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NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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February 12, 1990

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In the Matter of
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE, ET AL.
(Seabrook Station, Units 1 and 2)
Docket Nos. 50-443, 50-444 -OL

Messieurs and Madame:

On February 9, 1990, the Executive Director for Operations issued a Memorandum to the Commission, providing additional information about various late-filed allegations which have been made concerning Seabrook Station. A copy of the Memorandum, and Inspection Reports 90-80 and 90-82, referred to therein, are enclosed for your information.

Best regards.

Sincerely,

Sherwin E Turk

Sherwin E. Turk
Senior Supervisory
Trial Attorney

Enclosures
cc w/Encls.:
Service List

D507

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

February 9, 1990

MEMORANDUM FOR: Chairman Carr
Commissioner Roberts
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: STATUS REPORT ON SEABROOK STATION, UNIT 1

Following the status briefing on the Seabrook facility on January 18, 1990, the Commission requested additional information from the staff regarding late-filed allegations and a status report on plant material readiness from Public Service Company of New Hampshire. This memorandum and enclosures respond to the Commission's request.

The staff completed detailed reviews of late-filed allegations concerning Seabrook Station, Unit 1. These reviews were conducted using the criteria of NRC Manual Chapter MC 0517, "Management of Allegations" (and particularly the late-allegation criteria of MC 0517, Section 059) and represent a substantial expenditure of NRC technical (approximately 1000 inspection hours) and managerial resources. Enclosure 1, NRC Inspection Report 50-443/90-80, describes the results of the staff's review of approximately 255 separate allegations prepared by the Quality Technology Corporation for the Employees Legal Project (ELP). Included in this review are allegations regarding falsification of documents provided to the NRC in a January 31, 1990 letter from ELP. Enclosure 2, NRC Inspection Report 50-443/90-82, describes the results of the staff's review of 13 allegations made by a private citizen (the president of Ideas & Information, Inc.) who taped Seabrook control room radio transmissions from January 1989 through January 1990. Based upon these reviews, the NRC staff concluded that none of the allegations represent concerns that are material to the issuance of a full-power license.

The staff's review of the ELP concerns determined that the majority of the concerns were restatements of allegations previously submitted by ELP that were reviewed and properly resolved in NRC Inspection Reports 50-443/84-12, 50-443/86-52 and 50-443/87-07. The remainder of the ELP allegations involved issues that had been previously documented in NRC reports dating back to 1981 or issues that were new and required a moderate amount of inspection for clarification and resolution. Although none of the allegations were deemed by the staff to be material to licensing, seven items are being tracked for additional confirmatory review by the staff.

Contact:
Victor Nerses, NRR
x21441

The staff's review of the selected transcripts received from Ideas & Information, Inc., determined none to be indicative of a safety or a security inadequacy and therefore not material to licensing. In addition, the staff evaluated a stutistical sampling (21 ninety-minute tapes with about 1300 messages) of 202 audio tapes received on January 30, 1990, in response to a subpoena issued by Region I.

This evaluation did not reveal any safety inadequacies or reflect any deficiencies in safety-related maintenance, equipment performance, or operator performance, as alleged. Based on the large number of conversations reviewed by the staff without finding any safety or security inadequacies, the staff concluded that there is a high level of confidence that the remainder of the tapes contain no safety or security inadequacies. The staff has arranged to have the 202 tapes transcribed and will forward them to the licensee for review. The staff believes, based on the 21 tapes it reviewed, that a reasonable schedule for licensee review and completion is 60 days from receipt of the transcripts.

In addition, the staff reviewed the ELP letter of February 1, 1990, which alleged a breakdown in control of security key cards at Seabrook. The staff has evaluated this issue and determined that the allegation is unsubstantiated and did not raise any concerns material to licensing.

Further, the staff reviewed Ms. Diane Curran's letter of February 1, 1990 to the Commission on behalf of three intervenors regarding the "Seabrook Readiness Review." Ms. Curran is counsel for the New England Coalition on Nuclear Pollution, a Seabrook intervenor. A copy of Ms. Curran's letter was forwarded to the NRC Office of the Inspector General for consideration. The technical issues described therein are all based upon NRC inspection findings previously reviewed by the staff and considered in its recommendation regarding issuance of a full-power license. No new safety issues or matters material to the licensing decision were raised. The staff is preparing a reply to Ms. Curran.

Enclosure 3 contains the licensee's report on the status of the major remaining items to be completed before the licensee is ready to receive a full-power license and begin plant operation. The report indicates that the facility will be ready for criticality and to begin the Power Ascension Test Program on or about February 15, 1990, contingent upon issuance of an NRC full-power license as well as satisfactory completion of testing below Mode 2. As noted in Enclosure 3, the licensee has not completed testing of the Emergency Feedwater

(EFW) System and plans to complete this testing prior to entering Mode 2. The Commission will be informed when the licensee completes the scheduled EFW system testing.

James M. Taylor
Executive Director
for Operations

Enclosures:
1. NRC Inspection Report 50-443/90-80
2. NRC Inspection Report 50-443/90-82
3. PSNH Update of Plant Status

cc w/enclosures:
SECY
OGC
OIG

w/o Enclosures:
OCA
PA
RI

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406

Enclosure 1

FEB 07 1990

Docket No. 50-443

Public Service Company of New Hampshire
ATTN: Mr. Edward A. Brown, President
and Chief Executive Officer
New Hampshire Yankee Division
Post Office Box 300
Seabrook, New Hampshire 03874

Gentlemen:

Subject: NRC Inspection Report 50-443/90-80

This refers to the review of allegations concerning the Seabrook Station performed by the NRC staff at the Region I office during the period January 11 through February 3, 1990. The allegations were an enclosure to a letter to the commission from several congressmen, dated January 8, 1990. This letter and the allegations were provided to you. You addressed these same issues in your letter, dated January 24, 1990, NYN-90020.

The staff's review as documented in the enclosed inspection report did not identify any allegation representing a material condition that would move the staff to recommend establishing a new license condition, preclude the issuance of a license or necessitate an immediate inspection or investigation, nor was any safety significant new information identified. Seven unresolved items are identified for further licensee evaluation and future NRC inspection.

In accordance with 10 CFR 2.790 (a), a copy of this letter and the enclosure will be placed in the NRC Public Document Room.

Sincerely,

W. T. Russell

William T. Russell
Regional Administrator, RI

Enclosure: NRC Inspection Report 50-443/90-80

cc w/encl:
J. C. Duffett, President and Chief Executive Officer, PSNH
T. C. Feigenbaum, Senior Vice President and Chief Operating Officer, NHY
J. M. Peschel, Operational Programs Manager, NHY
D. E. Moody, Station Manager, NHY
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Public Document Room (PDR)
Local Public Document Room (LPDR)
Nuclear Safety Information Center (NSIC)
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Seabrook Hearing Service List

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V. Nerses, NRR
K. Abraham, PAO (20) SALP Reports and All Inspection Reports

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

License No.: NPF-67 Docket No.: 50-443 Report No. 50-443/90-80

Licensee: Public Service Company of New Hampshire
New Hampshire Yankee Division
Post Office Box 300
Seabrook, New Hampshire 03874

Facility Name: Seabrook Station, Unit No. 1

Inspection At: Region I Office

Dates: January 11 - February 3, 1990

Inspection Team:

Inspectors: R. Barkley, Reactor Engineer, DRP
T. Cerne, Resident Inspector, Pilgrim Station
S. Chaudhary, Senior Reactor Engineer, DRS
P. Drysdale, Senior Reactor Engineer, DRS
H. Gray, Senior Reactor Engineer, DRS
T. Koshy, Senior Reactor Engineer, DRS
W. Oliveira, Reactor Engineer, DRS
R. Winters, Reactor Engineer, DRS
J. Yerokun, Reactor Engineer, DRS

Approved By: _____ 2/7/90
Jacque P. Durr, Chief, Engineering Branch, Division of Reactor Safety, Region I — date

Results: See Executive Summary

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EXECUTIVE SUMMARY

The Nuclear Regulatory Commission received a letter from Senators W.M. Kennedy and J.F. Kerry and U.S. Representatives N. Mavroules and J. Markey, dated January 8,1990, requesting that the NRC withhold its decision on the licensing of the Seabrook Station pending an independent investigation of a series of allegations. The allegations were provided with the foregoing letter and represented information supplied by the Employees Legal Project (ELP) of Hampton, New Hampshire.

The ELP had been previously in contact with the NRC Region I office concerning allegations in the 1986 -1987 time frame. In response to these allegations, the Region interviewed the available concerned parties on two separate occasions, and, as a result of the interviews and the other information provided, fielded technical inspection teams in November, 1986 and April, 1987, to address the concerns. No hardware deficiencies were identified during these inspections that would indicate construction inadequacies.

The current submittal of allegations was in the form of an Executive Summary by the ELP and a report that was prepared by the Quality Technology Company (QTC) of Lebo, Kansas. The ELP Executive Summary contained technical issues, criticism of the agency and some statements that appear to be new allegations. These statements and the new allegations were essentially drawn from the QTC report. Appended to the QTC report were 255 separate allegation work sheets that formed the basis for the comments in the report.

In response to the ELP submittal, Region I assembled a team to review the allegations and determine if any were material to the ongoing licensing process such that a reconsideration of the NRC staff's position was warranted. The review determined that greater than one half of the 255 stated concerns (allegations) in Appendix H of the ELP submittal were previously addressed, either directly or in similar related evaluations, in NRC inspection reports and were adequately closed. The review also determined that, based on the previous inspections and independent measurements, reviews and evaluations, and the current expenditure of greater than 750 staff hours of review and evaluation, that no further efforts should be devoted to these specific issues and the items are closed except as noted in the report.

