New Hampshire
Yankee

Ted C. Feigenbaum
President and
Chief Executive Officer

NYN-91088

May 20, 1991

United States Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, PA 19406

Attention: Mr. Thomas T. Martin, Regional Administrator

References: (a) Facility Operating License No. NPF-86, Docket No. 50-443.

(b) Transcribed Public Meeting Between New Hampshire Yankee and the NRC conducted on April 10, 1991.

(c) NHY Letter NYN-91076 dated May 13, 1991, "Transmittal of the Program Description for the Reverification of Pullman-Higgins Field Weld Records", T. C. Feigenbaum to T. T. Martin.

Subject: May 1991 Status Report for the Program for the Reverification of Pullman-Higgins Field Weld Records

Gentlemen:

In the April 10, 1991 Public Meeting between New Hampshire Yankee (NHY) and the NRC [Reference (b)], and as provided in the NHY Program Description for the Reverification of Pullman-Higgins Field Weld Records, transmitted to the NRC on May 13, 1991 [Reference (c)], NHY agreed to provide the NRC with a monthly written report of the progress of the Reverification of Pullman-Higgins Field Weld Records Program. Accordingly, enclosed please find the status report for the month of May 1991.

Should you have any questions regarding this matter, please contact Mr. Neal A. Pillsbury, Director of Quality Programs at (603) 474-9521, extension 3341.

Very truly yours,

Ted C. Feigenbaum

TCF:JES/les

Enclosure

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New Hampshire Yankee
May 30, 1991

ENCLOSURE 1 to NYN-91088

MAY 1991 STATUS REPORT FOR THE REVERIFICATION OF
PULLMAN-HIGGINS FIELD WELD RECORDS

MAY 1991 STATUS REPORT

FOR THE NEW HAMPSHIRE YANKEE PROGRAM FOR THE

REVERIFICATION OF PULLMAN-HIGGINS FIELD WELD RECORDS

A. INTRODUCTION

The following provides the status of the New Hampshire Yankee Reverification of Pullman-Higgins Field Weld Records Program as of May 29, 1991. This program is being implemented in accordance with the program description submitted to the NRC on May 13, 1991. This status report presents the program's progress and performance, weld record anomalies identified as a result of this program, and corrective actions implemented to address these anomalies.

B. PROGRESS

B.1 Weld Tabulation

On April 22, 1991, Nuclear Energy Services (NES) personnel started the Task 1 weld tabulation effort. This effort is designed to provide a list of field welds requiring radiography in order to meet code. As provided in the program description, the basis for this list is engineering design documentation (drawings and change documents) and the N-5 Code Data Reports. As of May 29, 1991, NES has processed a total of 608 of the 3100 (approximately 20 percent) document packages for this effort. The progress for each category of field weld which requires radiography by code is presented below.

To ensure the task's scheduled completion date of June 28, 1991, NES supplemented the project staff with an additional engineer. This NES engineer began working on the weld tabulation portion of the project on May 21, 1991. His qualifications are commensurate with those of the other NES personnel working on this project in the same capacity.

B.1.a ASME Section III Piping

As of May 29, 1991, NES has processed 608 document packages for ASME Section III piping. This encompasses a large part of both the Charging System (CS) [or Chemical and Volume Control System (CVCS)], and the Reactor Coolant System (RC). The following provides the number of isometric drawings reviewed for these two systems to date.

System	Isometrics Reviewed
CS	444
RC	164
	608

B.1.b ASME Section III Supports

As of May 29, 1991, none of the ASME Section III Support document packages have been reviewed.

B.1.c ANSI B31.1 Piping

As of May 29, 1991, none of the ANSI B31.1 Piping document packages have been reviewed.

B.1.d ASME Section VIII Unfired Pressure Vessels

As of May 29, 1991, none of the ASME Section VIII Unfired Pressure Vessel document packages have been reviewed.

During the weld tabulation effort described above, a total of five Requests for Engineering Services (RES) were generated. As described in the program description, an RES is the mechanism for identifying and responding to potential anomalies generated as part of the weld tabulation effort. Examples of the issues identified in these RESs include: type of weld not identified on the isometric drawings; questions regarding the design change documents posted in the Change Document Tracking system; and references to weld process sheets for Non-Destructive Examination requirements. NHY has responded to all of these RESs and has determined that they do not contain anomalies which are reportable to the NRC pursuant to the program description. NHY is correcting any minor administrative discrepancies identified in these RESs.

