request encompassed procedures that mandated the review.

Whether or not a specific procedure governed the YAEC 100% review prior to May 1984, I assume the ongoing NRC inspection will provide information:
(Several questions follow)

Response

Response to questions 1a through 1f and 2 have been provided separately.

Questions 1g & 3

- 1g. A statement as to the approximate date on which the NRC learned of the YAEC 100% review and a discussion as to whether and during what time period the NRC assessed the adequacy of this review.
3. As of this date, I am unable to locate an NRC document, issued prior to IR 90-8U on February 7, 1990, which refers to a YAEC 100% review. If the NRC staff knows of any such reference, please provide it to me prior to COB, Friday, June 22.

Response

NRC Region I was aware in December 1983 of the licensee's intent to review 100% of the radiographs transmitted to the document control vault as quality records. This date is based upon documentation in a January 4, 1984 Region I memorandum (previously provided) documenting NRC awareness of the YAEC 100% radiographic review and upon reference in the resident inspector SALP office files to Deficiency Report (DK) 527 issued on December 7, 1983 with the supporting "YAEC RT INTERPRETATION" listing. It is possible that the NRC knew before December 1983 that YAEC was reviewing all film as it was received. However, we have not found any record of NRC cognizance of the 100% review prior to December 1983.

An NRC assessment of the adequacy of the YAEC review program was performed during the Systematic Assessment of Licensee Performance (SALP) conducted for piping systems and supports on February 14, 1984. This is documented in the final SALP report issued on May 17, 1984 as a YAEC "customer review" of ASME final code accepted radiographic film. Furthermore, the NRC Construction Appraisal Team (CAT) inspection conducted over the period

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April 23 - May 25, 1984 reviewed several radiographic film packages. The CAT inspection report, 50-443/84-07, issued on July 18, 1984 documents the following:

"No significant problems were identified involving film that was reviewed by the applicant's NDE organization. However, several irregularities were identified involving film that had not [yet] been reviewed by the applicant."

If the film in which the irregularities were identified by the CAT inspectors had been accepted final radiographs, enforcement actions would have been pursued. Instead, the CAT recognized that the licensee's program required the noted YAEC review of all safety-related vendor and site generated radiographs. In documenting the difference between the radiographic film which had been reviewed by the applicant and that which had not, the CAT inspectors specifically highlighted the fact that the radiographic review process would have represented a regulatory concern had it not been for the applicant's review process. Hence, this area of inspection was not listed as one where either potential enforcement actions or significant weaknesses were identified. Such inspection logic and the resulting findings and conclusions represent an additional NRC assessment of the adequacy of the YAEC 100% radiographic review program.

Additional documentation of an NRC assessment of the YAEC radiographic review process can be found in other NRC inspection reports (IRs). As an example, IR 50-443/83-19 for inspection conducted from November 28 - December 1, 1983 included a review of the reactor pressure vessel (RPV) safe end radiographs. The NRC inspector reviewed radiographs that had been rejected by YAEC despite a differing position tendered by Westinghouse as the RPV supplier, and the NRC concurred with the YAEC findings. Other component radiographs were also reviewed, resulting in additional assessment of the quality of the YAEC review. An example is IR 50-443/85-31 for an inspection conducted from October - December 1985. Documented in this IR is the statement that:

"To date, the licensee has performed an overview of virtually all vendor supplied radiographic film. Where problems were found, such as geometric unsharpness failing to meet the ASME code, radiography was re-performed on site and repairs were made, if necessary."

The inspector reviewed a sample of film during this inspection, which also provided a measure of the NRC assessment of the YAEC radiographic review program.

Other NRC inspections (e.g., IR 50-443/85-19 conducted in July 1985) used the NRC NDE Van to independently radiograph welds. Such inspections verified the adequacy of the licensee's radiographic program and compared site file film to NRC radiographs in an assessment of the licensee's overall NDE quality control program.

-3-

Another assessment of licensee performance in this area was conducted during the SALP appraisal on February 19, 1985. In the SALP report, issued on May 28, 1985, the following evaluation was documented:

"It is noted, however, that with regard to completed and finally inspected hardware, very few problems were identified. In fact, in the welding and NDE areas, independent examinations by NRC inspectors revealed generally high quality work and effective licensee overview of the final radiographic film packages."

In assessing the overall performance in the area of piping during this January 1 - December 31, 1984 SALP period, it was noted that significant improvement had been achieved and that the licensee had demonstrated "adequate control over their self-identified construction problems." One of the areas evidencing such licensee control was the YAEC 100% radiographic review process.

Further, in the previously mentioned Region I internal memorandum of January 4, 1984, it was noted that:

"A key operation in providing assurance of QC field activities is the YAEC surveillance program. Specifically, YAEC NDE personnel had been and still do conduct 100% review of contractor accepted radiographs."

This memorandum not only provides the requested reference to an NRC document acknowledging the YAEC 100% radiographic review effort, but also assesses this program in the context of NRC followup of the previously reported NDE falsification problem, (i.e., the "Padovano" case). It should be noted that the above quote discusses the 100% review in reference to the "YAEC surveillance program." As has been discussed in previous responses to Dr. Myers' requests, prior to the implementation of the YAEC NDE Review Group procedure No. 5 in May 1984, the YAEC radiographic review process was controlled as a surveillance activity. Thus, even though surveillances were not normally 100% inspection efforts, the above NRC quotation illustrates the YAEC intent to conduct such film reviews on a 100% basis some time before the existence of the procedural requirement to do so.

The inspection reports identified in the response to this request have been provided previously.