The review determined that none of the concerns (allegations) represent a material condition that would move the staff to recommend establishing a new license condition, preclude the issuance of the license or necessitate an immediate inspection or investigation.

The evaluation identified seven unresolved items that should be examined further in future NRC inspections. These unresolved items are discussed in the Summary and Conclusions section of the report.

In conjunction with the above described technical review, an independent group, not previously associated with the Seabrook inspections, verified that those allegations declared by the recent NRC review to have been previously addressed in NRC inspection reports were, in fact, 1) addressed and 2) the previous technical assessments were appropriate. The group found that all previous technical assessments were appropriately resolved and none of the concerns reviewed constituted an immediate safety question. The independent review group provided recommendations for further followup of some items; these are highlighted in the report and discussed in the report Summary and Conclusions.

1.0 INTRODUCTION

1.1 BACKGROUND

The Nuclear Regulatory Commission received a letter from Senators E. M. Kennedy and J.F Kerry and U.S. Representatives N. Mavroules and J. Markey, dated January 8, 1990, requesting that the NRC withhold its decision on the licensing of the Seabrook Station pending an independent investigation of a series of allegations. The allegations were provided with the foregoing letter and represented information supplied by the Employees Legal Project (ELP) of Hampton, New Hampshire.

Prior to the ELP's initial concerns, the NRC performed an inspection of allegations at the Seabrook Station during the period August 13-17 and 27-31, 1984. These earlier allegations are repeated in the recent ELP submittal.

The ELP had been previously in contact with the NRC Region I office concerning allegations in the 1986 - 1987 time frame. In response to those allegations, the Region fielded a seven member technical inspection team, interviewed the concerned parties that were available, performed a site inspection and issued Inspection Report 50-443/86-52. Subsequent to the inspection, the ELP submitted comments on the inspection report and also provided some new allegations. The NRC inspection team met with the ELP staff on April 20, 1987, during the second inspection and discussed their technical questions, received other clarifying information and several new allegations. The second inspection was performed during the period April 6-10, 20-24, and May 4-8, 1987, and the results documented in Inspection Report 50-443/87-07. The NRC requested additional information for several of the allegations presented in the April 20,1987, document provided by ELP. The ELP provided a partial response to the request in a July 6, 1987, letter, but much of the information was not provided. The NRC stated in a February 18,1988, letter to ELP that for those allegations that did not contain sufficient information to inspect that no further actions would be taken. On December 29, 1987, a meeting between the NRC staff and ELP was conducted in Region I to discuss ELP's comments on Inspection Reports 50-443/86-52 and 87-07 at which time additional allegations raised by the ELP were discussed. These allegations were addressed in subsequent resident inspector reports.

The current submittal of allegations was in the form of an Executive Summary by ELP and a report that was prepared by the Quality Technology Company (QTC) of Lebo, Kansas. The ELP Executive Summary contained technical issues, criticism of the agency and some statements that can be construed as new allegations. The technical issues, criticisms and new allegations were essentially drawn from the QTC report. Appended to the QTC report were the 255 separate allegations that formed the basis for the comments in the report. These ELP allegations were provided to the NRC on January 8, 1990, and are, therefore, late filed allegations.

1.2 ALLEGATION SCREENING PROCESS

NRC Manual Chapter 0517 prescribes the process for handling late filed allegations. It requires that the allegation be characterized relative to its materiality; if true, would it be cause for denial of the license, be cause for

a license condition, or require further inspection or evaluation to determine its materiality before the issuance of the license. Once this determination is made, the allegation is reviewed for new information, either an old allegation with new information or a completely new allegation. Thereafter, both types of allegations are evaluated to determine what actions are needed before a license is issued.

The allegations submitted in the January 8, 1990, letter to the Commission were reviewed by a team of reactor engineering specialists for the above listed attributes. An attempt was made to determine what allegations were previously addressed. This aspect was particularly difficult because the Quality Technology submittals were paraphrased versions of some previously inspected issues and issues that were presented to the NRC but were too vague to process. Further, there are duplicate issues in the QTC report which also complicates the identification process. Items that were exact replicas of previously addressed allegations are so identified. Items that are similar are treated as previously addressed where the confidence is high that they are the same or that a previous resolution of the issue encompasses the allegation.

For those issues that were previously addressed by NRC inspections, an independent technical team was assembled to review the current set of allegations and determine if, in fact, they had been previously addressed in a NRC inspection report. If they were determined to have been previously addressed, the previous resolution was assessed for its technical adequacy and the conclusion confirmed by the team or referred for further review. The team consisted of four technical specialists, one from NRR headquarters, the construction senior resident inspector from Watts Bar and two previously uninvolved specialists from Region I. The team operated under the direction of the Assistant Director for Inspection Programs, TVA Projects Division, Office of Nuclear Reactor Regulation. Each allegation that the team reviewed will be noted in the details section of the report.

The report addresses only those issues and concerns (allegations) provided in the Employees Legal Project Executive Summary, the Quality Technology Company's Investigation of Seabrook Station and Appendix H, Quality Technology Company "A Forms" which constitute the 255 separate allegations. The other sections of the submittal are issues and documents provided in previous submittals and were considered to be supporting information. The report also addresses another late filed concern regarding the falsification of documents, Section 2.4.

The independent team report noted, "In none of the identified cases did we find any outstanding safety issues. In general, we found that the vast majority of the allegations were very vague and non-specific and the NRC staff made more than reasonable efforts to obtain details and resolve the allegers safety concerns."

1.3 SUMMARY AND CONCLUSIONS

This section summarizes the results of the evaluation of the Employees Legal Project and Quality Technology Company documents contained as enclosures to the congressional letter to the commission, dated January 8, 1990, by the Region I review team. The review determined, based on over 750 staff hours of review, that greater than one half of the stated concerns (allegations) were previously addressed, either directly or in similar related evaluations, in NRC inspection reports and were adequately closed. This was confirmed by the independent NRC review group. The review also determined that, based on the previous inspections, independent measurements and the current reviews and evaluations, that no further efforts be devoted to these remaining issues except as noted below and in the body of the report. All of these items are considered closed.

The review determined that none of the concerns (allegations) represent a material condition that would move the staff to recommend establishing a new license condition, preclude the issuance of the license or necessitate an immediate inspection or investigation.

The evaluation identified seven unresolved items that, although not presently material to the licensing process, should be examined further in future NRC inspections. These unresolved items are:

1. Item 2.3.38 stated that there were "control room instrumentation problems." Although too vague to affect licensing, the staff recommends that the alleger be contacted, if possible, to determine the exact nature of the concern.

2. Item 2.3.64 was a statement by the alleger that he welded on the piping while it was wet. The independent review group determined that the original allegation was properly closed based on the record, but recommended that further reviews be made of the welding procedure controls and the welding electrode control process.

3. Item 2.3.128 deals with the apparent upgrade of instrumentation tubing from one class to another. The statement provided a work request number that did not deal with upgrading instrument tubing. The licensee identified a work request with a different number that did discuss instrument tubing and asserted that it was installed in accordance with the specification. The review group recommends that the work request with the differing number be reviewed to verify that it is not the alleged work order and the installation meets appropriate requirements.

4. Item 2.3.156 relates to the obsolescence of the plant computer and the ability to obtain spare parts. The computer is not safety related and the plant can be operated without it. The review group recommends that the NRC confirm the licensees short and long term actions to alleviate the problem regarding the plant computer.

5. Item 2.3.171 deals with a drug dog search that resulted in a positive reaction near the shift supervisors office. It should be determined if this concerns a new event that was not previously reviewed.

6. Item 2.3.186 involves socket weld fittings and the improper fitup before welding. A nonconformance report was written and an engineering evaluation was given to use-as-is. The review team determined the disposition was appropriate, but recommends the nonconformance report be reviewed by an NRC inspector.

7. Item 2.3.192 alleges that security guards were sleeping. The review team recommends this item be followed to ensure that this security incident relates to the construction security force.

1.4 REPORT ORGANIZATION

Section 2.1 of the report addresses concerns that were raised in the Employees Legal Project Executive Summary. Some issues were presented in Appendix H of the ELP submittal and reiterated in the Executive Summary.

Section 2.2 of the report discusses the Quality Technical Company's narrative and, in most cases, this section of ELP's submittal is a reiteration of the Employees Legal Projects Executive Summary . Where there was duplication with the other sections of the ELP report, the NRC's response is only presented in section 2.1 of this report.

Sections 2.3 and 2.4 of the report discuss the individual allegations or concerns. Section 2.3 represents the NRC's response to the 255 individual allegations that were received in the January 8, 1990, submittal. Section 2.4 provides the NRC's response to the recent Employees Legal Project's submittal, dated January 31, 1990. The item numbers last three digits of section 2.3 represent the page numbers of ELP's Appendix H submittal.

2.0 REPORT DETAILS

2.1 ELP EXECUTIVE SUMMARY

2.1.1 QUALITY ASSURANCE PROGRAMS

CONCERN

"Many NRC reports list violations of federal regulations but fail to officially cite the utility." Also, the NRC's "notion that QA/QC problems are only paper problems is incorrect." "The NRC has also resolutely refused to address questions about QA/QC..."

EVALUATION

The above concerns are documented on page 2 of the ELP Executive Summary. With regard to the issue that NRC inspection reports fail to cite all violations, the allegation does not provide sufficient specific information to permit detailed followup of this concern. However, the NRC does not cite all violations that are identified by the licensee or as a result of quality assurance program effectiveness. This policy is part of the general procedure for NRC enforcement

actions and is discussed in 10 CFR 2, Appendix C. Each licensee nonconformance report could be considered a violation of regulatory requirements, but the exercise of discretion in the case of licensee identified violations is intended to encourage licensee initiative. The licensee identified violations are, in fact, an example of a functioning licensee problem identification and quality assurance program. Thus, the NRC may refrain from issuing a Notice of Violation for a violation described in an inspection report if certain conditions are met. The NRC does issue violations for significant deficiencies that are identified by the licensee in those cases that warrant followup of the corrective actions by the agency.