B.2 Radiograph Package Inventory

On April 29, 1991, NES personnel began the Task 2 Radiograph Package Inventory. This task is designed to provide a list of field welds for which radiograph films and Radiograph Inspection Reports (RIRs) are retained in the site records vault. This task also records the signature of the individuals and organization reviewing the radiographic film.

As of May 29, 1991, NES has reviewed RIRs and radiograph film for 1676 welds. This encompasses the CS, RC, and Residual Heat Removal (RHR) systems, and a portion of the Safety Injection (SI) system, and represents approximately 40 percent of the RIRs to be reviewed. NHY is on schedule to complete this task by June 28, 1991. The following provides the number of Radiograph Inspection Reports (RIR) reviewed for these systems to date.

System	Number of RIRs Reviewed
CS	718
RC	336
RHR	334
SI	288
	1676

During the radiograph review process described above, a total of fifteen Corrective Action Requests (CAR) were generated. As described in the program description, the CAR is the mechanism for identifying and responding to potential weld record anomalies generated as part of the radiograph review effort. The weld record anomalies identified to date all pertain to administrative deficiencies. None of these deficiencies affect the physical quality of the welds. NHY has completed the initial investigative action for the fifteen CAR's and concluded that thirteen of the fifteen do not contain anomalies which are reportable to the NRC pursuant to the program description. The following examples typify the nature of these minor administrative deficiencies: legibility of radiographic film data; minor administrative data mismatches between RIRs and radiographic film (e.g., numbers transposed); and questions regarding radiographic technique. NHY is correcting minor administrative discrepancies identified by these thirteen CARs and annotating the radiographic film package with a reference to the respective CAR. Section C.1 of this report summarizes the two CARs which resulted in reports to the NRC.

B.3 Field Weld List and Radiograph Comparison

The comparison of the list of field welds requiring radiography (Task 1 output) with the list of field welds for which radiographic records exist (Task 2 output) will provide a single list which indicates that radiographic records are retained for field welds which require radiography by code.

As of May 29, 1991, NES has performed this comparison for 372 of the 480 document packages for the CS system. This comparison indicated that for one field weld, 1-CS-328-02-F0204, the requisite radiographic film was unavailable. This is the same weld which was identified before this program was implemented. NHY provided a report regarding this documentation deficiency to the NRC in a letter dated February 8, 1991 (NYN-91023). This comparison did not identify any additional documentation deficiencies which were reportable to the NRC. NHY is on schedule to complete this task by July 5, 1991.

C. PERFORMANCE MEASUREMENT AND REPORTING

C.1 Reports to the NRC

As of May 29, 1991, NHY has determined that two weld documentation anomalies were reportable pursuant to the Program Description for the Reverification of Pullman-Higgins Field Weld Records. These anomalies pertain to a lack of administrative information on some of the radiographic film for field welds 1-CS-318-02-F0202 and 1-RC-13-02-F0203. In accordance with the reporting requirements delineated in the program description, telephone notifications regarding these anomalies were made to the NRC within 24 hours of the determination that they were reportable. Additionally, 72 hour written reports regarding these two anomalies were provided to the NRC on May 17, 1991 (NYN-91080), and May 20, 1991 (NYN-91082), respectively. These written reports established that the identified weld record anomalies do not compromise the integrity of these welds or other Seabrook Station welds. It was also established that these record deficiencies do not compromise the integrity of the systems in which these welds are located, thus they do not produce any reduction in the protection provided for the health and safety of the public. The following provides a summary description of these records anomalies, cause of the deficiencies, and corrective actions implemented.

Description of Anomalies

Pullman-Higgins Field Weld 1-CS-318-02-F0202

As stated in NHY letter NYN-91080, dated May 17, 1991, Pullman-Higgins field weld 1-CS-318-02-F0202 is a circumferential butt weld on a three inch diameter section of piping in the Chemical and Volume Control System (CVCS). This section of the CVCS system is ASME III, Class 2, and Safety Class 2. This weld connects a valve (V-325) to the piping and is also adjacent to a reducer. This weld is located in the letdown leg of the CVCS system downstream of both the Regenerative (Tag number E-2) and Letdown (Tag number E-4) Heat Exchangers. This weld is physically located in the Primary Auxiliary Building which is outside the Containment Building. (Reference NHY P&ID 1-CS-D20722). This field weld was radiographed in 1981 in accordance with the Non Destructive Examination (NDE) requirements contained in the 1977 Edition of ASME Section III up through and including the Winter 1977 Addenda (the code applicable to Seabrook Station).