In response to the statement that QA/QC problems are not only paper problems, this issue does not provide any specific examples of concern. Rather, the allegation is a statement of fact with which the NRC agrees. The NRC has never professed that the QA/QC issues identified at the Seabrook Station were just paper problems. We do not cite licensees for just paper problems, but in recognition of the fact that the quality assurance program that is mandated by our regulations is a vital element in the defense-in-depth concept. The Quality Assurance Criteria for Nuclear Power Plants, 10 CFR 50, Appendix B, is the primary vehicle used by the agency during plant construction to measure the success of the licensee's program. The agency's commitment to quality assurance concepts is embodied in Appendix B which set the standard for the industry.

In response to the statement that the NRC has resolutely refused to address questions about QA/QC, the introduction to NRC Inspection Report 50-443/86-52 provides the basis for the agency's assertion that construction quality assurance for the Seabrook Station was adequately monitored. It provides three pages of narrative and six tables of data to illustrate the resources committed up to that time in verifying the adequacy of the fabrication, installation and testing of the equipment and systems. Further, paragraph 1.3 of Inspection Report 50-443/87-07 discusses the programmatic issues directly, the cause for the perceived differences and the agency's basis for concluding that the construction was satisfactory.

2.1.2 EMPLOYEE ALLEGATION RESOLUTION PROCEDURE

CONCERN

"Because of substantive deficiencies including ambiguous instructions, no defined QA interface, and lack of qualification requirements for those running the program, there is no guarantee that significant deficiencies brought to the program will ever be corrected or resolved."

EVALUATION

The above allegation regarding the Employee Allegation Resolution (EAR) procedure is documented on page 2 of the ELP Executive Summary. It is further discussed on pages 42-43 of the Quality Technology Company Report, as part of item No. 9, and on page No. 113 of the ELP Concern Record (Appendix H).

NRC interface with the licensee's Employee Allegation Resolution (EAR) program since its establishment at Seabrook Station in 1985 has been positive. Below are excerpts from NRC reports discussing a general assessment of the EAR impact.

Systematic Assessment of Licensee Performance (SALP) Report 50-443/85-99 (February 19, 1985)

"Another new program, the Allegation Resolution Program, has recently been established by management to investigate, track and respond to allegations/ concerns brought to the licensee's attention. Initial NRC interface with this program has proven beneficial in the initiation of licensee actions to satisfactorily resolve NRC concerns."

Construction Team Inspection (CTI) Report 50-443/85-15 (October 3, 1985)

"Site management also realized the need for attention to employee concerns and allegations and established an employee allegation resolution program at the site. The allegation resolution office is staffed with full time experienced and qualified personnel. The available internal means of problem resolution are well established and made known to the personnel during the indoctrination training."

Similarly, other inspection reports (e.g., IR 50-443/85-20, paragraph 10) have documented NRC interface with the licensee EAR program with positive results. EAR files have been open to NRC quality review since the establishment of the program. The Employee Allegation Resolution Program Operating Procedure, dated April 12, 1985, was provided to the NRC Senior Resident Inspector shortly after initiation of the program. This procedure, consisting of approximately 40 pages, governed EAR activities during the period of construction completion, when a heavy workload existed for exit interviews of terminated workers and the conduct of concern surveys for personnel still working in the plant. It is noted that the procedure specified that, "the EAR office is committed to investigate concerns in a manner that focuses on the substantiation, non-substantiation, reportability and recommendation for corrective action for each concern," and also that, "New Hampshire Yankee Management is responsible for assuring that corrective action stemming from resolution of allegations is implemented."

The QTC report on page 43 discusses a seven page procedure for the EAR program. This matches the description of the EAR program ("7 pages with 2 of the 7 pages being forms") provided in the New Hampshire Yankee (NHY) Programs and Procedures Manual. This manual provides program overviews and procedural descriptions for several NHY programs, but not complete implementing instructions. For example, the NHY "Corrective Action System" is described in a four page document, but this does not imply that the entire QA corrective action program is implemented with this four page procedure. Similarly for the EAR program, despite scope changes from the end of construction to the present situation with a stable operating organization, other procedures and operating instructions, distinct from the seven page Programs and Procedures Manual overview, have been available for NRC review to confirm evidence of acceptable programmatic control.

While it is true as stated in the QTC report that the EAR files are not considered quality records, EAR interface with the QA program for corrective action implementation is procedurally required. In fact, the NHY Director of Quality Programs, to whom the EAR Program Manager reports, is also the supervisor of the Nuclear Quality Manager responsible for QA program management. Additionally, the EAR program requires that allegation records be retained for a five year period and that they be available for NRC inspection at any time.

In general, numerous NRC contacts with the EAR program at Seabrook have provided neither substantiation of the concerns raised by the above allegation, nor evidence of the negative implications stated in the QTC report. The establishment of the EAR program was a licensee initiative. It has not adversely affected employees' rights or ability to contact the NRC directly with any allegations. While the establishment of any allegation followup program is not a regulatory requirement, its existence at Seabrook Station has proven useful to the NRC in the resolution of allegations of quality problems.

2.1.3 UNITED ENGINEERS AND CONSTRUCTORS CORPORATE QA PROGRAM

CONCERN

"A review of the UE&C corporate QA program (July 1987-April 1988) revealed that the primary functions of that QA program were absent or dysfunctional..."

EVALUATION

The above allegation is documented on page 3 of the ELP Executive Summary and is further discussed on pages 44-45 of the Quality Technology Company Final Report.

The New Hampshire Yankee Operational Quality Assurance Program became effective for Seabrook Station in 1986. This QA program is generally described in the Seabrook Station FSAR, chapter 17.2, and is distinct from the QA program in place during design and construction (reference: FSAR chapter 17.1). During construction, the licensee delegated to the Yankee Atomic Electric Company (YAEC) the responsibility for the development, execution and administration of the QA program. UE&C, both with the corporate and site QA staffs, had a large role in the implementation of the overall Seabrook QA program during the construction phase, particularly with regard to design and procurement activities, component installation and civil structural work.

NRC inspection of the QA program at Seabrook Station, to include the responsibilities of the UE&C Corporate organization, was initiated prior to issuance of the Construction Permit (CP) in 1976 (e.g., IR 50-443/74-01) and has continued to the present. Routine inspections of UE&C QA program activities (e.g., vendor audits - IR 50-443/84-20) and major team inspections like the Construction Assessment Team (CAT) inspections (reference: IRs 50-443/82-06 & 84-07) reviewed the QA programs at Seabrook, to include UE&C corporate and field QA responsibilities. Additionally, another major Construction Team Inspection (CTI) was conducted in 1985 to assess the effectiveness of management controls, to include QA program implementation, under the new New Hampshire Yankee organizational control (reference: IR 50-443/85-15). Also, several USNRC Vendor Programs Branch inspections by Region IV inspectors were conducted at the UE&C corporate office in Philadelphia to review, among other inspection areas, UE&C audit activities and UE&C implementation of 10 CFR 50, Appendix B criteria (reference: Docket No. 99900510 inspections). NRC SALP reviews of Seabrook Station have been conducted since 1980 and have identified no significant UE&C QA program problems that were not adequately addressed by licensee QA verification activities.

As alluded to on page 44 of the QTC report, ASME audits of UE&C activities were periodically conducted both at the site and at the UE&C corporate office in Philadelphia. Their audits were accomplished to criteria of the ASME Boiler and Pressure Vessel Code, Section III, and required corrective action by UE&C. Reaudit of certain areas was conducted where deficiencies were identified. The NRC was aware of these "N-stamp" inspection activities and has in fact endorsed the need for such third-party audits as essential to the implementation of ASME Boiler and Pressure Vessel Code work. UE&C utilized a valid "N-stamp" in fulfillment of ASME Code responsibilities with respect to the design specifications, stress reports, code data report forms, and other "N" certificate holder responsibilities involving QA program activities in the construction of Seabrook Station. The NRC has inspected licensee and UE&C implementation of code responsibilities with respect to as-built drawing controls, stress reconciliation activities and IE Bulletin 79-14 response (reference: IR's 50-443/85-15, 85-29, 86-14 & 86-43). Additionally, as a result of an allegation regarding the possible existence of discrepancies in the as-built drawing for piping systems used in design reconciliation reviews, an NRC inspection (e.g. IR 50-443/86-51) was conducted with the allegation found to be unsubstantiated and the conclusion reached that "the programs had met the intent of the regulations and were substantially in conformance with established industry standards".

In summary, during the period of time of Seabrook Station construction, NRC inspection, licensee and third-party audits verified the acceptability of the UE&C QA program, both at the site and in the corporate office. After 1986 (note that the above allegation cites a 1987-1988 time frame), the NHY operational QA program was in effect and UE&C had no direct site QA responsibilities. Any services provided to NHY by UE&C at that time would have been controlled by a procurement contract. Just like any other vendor supplying components or services to Seabrook Station, the UE&C corporate QA program was audited by both the NHY and YAEC personnel to ensure acceptability of the QA criteria relative to the specific services provided by the contract.

The above allegation cannot be substantiated. The reference in the QTC report to "billability" and "billable" functions by UE&C may provide some indication of the source of such concerns, i.e., prudency reviews of Seabrook Station accomplished for the purpose of state PUC or DPU needs in rate setting cases. If this is the case, such concerns relating to cost and efficiency are not within areas of NRC jurisdiction. The areas of program overview, implementation and acceptability of not only the UE&C QA program, but also the overall Seabrook QA controls have been inspected by the NRC over the entire course of Seabrook Station design, construction and operation from pre-CP time to the present.

2.1.4 INACCURACIES IN OPERATING PROCEDURES

CONCERN

"The procedures for operations, mechanical and electrical maintenance, chemistry, and radiological controls for Seabrook Station are incomplete and inaccurate." "This is not an isolated incident."

EVALUATION

The above allegation is documented on page 3 of the ELP Executive Summary and is further highlighted in the ELP/QTC Report, under Appendix A, and as Concern File #501-89-001 in Appendix H (Item 2.3.243).

NRC Inspection Report 50-443/89-21, paragraph 4, addressed this allegation. The inspection disclosed that the procedure numbers provided by the alleger do not exist at the Seabrook Station. The NRC reviewed procedures that had numbers similar to those with the alleged conditions and was unable to observe the deficiencies stated. ELP was notified of this finding by letter dated January 8, 1990.

Also, the deficiencies noted by the NRC with regard to Security procedures were reviewed and documented in inspection report 50-443/89-12. In that inspection, the NRC found that NHY had resurveyed the protected area lighting because of the procedural deficiency and determined that, in almost all cases, there had been correct levels of illumination. The NRC documented in the subject inspection report that the lighting measurement issue will be reviewed at a later time to verify the adequacy of corrective actions. The NRC evaluated these deficiencies and determined that NHY properly addressed this issue. The noted security procedural deficiencies are entirely separate and distinct matters from the procedural deficiencies noted in operations in the subject allegation above, which were unsubstantiated by NRC inspection.

2.1.5 REACTOR COOLANT PUMP SUPPORT LEG ANCHOR BOLTS

CONCERN

"An individual raised the concern that the four pumps used to cool the reactor could be forced out of plumb during operation, possibly stressing the large pipes attaching them to the reactor. This has led to the further concern that one foot or each pump may be incorrectly secured and lack the strength required for safe operation of the plant."

EVALUATION

The above allegation is documented on page 3 of the ELP Executive Summary, and is further discussed in the QTC report on pages 8-9 (Item No. 2). It is further amplified in Appendix H to the Report on pages 21 & 22 of the ELP Concern Record (see Items 2.3.21 and 22).

Inspection Report 50-443/87-07, paragraph 2.25, addressed this allegation,. A documented interview with the alleger indicated that this was not an allegation in the literal sense, but a question regarding the resolution of a problem of which he was aware. A detailed review of the allegation disclosed that this was a well documented condition in the licensee's Engineering Change Authorization (ECA) program. The NRC review included the design stress analysis and independent measurements. Also, the licensee handling and resolution of the subject ECA was inspected and documented in IR 84-07 before the issue was raised and in IR 88-10 relative to reactor coolant pump level conditions based upon additional ELP questions.

Also at issue is a question stemming from the QTC review of the ELP allegation discussed in item 2.3.21. The concern was in regard to the anchor bolt for the pump base. It questioned how the anchor bolts were moved when the base was moved. The anchor bolts are, in fact, 48" long and 2" in diameter. The anchor bolt holes in the 3" thick base plate are 7" in diameter to accommodate the 2" diameter anchor bolts; and 2" thick washer plates with 4" diameter holes were installed above and below the base plate along with levelling nuts, load nuts, jam nuts and standard washers. The assembly was then grouted to complete the installation. The oversized holes could accommodate the small offset necessary to realign the pump, thus, precluding the need to move the anchor bolts.

Further, the NRC confirmed that the relocation of these supports did not overstress the reactor coolant pumps or the reactor coolant system piping. Licensee measurements of the movement of key reactor coolant system components, in accordance with Regulatory Guide 1.68, during Hot Functional Testing in late 1985 did not identify any Reactor Coolant System piping or support displacements or vibration levels which would indicate an overstressed condition. Further, the reactor coolant system pumps are equipped with vibration sensors to monitor the pumps during normal operation. No problems with excessive RCP vibration have been noted. Therefore, the NRC does not believe that this concern constitutes a safety problem.

2.1.b CONTAINMENT PURGE VALVES

CONCERN

"The utility's technical specifications for certain valves in the reactor containment purge system contradict NRC requirements for those same valves."

EVALUATION

The above allegation is documented on page 4 of the ELP Executive Summary and is further discussed on pages 10-17 of the QTC Report (item no. 3).

As indicated in the FSAR, there are two sets of containment purge lines at Seabrook, a 36-inch large line and a 8-inch small line in each redundant piping train. The smaller line may be opened during plant operation (Mode 1, 2, 3 and 4) and the large line is designed for use during refueling and other times when the containment is opened for maintenance. During plant operation, the containment isolation valves in the 36" line are required to be sealed closed to serve the containment isolation function. The Technical Specifications Definition Section 1.19 defines that a system or component shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). These valves in the 36-inch line are considered to be OPERABLE when they are capable of performing their specified function, which, in this case (during Modes 1, 2, 3 and 4), is containment isolation rather than containment purging. During Modes 1, 2, 3 and 4, these valves are disabled to prevent them from accidentally being opened while the 8-inch valves are adequate for purging.

Therefore, the NRC staff believes that there is no discrepancy between the requirements of OPERABLE and sealed closed valves.

2.1.7 INSPECTION FALSIFICATIONS

CONCERN

"A quality control inspector was imprisoned for falsifying approximately 2400 weld inspections; a concerned individual reported that many other weld inspectors falsified their reports because of management deadlines; a second individual documented falsification on a specific weld inspection; and the NRC reported another such instance. The NRC maintains these are unconnected incidents which do not indicate a pattern needing further investigation. Many of the 2400 welds were never re-inspected."

EVALUATION

This allegation is discussed on page 4 of the ELP Executive Summary and in Appendix B to the ELP/QTC Report. Concern File #108-86-007 of the ELP Concern Record (Appendix H) documents an additional statement of concern regarding the NDE falsifications. The evaluation of "The Padovano Case" as documented in Appendix B to the ELP Report references several NRC inspections, an NRC investigation and the Construction Deficiency Reports (CDR, reference No. 83-00-08) submitted by the licensee in accordance with 10 CFR 50.55(e). This CDR was closed in Inspection Report (IR) 50-443/85-25. On January 14, 1986 an NRC Office of Investigations (OI) Investigation Report Summary (Case No.1-83-008) concerning the falsification of NDE records by the subject Pullman-Higgins (P-H) QC inspector was issued by NRC Region I.

While the above allegation does not provide any new or more specific information with respect to this issue, it does infer that other site personnel had been involved in similar falsification activities. Licensee followup and corrective action activities, as well as NRC inspection and investigation conduct, revealed no evidence that the alleged widespread falsification had taken place. This conclusion was based upon results obtained from the following activities:

- reinspection by the licensee of a sample of welds that had already been inspected and accepted by each P-H NDE technician per NDE process.

- the implementation by the licensee of random "information only" NDE surface examinations of welds accepted by P-H technicians.

- the results from USNRC NDE van inspections of welding and NDE activities conducted not only after the subject falsification was identified (e.g., IRS 50-443/83-18 and 85-19), but also before the problem was known (e.g., IR 50-443/82-06).

- NRC independent review of the P-H NDE personnel certification records (reference: IR 50-443/83-22). It was determined that no other NDE technician had falsified his previous employment/certification record as had been the case with the single individual that was the subject of the NDE investigation.

- NRC OI investigation, to include interviews with all NDE technicians, into the NDE falsification problem.

Based upon these inspection activities and their results, the NRC concluded that only the NDE examinations performed by the subject individual were suspect to the extent that reinspection or evaluation were required.

Appendix B to the ELP Report discusses the handling of "The Padovano Case" and concludes that "all problem areas were not identified and corrected". NRC review of Appendix B indicates that this conclusion may be mistakenly based upon certain misinterpretations of the facts, data and NRC inspection results. Where possible clarification is provided below to correct these mistaken impressions.

For example, the following excerpt from NRC IR 50-443/83-06 is quoted, "The suspect NDE includes magnetic particle (MT) and liquid penetrant (LPT) examinations of welds made by several site contractors...". The area underlined by ELP is not intended to reflect the fact that MT & LPT examinations were accomplished by several site contractors, but rather that the welds were made by several site contractors. Pullman-Higgins technicians provided the NDE services for most of the site work, included welding done by other site contractors. Therefore, of the approximate 2400 suspect NDE examinations, it was noted that only approximately one-third were safety-related. Several of the nonsafety examinations did not even involve final as-built plant components, but rather construction process activities (e.g., MT inspection of crane hooks to confirm the structural integrity of the hook prior to load lifts by the crane.)

Also, it should be noted that the approximate number of 2400 (2399 welds) examinations did not represent 2400 "welds". Besides the nonsafety material inspected (e.g., crane hooks), certain welds could have been inspected by more than one NDE inspection. Thus, if the repair cavity of a weld was given an LPT examination prior to repair welding and the final weld given an LPT examination, two NDE examinations would be counted against the same weld. The "inaccessibility" referred to by ELP in its evaluation of the suspect examinations then does not necessarily mean the welds are inaccessible (which was normally not the case), but rather indicates that the NDE exam (e.g., LPT on a repair cavity) cannot be duplicated because the weld is now complete. Such "inaccessible" items, after evaluation, could be shifted to the "Accept-As-Is" category depending upon what type of NDE was accomplished on the final weld.

An NRC inspector reviewed the listing of all 2,399 suspect items, their evaluation and categorization prior to the closure of the CDR submitted by the licensee in accordance with 10 CFR 50.55(e). While the NRC concurs with ELP that an apparent inconsistency in the numbers of accountable items appeared in different 10 CFR 50.55(e) interim reports, this resulted primarily from the licensee's attempt to track welds and items separately from actual suspect NDE examinations. Some shifting of numbers also occurred as the evaluation process and the criteria for acceptability evolved. However, as documented in IR 50-443/85-25, an NRC inspector reviewed the status of all 2,399 suspect items and evaluated the detailed NCR listings against the total number provided by the licensee in its Final 10 CFR 50.55(e) Report. The NRC inspector's review went to the detail of a question of the categorization of two particular welds. When that question was satisfactorily answered, as noted in IR 50-443/85-25, the status of all 2,399 items was determined to have been appropriately dispositioned.