The weld records package for weld 1-CS-318-02-F0202 contains a Radiograph Inspection Report (RIR) and the radiographic film. The RIR indicates that the radiograph views for all stations of this weld are of acceptable quality. The RIR also contains the approval signatures of the Level II Pullman-Higgins reviewer, Authorized Nuclear Inspector (ANI), and the Yankee Atomic Electric Company (YAEC) reviewer. Additionally, another Level II Pullman-Higgins reviewer subsequently reviewed this RIR. At the time this radiograph was reviewed, the ASME Code approval process included the Level II Pullman-Higgins reviewer and the ANI. YAEC provided a review in order to satisfy Quality Assurance Program requirements. Level III Pullman-Higgins review was added to the review process at a later point and therefore is not a requirement for this field weld.

As required by ASME V including paragraph T-236, NHY maintains the Radiograph Inspection Report (RIR) and the radiographic film for this weld. The RIR and the radiographic film for two of this weld's three stations (stations 0 and 1), contain the code required information and approvals. As identified in NHY Corrective Action Request (CAR) 91-005, the radiographic film for station 2 lacks the identification of the exposure date, system/line/isometric number, weld number, and manufacturer's identification. The only information contained on this film is the station number. Therefore, the film for station 2 does not meet the code requirements. This anomaly has now been corrected as stated below.

NHY Nuclear Quality Group personnel have verified that the radiographic film for station 2 is in fact that of weld F0202. Comparison of the film for station 2 with that of stations 0 and 1, indicates unique weld profile is present on all the film for three stations. Specifically, at the time this radiograph was taken there was a spool identification tag tack welded to the pipe near this location which is oriented in a position that provides a unique identifier common to all three stations. Additionally, this weld is located near a reducer which also can be identified on the film for all three stations. This radiographic film comparison was performed by a NHY Level II RT reviewer on May 9, 1991. This conclusion was independently verified by a YAEC Level III reviewer on May 21, 1991.

NHY Nuclear Quality Group personnel have also verified that the film reviewed for weld F0202 is the only film available for this weld. Review of the weld process sheets indicates that only one repair was made to this weld before the weld was radiographed. This

repair was on the root pass (first weld layer) of the weld. A visual examination of this pass detected a flaw which required a repair. No other repairs were made prior to or after radiographic examination. As a result of the above reviews, NHY has determined that the station 2 film is of Pullman-Higgins field weld 1-CS-318-02-F0202.

Pullman-Higgins Field Weld 1-RC-13-02-F0203

As stated in NHY letter NYN-91082, dated May 20, 1991, Pullman-Higgins field weld 1-RC-13-02-F0203 is a circumferential butt weld on a twelve inch diameter section of piping in the Residual Heat Removal (RHR) system. This section of the RHR system is ASME III, Class 2, and Safety Class 2. This weld is located adjacent to check valve CBS V-55 in line 1209-02, which is the RHR Pump 8A supply from the Refueling Water Storage Tank. This weld is physically located in the RHR Vault Number 1, in the Primary Auxiliary Building which is outside the Containment Building. (Reference NHY P&ID 1-CBS-D20233). This field weld was radiographed in 1981 in accordance with the Non Destructive Examination (NDE) requirements contained in the 1977 Edition of ASME Section III up through and including the Winter 1977 Addenda (the code applicable to Seabrook Station).

The weld records package for weld 1-RC-13-02-F0203 contains a Radiograph Inspection Report (RIR) and the radiographic film. The RIR indicates that the radiograph views for all stations of this weld are of acceptable quality. The RIR also contains the approval signatures of the Level II Pullman-Higgins reviewer, Authorized Nuclear Inspector (ANI), and the Yankee Atomic Electric Company (YAEC) reviewer. At the time this radiograph was reviewed, the ASME Code approval process included the Level II Pullman-Higgins reviewer and the ANI. YAEC provided a review in order to satisfy Quality Assurance Program requirements. Level III Pullman-Higgins review was added to the review process at a later point and therefore is not a requirement for this field weld.