Another ELP question of consistency about suspect NDE numbers relates to the quote of the DOJ press release on September 30, 1985 stating that , "More than half of these welds were classified as safety related...". The underlined portion appeared to conflict with the NRC inspection report discussion that "about a third" of the items were safety-related. It is important to note that the NRC Senior Resident Inspector worked with the Assistant US Attorney in providing the technical data and explanation of terminology in prosecution of the case against the subject individual. The "more than half" quoted by DOJ relates not to the total 2,399 suspect items, but rather to the number of welds that were rejected when reexamined. In other words, more than half of the approximate 94 items that required repair were safety-related, but about one-third of total 2,399 suspect NDE items were safety-related.

As regards the question of background and technical qualification checks accomplished by P-H for their NDE personnel, the NRC determined that Pullman-Higgins had not only complied with personnel qualification and certification practices specified in the American Society for Nondestructive Testing Recommended Practice No.SNT-TC-1A, but also exceeded this practice by contacting the subject individual's previous employer to verify certification. Had the previous employer been as complete in their background checks, they would have uncovered prior employment falsification problems identified with this one individual. This fact was brought to the attention of the previous employer for further review. Also, as noted above, more complete background checks implemented for P-H NDE technicians identified no similar certification problems.

Finally, as noted in the ELP Report Appendix B Conclusions and Recommendations, the question of radiographic (RT) examination validity at Seabrook Station is raised. In addition to the fact that RT was performed by more than one individual, unlike a surface exam, RT activities result in the production of a final radiograph which is reviewed by other qualified NDE personnel and is retained as a permanent QA record. The licensee instituted a program of 100% review of all radiographs provided by contractors and vendors in the construction of Seabrook Station. This process was inspected by NRC personnel, along with an independent evaluation of radiographic samples, during a Construction Appraisal Team (CAT) inspection (IR 50-443/84-07) conducted in 1984. This CAT inspection was coordinated by NRC Headquarters personnel, distinct from the three previously referenced NDE Van inspections conducted at Seabrook Station by Region I personnel. The results of this CAT inspection revealed no problems in the areas of welding and NDE activities.

In summary, with respect to the above allegations and the ELP assessment of how "The Padovano Case" was handled by both the licensee and the NRC, no new information or facts emerge which would alter the previous NRC conclusion that this technical issue is closed.

2.1.8 CONCRETE LEAKAGE IN THE REACTOR CONTAINMENT SUMP

CONCERN

"Water was seeping through the paint in the reactor containment building sump, leakage which has never been corrected, according to an individual who brought the concern to ELP."

EVALUATION

This allegation is documented on page 4 of the ELP Executive Summary and is further discussed on page 7 of the QTC Report (item no. 7). This is a new allegation in the sense that it infers water leakage into the containment sumps from some unexplained outside source.

The NRC had identified no problems of water leakage into the two safety-related ECCS sumps during the construction phase (when painting would have been in progress) or thereafter. The concrete in these sumps covers the containment liner, which provides the safety-related barrier against the leakage of fission products from the containment under accident conditions. Other concrete (on the outside of the containment liner) forms the actual containment structure designed to withstand pressures in excess of the postulated peak accident pressure. The containment structure underwent a Structural Integrity Test (SIT) and an Integrated Leak Rate Test (ILRT) in 1986 in which it was pressurized to 125% of design pressure and subsequently tested for leakage. Both of these major tests were witnessed by NRC inspectors and documented in inspection reports 50-443/86-15 and 86-12.

In light of the above concerns, discussions were held with the licensee and it was identified that they had experienced paint adhesion problems on the floor of the Emergency Core Cooling System recirculation sumps due to moisture problems (not attributed to water inleakage through the containment liner). Some of the paint on the floor of the sumps was subsequently removed in 1987. The NRC resident inspector visually confirmed this fact on January 17, 1990. No other water problems have been identified by NHY with any of the other containment sumps. Given that the recently performed Integrated Leak Rate Test of the containment building, observed by inspectors, (IR 50-443/89-13) was successful. The NRC has determined that there is no credible source of water inleakage into any containment sump through the containment boundary.

2.1.9 CADWELD CHEATING

CONCERN

"...cadwelders were fired for cheating on required test weld." "Even so, the NRC did not address, nor did it require the utility to address, the deficiencies which allowed the cheating to occur without detection. The NRC did not require the utility to identify the root cause of the problem and correct it."

EVALUATION

The above allegation is documented on page 4 of the ELP Executive Summary and is discussed on pages 24-39 of the QTC Report (item, ro. 8). A related allegation is documented in the ELP Concern Record on page no. 234 of Appendix H (see Item 2.3.234).

NRC inspection of a nonconforming condition regarding cadweld testing activities is documented in Region I inspection report 50-443/82-01, paragraph 4b. This inspection report entry is quoted verbatim as part of the analysis done by Quality Technology Company with respect to the above allegation of "Cadweld Cheating".

Inspection Report (IR) 50-443/82-01 references a nonconformance report (NCR) 2407 which documents the fact that partially cut reinforcing bars had been improperly used in cadweld sister splice test samples. The disposition to this NCR, which was approved by United Engineers and Constructors (the Seabrook Architect-Engineer and Construction Manager firm) and concurred by both the Yankee Atomic Electric Company QA organization and the Authorized Nuclear Inspector (ANI), and independent NRC inspection provided the primary bases for the NRC inspector's conclusion that "no evidence of improper cadwelding actually exists in the in-place structural rebar."

Licensee investigation of this problem, as part of the NCR disposition, determined that improperly fired cadweld sister splice samples could only have been made between December 11, 1981 and February, 1982 when the subject concern was identified. Prior to December 11, 1981, all splices were inspected by Quality Control personnel during fit-up inspections prior to firing. NRC inspection of the scope of cadweld pre-firing inspections traces back to 1976 (reference: inspection reports 50-443/76-06 & 77-10) at which time licensee compliance with USNRC Regulatory Guide (RG) 1.10, governing cadweld splicing and the tensile test frequency, was verified.

During the approximate two-month period of time that the cadweld sister splice sample process was suspect, a cadweld history record review revealed that a total of 153 sister splices had been fired. The licensee was able to inspect over 75% of the samples after they had been subjected to tensile testing and determined that only the seven sister splices documented in NRC IR 50-443/82-01 had been improperly fabricated. Additionally, using information provided by all of the site cadwelders as a collective group, the licensee was able to determine that five specific cadweld crews had utilized the improper technique in preparing the sister splices. This information was consistent with the inspection data, in that each of the seven problem splices had been prepared by one of the five crews who had been identified as having utilized the incorrect technique.

As documented in IR 82-01, the seven production splices, for which the sister splices had been fired to represent, were cut out of the existing containment reinforcing steel grid. These production splices were successfully tensile tested as documented in the NRC inspection report, thereby qualifying the other production splices for which they served as a sample. This was accomplished in

accordance with the guidelines of USNRC Regulatory Guide (RG) 1.10 and, because the Seabrook containment structure is an ASME Boiler & Pressure Vessel Code Section III, Division 2 vessel, in compliance with ASME Code. Section CC-4333.4.3(c) of the ASME Code for Concrete Containments states, "Bars bent with large radii shall be considered straight bars", and the conduct of the required tensile testing, as witnessed by the NRC inspector, was shown to have not been adversely affected by the slight curvature of these large radii bars.

The licensee took corrective actions to preclude recurrence of the subject cadweld testing problem, to include retraining of all cadweld operators and instituting additional controls on the cadweld splicing activities and QC inspections thereof. Subsequent NRC inspections of cadwelding activities, as documented in four additional IR's for 1982 alone (i.e., 50-443/82-03, 82-07, 82-09 & 82-16) identified no inadequacies or unresolved concerns with cadwelding activities at Seabrook Station.

In evaluating the need for enforcement action at the time the subject cadweld testing problem was identified, the NRC considered the following: the licensee had identified this problem; notified the NRC of the issuance of the non-conformance report; evaluated the concern in accordance with 10CFR50.55(e); implemented corrective actions including measures to preclude recurrence; and provided evidence that the plant as-built had not been adversely affected by the subject cadweld testing problems. In consideration of enforcement guidance and codified criteria, issuance of a notice of violation was not warranted.

Although certain of the facts stated on page no. 234 of the ELP Concern Record (Appendix H) are erroneous (e.g., date of occurrence and number of personnel fired), the basic concern was substantiated. NRC inspection verified that adequate corrective action was taken.

2.1.10 ELECTRICAL PENETRATIONS

CONCERN

Penetrations in the containment for electrical cables were pressurized (sealed) to about 15 psi during the Containment Integrated Leak Rate Test. But after the test, the utility depressurized the penetrations. The utility told the NRC the penetrations would only be pressurized during the containment leak tests. Pressurizing the penetrations only for tests raises many questions about containment integrity during normal operation.

EVALUATION

This allegations was documented on page 4 of the ELP Executive Summary and is further discussed on pages 46-50 of the QTC Report (item no. 10).

The containment electrical penetrations have two O-ring seals which provide the boundary to the containment atmosphere. The electrical penetrations were pressurized to 15 psig during in-place storage after installation as a preservation measure. This was accomplished in accordance with Westinghouse recommendations and was the reason unresolved items 84-03-02 and 86-45-01 were opened to

question why electrical penetration H-59 had a zero pressure reading. During Type B, 10 CFR 50, Appendix J Local Leak Rate Testing (LLRT), the penetrations are pressurized to above the post-LOCA containment pressure to test the leak-tightness of each penetration. This is consistent with the discussion in IR 89-04 when unresolved item 86-45-01 was closed. During the Integrated Leak Rate Test (ILRT), i.e., the Appendix J, Type A Test, the penetrations are left depressurized. Discussion in IR 89-04 of pressurization during Appendix J leak rate testing refers to the LLRT Type B tests. Thus, the nitrogen pressurization system for these penetrations is only required during LLRT and is correctly left depressurized during the ILRT. LLRT data (both Type B&C) is considered in conjunction with Type A results to determine the total leak rate in accordance with 10 CFR 50, Appendix J criteria.

The ELP concern regarding "pressurizing the penetrations only for tests" represents a misunderstanding of the technical principles since this pressurization is in fact, how the electrical penetrations are given a LLRT. The ELP concerns are unfounded and NRC closure of this issue in IR 50-443/89-04 was correct, based upon the stated Appendix J test requirements.

2.1.11 CONTAINMENT PRESSURE

CONCERN

"Technical specifications for Seabrook Station require a positive containment air pressure of between 14.7 and 16.2 psi during operation. Most nuclear plants require a negative containment air pressure so as to prevent radioactive contamination of the environment. The NRC-approved guidelines for Seabrook Station ventilation call for an air flow from areas of low potential contamination to areas of high contamination in order to contain radiation. With the containment at a greater than atmospheric pressure, the air will flow to an area of low contamination from an area of higher contamination, i.e., from the containment to the environment or from containment to uncontaminated areas of the plant."

EVALUATION

This allegation is documented on page 5 of the ELP Executive Summary and is further discussed on page 51 of the QTC Report (item no. 1).

ELP is incorrect in their statement that most nuclear plants require a negative containment air pressure so as to avoid radioactive contamination to the environment. In fact, the only containment buildings which are operated at all times at a subatmospheric pressure are those Pressurized Water Reactor containments designed by the Stone and Webster corporation. The Seabrook Station FSAR Section 6.2 states that the containment is designed and analyzed for normal operation at an atmospheric pressure of 0 to 1.5 psig (14.7 to 16.2 psia). When containment pressure approaches the TS limit during normal operations, the containment is purged through an on-line purge filter system to the containment vent. During operation the containment will be maintained at about atmospheric pressure (14.7 psia). At times the containment may be at a slightly positive pressure which poses no safety hazard. The slightly positive pressure would have a very minor, and analyzed to be acceptable, effect on leakage direction. Furthermore,

Seabrook Station is designed with a safety-related containment enclosure emergency air cleaning system (CEEACS) which draws a slightly negative pressure on the enclosure space surrounding containment and is actuated upon an accident signal. Thus, if any hypothetical containment leakage reached the enclosure area, the direction of flow would be from the uncontaminated areas to the enclosure area. The containment enclosure area is also provided with a safety-related filtration system as part of the CEEACS discussed in FSAR Section 6.5.

The plant ventilation systems do not communicate between the containment and other plant buildings. They are used to ventilate spaces outside the primary containment and are designed to be unaffected by containment pressure (the containment is sealed during operation). Even if there were to be any leakage from the containment to a ventilated space, the ventilation system was designed for this eventuality, even in a post-accident scenario,. The NRC has confirmed from the FSAR that any such leakage was properly included in the safety analysis. Thus, the NRC concludes that the alleged concern has no safety significance.

2.1.12 RESIDUAL HEAT REMOVAL PUMP HISTORY

CONCERN

"In 1983 a NRC inspector officially cited the utility for making up inaccurate records for residual heat removal (RHR) pumps; These records were not created in accordance with any procedure. In 1987 the same inspector reported work by the utility on the RHR pump casing wear rings. In 1988 the inspector reported that the clearance of the casing wear rings was below the minimum requirement in the RHR pumps, and that the actual ring clearance did not match utility documentation on the pumps. The NRC inspector was not concerned with the utility's inability to discover which records were faulty and accepted all records as they were."

EVALUATION

The above allegation is documented on page 5 of the ELP Executive Summary. It is discussed in greater detail in the Quality Technology Company Report on pages 52-62 as item no.12. Excerpts from NRC Region I inspection reports (IR) 50-443/83-02, 87-24 & 88-10 are included as part of the QTC discussion of the RHR Pump Wear Rings.

There is no direct connection between the "A" RHR pump bearing failure, documented in IR 50-443/87-24 (paragraph 4d quoted by QTC) and the dimensional gap problems discussed in the subsequent inspection report. The section of IR 50-443/88-10, quoted by QTC relative to the RHR system, begins with the statement, "NRC Region I Inspection Report 50-443/87-24 described a ....." This, in fact, refers to a section (paragraph 8e) of IR 50-443/87-24 which QTC does not reference and in which RHR pump wearing ring and impeller clearance problems are discussed. NRC followup inspection included witnessing the clearance measurements and review of the licensee's engineering assessment and the evaluation of reportability in accordance with 10CFR21. Corrective action was taken to bring the subject clearance measurements to within tolerance specifications. Therefore, the last two inspection report subjects referred to by QTC do reflect a technical problem

which was investigated by the licensee, discussed with the NRC, addressed by corrective measures, and followed-up by NRC inspection from the time it was first identified. However, the "A" RHR pump bearing failure was inspected in IR 50-443/88-17 as followup to a Licensee Event Report (LER) 88-009 submitted on January 9, 1989, as a thrust bearing problem unrelated to the wear ring clearance problem.

The subject allegation also infers that violations issued in IR 50-443/83-03 share some "commonality" with the technical issues of subsequent inspection reports, discussed above. This is not the case except for the fact that the RHR pumps were the subject of both inspection writeups. The inspection areas and violations identified in 1983 dealt with RHR pump installation activities conducted by Pullman-Higgins, the piping contractor. Specifically, the reconstruction of the missing field process sheet was an uncontrolled activity, but did not relate to inadequate installation of the pumps. In fact, the original process sheet was found in the search process and confirmed acceptable installation. Furthermore, the subject process sheets related to Pullman-Higgins component installation activities, which had no relationship to the later problem identified with the dimensional gaps between the pump wearing rings and the impeller.

These clearance dimensions were set by the pump manufacturer (Ingersoll-Rand) during the fabrication process and would not be altered by field installation of the pump internals into the pump casing. In fact, during the installation process, Pullman-Higgins personnel were not required to measure these clearances because not only would the internals arrive with the gaps preset, but also field installation of the internals would not involve any modifications or field work on the subject parts.

The noted violation (50-443/83-02-03) identified in the original inspection report was closed during inspection 50-443/83-09 with generic corrective action governing QA record modification. This applied to all site contractors since the emphasis of the violation was a 10CFR50 Appendix B, Criterion XVII non-compliance dealing with the lack of procedural controls on record reconstruction, rather than a specific problem on the installation records for the RHR pumps. Specific corrective action regarding Pullman-Higgins involved a significant record audit with no additional problems identified. This provided the basis for the inspector's conclusion that the cited case of an unauthorized record reconstruction was an isolated case.

The subsequent examples of problems identified with the RHR pumps in inspection reports 50-443/87-24 & 88-10 do not alter that conclusion. The technical issues, as well as the QA issues, involved with the separate inspection items (IR 83-02 vs. IRs 87-24 & 88-10) are totally unrelated.

This allegation cannot be substantiated.

2.1.13 UNI-STRUT BOLT STRENGTH

CONCERN

"A concerned individual reported he participated in the haphazard replacement of under-strength uni-strut bolts in 1985 -- bolts that did not meet required specifications. Bolts in difficult locations were not replaced, and no record was kept of which bolts were replaced and which were not. There is no indication in Seabrook Station's NRC docket file that this action took place (see Appendix H. QTC "A Forms," page 231.)

EVALUATION

This allegation is discussed on page 5 of the ELP Executive Summary and on page 64 (item no.14) of the Quality Technology Company report regarding "Uni-Strut Bolts Strength". The ELP Concern Record on pages 230 & 231 of Appendix H also discussed "counterfeit Unistrut Bolts" and bolt replacement activities in the fall of 1983."

On July 27, 1981 the licensee, in accordance with 10 CFR 50.55(e), reported to the NRC a potential defect pertaining to the slippage of electrical cable raceway support bolted strut fittings. On August 7, 1981 United Engineers and Constructors, Inc. (UE&C, the Seabrook Station architect-engineer) reported the same problem to the NRC in accordance with 10 CFR 21. UE&C conducted independent laboratory testing on certain of the subject fittings and replacement of specific bolting connection hardware was required for certain types of support fittings. The replacement activity commenced in 1983.

While it is believed that the subject allegation relates to the same problems identified and reported by the licensee and UE&C in 1981, a few inconsistencies stand out. While connections using Unistrut, Powerstrut and Superstrut components, or combinations thereof, were tested, the Unistrut material, contrary to the stated allegation, performed well and did not require replacement. In fact, the Unistrut components were the only parts authorized for use in future installations. The retrofit activities involved the replacement of Powerstrut and Superstrut parts with Unistrut components. Also, contrary to the allegation of "counterfeit bolts", the technical problem actually involved the use of strut connection material (e.g., bolts, spring nuts, fittings) supplied by the three manufacturers in configurations for which incorrect loading data had been utilized in the design calculations. In other words, the technical issue was not that material counterfeiting had been identified, but rather that errors in calculating the load capacities of the subject support configurations had been discovered.