As required by ASME V, including paragraph T-236, NHY maintains the Radiograph Inspection Report (RIR) and the radiographic film for this weld. The RIR and the radiographic film for one of this weld's four stations (station 3-0), contains the Code required information and approvals. As identified in NHY Corrective Action Request (CAR) 91-010, the radiographic film for stations 0-1, 1-2, and 2-3 lack the identification of the exposure date, system/line/isometric number, weld number, and manufacturer's identification. The only information contained on these films is the station number. Therefore, the film for these three stations does not meet the code requirements. This anomaly has now been corrected as stated below.

NHY Nuclear Quality Group personnel have verified that the radiographic film for stations 0-1, 1-2, and 2-3, are in fact that of weld F0203. The radiographic technique utilized for this weld allowed a portion of the film for each station to overlap onto the adjacent stations' area of interest. Comparison of the film for all four stations indicates that there are unique identifiers (e.g., unique weld profile; and code allowable inclusions) in the overlapping portions of each stations' film. Therefore, the film for all four stations are contiguous, and are of weld 1-RC-13-02-F0203. This radiographic film comparison was performed by a NHY Level II RT reviewer on May 17, 1991. This conclusion was independently verified by a YAEC Level III reviewer on May 21, 1991.

NHY Nuclear Quality Group personnel have also verified that the film reviewed for weld F0203 is the only film available for this weld. Review of the weld process sheets

indicates that no repairs were made to this weld before or after the weld was radiographed. As a result of the above reviews, NHY has determined that the films for stations 0-1, 1-2, and 2-3 are of Pullman-Higgins field weld 1-RC-13-02-F0203.

Cause of Deficiencies

NHY has reviewed the records deficiencies for these two Pullman-Higgins field welds and has determined their cause to be personnel error on the part of Pullman-Higgins NDE personnel. The Pullman-Higgins NDE personnel apparently neglected to place the required field weld identification tags on the radiographic films for the subject stations when the film was developed. Identification of radiographic film as required by code was an explicit provision of the Pullman-Higgins Radiographic Procedure 1X-RT-1-W77.

Corrective Actions

NHY has determined that the appropriate short-term corrective actions for the two records deficiencies are to: 1) permanently identify the code required information on the films which are missing this information; and 2) reference the CAR on the film packages for these welds. These corrective actions are specifically allowed for by the Code (T-236), and once completed they will ensure compliance with the code. NHY completed these corrective actions for both 1-CS-318-02-F0202 and 1-RC-13-02-F0203 on May 17, 1991.

If similar anomalies are found during the conduct of the balance of the Weld Records Reverification Project, long-term corrective actions will include the evaluation of such anomalies, as a group, for generic implications and possible additional corrective actions.

C.2. NHY NQG Surveillance

The NHY Nuclear Quality Group (NQG) is performing three separate surveillance activities for the reverification effort. These and their progress as of May 29, 1991 are provided below.

The first NHY surveillance is to address the adequacy of the procedures, scope and starting point for the weld tabulation, radiograph package inventory, and field weld list and radiograph comparison efforts described above. This surveillance will be performed in June and the results will be provided in the next monthly report.

The second NHY surveillance is to sample 20 percent of the field welds from each of the isometric and support drawings previously reviewed by NES as part of the Task 1 weld tabulation effort. This surveillance addresses the procedural requirements outlined in NES Procedure 83A5643, "Review of Drawings." As of May 29, 1991, NHY Nuclear Quality Group personnel are in the process of performing this surveillance for the CS system. It is expected that this surveillance for the CS system will be completed by June 7, 1991.

The third NHY surveillance is to sample 20 percent of the radiograph packages, by system, that NES has reviewed as part of the task 2 effort. This surveillance addresses the procedural requirements outlined in NES Procedure 83A5462, "Review of Radiographs." As of May 29, 1991, NHY Nuclear Quality Group personnel are in the process of performing

this surveillance for the CS system. It is expected that this surveillance for the CS system will be completed by June 7, 1991.

C.3 NES Management Oversight

NES also provides management oversight regarding the activities being performed by the NES personnel as part of the reverification of weld records project. On May 10, and May 21, 1991, an officer of NES visited Seabrook Station to monitor the status and progress of the project. Additionally, on May 16, and May 17, 1991, NES performed a Quality Assurance Audit of the activities being performed on site. This audit included a sampling of completed work to ensure compliance with procedures. Although the audit report is still in progress, the sampling indicated that completed work does comply with procedures. The results of this audit will be presented in a subsequent monthly report.

C.4 Performance Monitoring

NHY also monitors the performance of the reverification of weld records program by tracking key parameters. The performance of these parameters is addressed in the respective sections of Part B of this report.