Despite these inconsistencies and based upon the assumption that the allegation concerning material replacement in electrical supports is the same issue that was identified in 1981 as a construction deficiency, the following is provided as documentation both submitted by the licensee to address and correct the problem and inspected by the NRC as corrective action followup:

10 CFR 50.55(e) Reports

- telephone report, July 27, 1981
- interim report, August 25, 1981
- interim report, December 15, 1981
- interim report, February 18, 1983
- interim report, February 1, 1984
- final report, August 21, 1986

NRC Inspection Reports

- 50-443/82-03, para. 3b
- 50-443/85-25, para. 14
- 50-443/85-29, para. 2.2 & 3
- 50-443/86-43, para. 2.2 & 3
- 50-443/86-46, para. 3a

The subject Construction Deficiency Report (CDR 81-00-10) was closed in IR 50-443/86-46 with the NRC inspector's confirmation that the required modifications to the electrical support connections in seismic Category I buildings had been installed and inspected. Other NRC inspection activities included evaluation of the UE&C testing program, conducted in phases at the Franklin Institute Laboratory and at the ANCO Laboratories, where dynamic testing of cable tray support hardware was conducted for seismic qualification. A meeting was held in Region I in October, 1985 with licensee and contractor representatives and NRC staff personnel from both NRR and Region I to discuss this testing and its results.

It is noted that the licensee was not required to replace all the hardware in all strut connections. Even in some of the suspect connections, engineering evaluation of the loading, dynamic testing, and application of load derating factors justified the acceptability of existing hardware. Therefore, as stated in the allegation, it is true that not all of the connection material was replaced. However, as documented in the referenced NRC inspection reports, inspection checklists were utilized in the documentation of the retrofit program and its replacement activities, thereby refuting the contention that "no known record" of what was replaced was available.

While this allegation, as written, cannot be substantiated, the facts described in the allegation have enough basis to relate to CDR 81-00-10 which was reported to the NRC in 1981 in accordance with 10 CFR 50.55(e). This deficiency was corrected by the licensee and inspected by the NRC, as is documented in the above referenced 10 CFR 50.55(e) and NRC inspection reports.

2.1.14 STEAM GENERATOR CONDITIONS

CONCERN

"At Seabrook Station, at least one violation has been issued against the utility to failing to maintain the Westinghouse steam generators' internal environment. A review of the steam generators and their documented condition is warranted to assure that those at Seabrook Station meet the critical requirements for safe operation."

EVALUATION

The above concern is documented on pages 5-6 of the ELP Executive Summary and is further discussed in the OTC Report on pages 64-65 (item no. 14).

As experience has been gained with steam generators in nuclear power plants, many improvements have been made in the design, construction, and maintenance of these components. The Westinghouse Model F steam generators installed at Seabrook Station have been in use in several other power plants for a number of years and the benefit of the experience gained by these utilities will be available to this licensee.

Historically, steam generators have been a troublesome component in some plants. Initially, many utilities did not provide adequate water quality on the secondary side and these utilities have experienced a variety of problems, some severe enough to require replacing the units. Experience has shown that economic incentives, as well as regulatory requirements, assure that the steam generators have been and will be well maintained both in service and during non-operating periods.

During the construction of Seabrook Stations Unit 1, the NRC did not identify any deficiencies in the care of the steam generators. One violation was issued in NRC Inspection Report 84-12 on the Unit 2 steam generators for the licensee's failure to properly inert the atmosphere of the steam generators with nitrogen. The construction permit for Seabrook Unit 2 is no longer active.

Preservice Non-Destructive Examination of the Unit 1 steam generator tubes was performed in 1985 and observed by NRC inspectors on a sampling basis. No significant problems were found during the examination of the tubes or the NRC inspection of the process. The Technical Specifications for the plant contain requirements for water chemistry during various plant conditions. These Technical Specifications also contain requirements for inspections of the tubes at specified intervals with provisions for escalating the inspections based on the results of the initial testing. In recent year, the NRC has performed numerous inspections during the eddy current examinations of steam generators at various operating plants and plan similar inspections at Seabrook Station. In addition, the Technical Specifications require NHY to report the results of all steam generator inspections. If the inspection results indicate problems, NHY must have NRC approval prior to resuming operations.

In general, NHY has significant regulatory incentives for maintaining the steam generators in a safe and reliable operating condition. Therefore, there are no safety concerns with regard to the Seabrook steam generators or the licensee program for maintaining them.

2.1.15 NRC INSPECTION HOURS

CONCERN

"The hours spent by the NRC inspection team in reaching conclusions on ELP concerns were significantly fewer than the time the NRC requires from other organizations that conduct investigations of this nature for the NRC and nuclear utilities."

EVALUATION

The above concern is documented on page 6 of the ELP Executive Summary and is further discussed on pages 507 of the QTC Report (item no. 1).

The NRC does not have any requirements regarding the amount of time expended on investigations into the nature and validity of allegations. Further, the NRC does not believe that there is any correlation between the amount of time spent on the resolution of one allegation to that spent on another, particularly in light of the experience of the inspectors involved and the nature and complexity of the allegations. Thus the NRC considers this issue without merit.

It should also be noted that QTC analysis of NRC inspection hours for inspection reports 50-443/86-52 and 87-07 did not include the significant amount of time dedicated by the resident inspectors in the review of the allegations and in the assistance provided to the visiting inspectors from the NRC team. Also, several of the allegations first raised by ELP were, in fact, older allegations inspected and documented in previous reports, e.g., 50-443/84-12, or issues previously inspected by the NRC in the normal course of corrective action follow-up activities, e.g., 10 CFR 50.55(e) reports.

As noted above, there is no required amount of inspection time expected to be devoted to the resolution of any particular allegation. The NRC has in the past and will continue to devote to allegation resolution those resources necessary to ensure that the health and safety of the public is adequately protected.

2.1.16 NRC ATTITUDE

CONCERN

"The NRC attempted to discredit concerned individuals and failed to investigate their concerns professionally and thoroughly. The NRC appears determined to find the concerns to be untrue, and exhibits an attitude of disbelief that anything could be wrong with the nuclear plant (see also Section iii, page 4). For instance, NRC inspectors incorrectly concluded a concerned individual was a draftsman and therefore not certified to perform quality activities (NRC Report No. 50-443/87-07). The NRC maintained this assertion even though the individual pointed out its error."

EVALUATION

The above allegation is documented on page 6 of the ELP Executive Summary and is further discussed on pages 19-22 of the QTC Report (item no. 5 and 6).

This concern regarding NRC attitude has been referred to the NRC Inspector General for independent review.

The NRC inspections of allegations at Seabrook Station did not attempt to discredit the allegers. In Inspection Report 50-443/86-52, the inspection found that thirteen of the forty-seven issues inspected were substantiated; however, eleven of these allegations were previously identified by the NRC or the licensee and were appropriately dispositioned by engineering. Further, to ensure that the inspections were thorough, issues that were clearly not safety related were examined in detail, to include independent nondestructive examinations, to identify any connection between the balance of plant equipment and the nuclear safety portions.

With regard to the statement that "NRC inspectors incorrectly concluded a concerned individual was a draftsman...," this concern is traced back to the NRC interview of the subject individual on April 20, 1987. During that interview, the individual was asked what his job title was while employed at the Seabrook Station. His reply was, "Good question. I was called an as-built informally. The specific title I'm afraid I can't remember exactly." The basis for the question was to determine if the Seabrook project had not trained and qualified quality control inspectors in accordance with regulatory requirements. Based on the foregoing response, the NRC was unable to determine whether the individual was considered to be a QC inspector or what were the qualifications required of the position.

The question was posed to the licensee who responded that his duties were not that of a quality control inspector but, basically, a draftsman. His duties were to produce updated drawings for the engineering department's use. No evidence has been provided to substantiate his claim to being employed as a quality control inspector. Personnel employed in the "as-building" process were required to note on piping and pipe support drawings the differences between drawing dimensions and identified field conditions. Whether the comparison of such work to that of a "draftsman" is exactly correct is not important, but the question of whether such personnel performed inspection activities which required certification to ANI Standard N45.2.6 was key to the NRC followup of the subject individual's concerns. NRC inspection review of this question determined that qualified QC inspectors had performed final inspection of the piping and pipe supports and that the "as-building" process was not a substitute for this inspection process, but rather used for specific data collection.

As an example, the placement of pipe support longitudinally on a piping line might involve a tolerance of 3" in either direction. QC inspection would require that this placement be within such tolerance as part of the acceptance criteria, but QC would not be required to note the exact dimension if the acceptance criteria were met. Providing the exact dimensions would be the function of the "as-building" personnel. The data provided was used in the piping and pipe support design reconciliation process which was reviewed by the NRC and documented in inspection reports 50-443/85-09, 85-15, 85-29 and 86-51.

NRC resolution of this question was not based upon disagreements in semantics over "as-builder" versus "draftsman", but rather involved a review of the work function, it's purpose and the end result of the process.

In regard to the statement that the NRC attempted to discredit concerned individuals and failed to investigate their concerns professionally and thoroughly, the record fairly well speaks for itself. The NRC met with the ELP staff and those concerned individuals who made themselves available on three occasions to ensure adequate understanding of the issues. The NRC team members met with other individuals that expressed concerns at locations chosen by them to secure any information that might confirm the alleged conditions at the plant. Some issues that were clearly not within the purview of the normal NRC inspection scope were examined in an attempt to establish the reliability of the allegations. Two team inspections (IRs 50-443/86-52 and 87-07) were conducted to investigate ELP allegations and other inspection activities were subsequently conducted and documented by the resident inspectors (e.g., IRs 50-443/87-26 and 88-10) to address ELP concerns. For a couple of the issues remaining unresolved after the 87-07 inspection, the NRC employed technical consultants from Brookhaven National Laboratory (BNL) to review the technical concerns. The BNL Technical Evaluation Report was attached to IR 50-443/88-17 which addressed closure of the unresolved items.

The NRC has addressed every allegation raised by ELP, has responded to every piece of correspondence sent by ELP, has conducted several meetings with ELP with transcription services provided at government expense and has evaluated each concern from the standpoint of the impact upon the health and safety of the public.

2.1.17 CONCLUSION

CONCERN

"Quality Technology Company has concluded that a full-scale independent safety investigation of Seabrook Station is warranted. Even though QTC's report has touched on many areas indicating safety problems which must be examined in more detail, there are also many other areas which require attention. Such investigations have been ordered by the NRC at other nuclear plants when there were indications similar to those at Seabrook Station. The U.S. Congress also has the power to order such an investigation, thereby ensuring the public's safety."

EVALUATION

The above concern is documented on page 6 of the ELP Executive Summary and is further discussed on page 66 of the QTC Report.

The Employees Legal Project's assertion that an independent safety investigation of the Seabrook Station is warranted can not be supported by the record. On three separate occasions, the NRC performed multi-discipline team inspections of allegations at the Seabrook Station, and, in each case, no safety significant problems were identified. One of these inspections utilized the NRC Mobile

Nondestructive Examination Team to perform destructive and nondestructive examinations on suspect structures and components. The ELP concern regarding concrete cracking was referred to the Office of Nuclear Reactor Regulation for an independent expert review. A consultant from Brookhaven National Laboratory was engaged to independently assess the cracking and water seepage. He concluded that concrete shrinkage cracks and water seepage did not effect structural integrity.

The staff reviewed ELP's latest allegation in accordance with agency procedures for late-filed allegations and concluded that none were material nor was any new safety significant issue identified. This conclusion was supported by an independent review lead by NRC staff personnel not previously associated with the Seabrook Station. The independent reviewers stated, "In general we found that the vast majority of the allegations were very vague and non-specific and the NRC staff made more than reasonable efforts to obtain details and resolve the allegers safety concerns."

2.2 QTC REPORT

All of the specific concerns raised by Quality Technology Company in its Final Report of Initial Investigation into Allegations of Safety Problems at the Seabrook Nuclear Power Station have already been addressed in the NRC Evaluation of concerns documented in the ELP Executive Summary (section 2.1 of this NRC report).

2.3 APPENDIX "H" INDIVIDUAL ALLEGATIONS

2.3.1 CONCERN

Use of a TP10 procedure to prevent writing NCR's. Save time and money.

EVALUATION

NRC Inspection Report (IR) 50-443/86-52, paragraph 24, specifically addressed this allegation. The original allegation stated," Implementation of the TP 10 procedure. This procedure enables Nonconformance Reports to be written without the NRC's knowledge saving valuable steps of inspection (saving the company money)." Other NRC inspection coverage of the licensee TP 10 procedure and program is documented in IRs 82-08, 83-13 and 83-15.

The conditions identified using this procedure were not required by regulation to be reported to the Commission. The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. It was concluded that the previous resolution to the concern was acceptable.

2.3.2 CONCERN

Ambiguous procedures used to allow loose interpretations.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 25, addressed this particular allegation. The original allegation stated, " Safety related construction procedures written in ambiguous, hard to interpret language in order to make conformance to them up to the reader and his or her interpretation." The allegation was a general statement of procedure ambiguity and did not cite any specific procedure as an example. Based on previous NRC inspections and licensee procedural process controls, the allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.3 CONCERN

Procedures written to allow safety (personnel) hazards to exist.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 26, examined this allegation. The original allegation stated," Procedures written to allow conditions to exist that are unsafe, but since a procedure has been written to cover the given condition that makes it acceptable." Further clarifying information was provided during the interviews conducted on November 4,1986. The concerned employee stated that equipment was installed incorrectly relative to the procedure, but once it was installed the procedure was rewritten to reflect the installation.

The allegation was a general statement and did not provide a specific example of the alleged conditions. Although the allegation, as provided in the OTC Appendix H, stated "safety (personnel)," based on the above interviews of the ELP staff, it was determined to mean equipment installed incorrectly. If, in fact, the allegation refers to personnel or industrial safety, the allegation has no direct affect on nuclear safety and is not appropriate for NRC evaluation. Although the industrial safety aspects come under the purview of OSHA, the NRC does note personnel safety issues and will refer major problems to the appropriate regional office of OSHA.

The subject inspection report evaluated the allegation for the nuclear safety aspect and concluded the allegation could not be substantiated. The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.4 CONCERN

Inadequately trained welders.

EVALUATION

Inspection Report 50-443/86-52, paragraph 12, examined this allegation or one very similar. The allegation was very general without any specific examples to support the statement. The NRC performed several in depth inspections of this area which are documented in the subject report.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.5 CONCERN

Improperly trained electricians.

EVALUATION

Inspection Report 50-443/86-52, paragraph 28, reviewed this allegation. The allegation was not specific regarding the training deficiency asserted. Based on the fact that electricians were journeymen level union members, the NRC inspections performed of training listed in Table 6 and the supplemental training they received at the site, the allegation was concluded to be unsubstantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.6 CONCERN

Trainees/Engineers gave classes in an inadequate manner. Internal group training.

EVALUATION

Inspection Report 50-443/86-52, paragraph 29, reviewed this allegation. The allegation was not specific in the nature of the inadequacy of the training. Based on previous NRC inspections of this area, see Table 6, it was concluded the allegation was unsubstantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.7 CONCERN

Individuals have worked excessive number of hours per day 18-20.

EVALUATION

Inspection Report 50-443/86-52, paragraph 14, examined this allegation or several that are very similar. The allegations did not specify which contractors were using excessive overtime. At the time of the inspection, construction contractors had demobilized and reconstruction of overtime work records was not possible. For the plant operating and maintenance staff, overtime is limited by technical specifications. No equipment deficiencies could be cited by those concerned individuals making the statements.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.8 CONCERN

Individual has seen engineers/technicians and craftsmen working 18/20 hours per day.

EVALUATION

This allegation is basically the same as number 7 above.

2.3.9 CONCERN

Tracking of drawings/blueprints is impossible.

EVALUATION

Inspection Report 50-443/86-52, paragraph 32, addressed this specific allegation. This allegation was clarified during the interviews of the ELP staff. In the interview record, it was stated that this concern resulted from observations made in the fire protection system in the turbine building. Based on previous inspections and examinations during the subject inspection, the allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable..

2.3.10 CONCERN

Sabotage/Battling between contractors. Undermining activities and morale, no physical sabotage.

EVALUATION

Inspection Report 50-443/86-52, paragraph 33, addressed this issue. Base on the interviews of the ELP, the allegation does not mean sabotage in the literal sense of damage to equipment. The allegation generally deals with the lack of cooperation between contractors such as United Engineers and Pullman - Higgins. These contractor interface problems were evaluated by the NRC and documented in several SALP reports. SALP Report 85-99 specifically discusses the restructuring of the Seabrook project under New Hampshire Yankee management and the replacement of several contractors by a work force under the direct supervision of UE&C. This project restructuring was viewed as a positive licensee management action. Based on the interviews of the allegers and previous inspections by the NRC, it was concluded that this allegation did not affect plant equipment.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.11 CONCERN

Contractors, engineering constructing job improperly in order to prolong the job.

EVALUATION

Inspection Report 50-443/86-52, paragraph 34, addressed this specific allegation. This was a general statement which did not allege any specific piece of equipment that could substantiate the allegation, but was indicative of the overall allegation regarding the adversarial relationship between contractors discussed in item 2.3.10 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.12 CONCERN

People trained/retrained or not trained due to lack of adequate tracking system.

EVALUATION

Inspection Report 50-443/86-52, paragraph 35, addressed this allegation. The allegation was not specific regarding the kind of training or what contractors were involved. Based on the inspections in this area performed by the NRC (see item 2.3.5) and audits conducted by the licensee, the allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.13 CONCERN

People working at site were illiterate, cheating on exams. Someone else would take the test for those who could not read or write. Literacy tests given toward end of construction to slow progress and give excuse for laying off.

EVALUATION

Inspection Report 50-443/86-52, paragraph 37, addressed this allegation. The allegation did not contain enough specific information to permit direct verification. The licensee never gave literacy tests but did give General Employee Training examinations near the end of construction as part of the operating license requirements to control access to the plant. The personnel tested were required to have positive identification to take the test.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.14 CONCERN

Paint thinner spilled on electrical cables, damage to insulation.

EVALUATION

Inspection Report 50-443/86-52, paragraph 38, addressed this allegation. The allegation was substantiated and the licensee was aware of it; however, based on NRC independent tests of cables exposed to paint thinners, the condition was determined not to be detrimental to the cables.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.15 CONCERN

Damage to cables because they were not protected and were walked on over last 6-7 years. Sparks/fires caused.

EVALUATION

Inspection Report 50-443/86-52, paragraph 39, addressed this allegation. The allegation did not cite specific cables but, based on the description of the cables, it was determined that the cables were not permanently installed safety related cables, but temporary cables.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.16 CONCERN

Piping from containment to turbine building was forced into position with a comealong for welding. Cold pull, cold spring.

EVALUATION

Inspection Report 50-443/86-52, paragraph 40, addressed this allegation. The allegation was previously identified by the licensee and documented in a Nonconformance Report and a 10 CFR 50.55(e) construction deficiency report to the NRC. The piping involved was the main steam piping. The corrective actions were verified by the NRC and documented in Inspection Report 50-443/85-25.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.17 CONCERN

NRC wrote reports on problems, these reports were covered up, some of the issues were corrected.

EVALUATION

This allegation has been referred to the Office of the Inspector General.

2.3.18 CONCERN

Paint on the floor near the refueling pool was peeling. Could be sheeted off with a putty knife. Painters painted over it with a harder paint.

EVALUATION

This was classified as a new allegation, and was assumed to mean the refueling floor inside the primary containment where it would have the most significance. The SRI recalls identification of peeling paint in the polar crane rail wells inside containment at the refueling floor level. This condition was adequtely corrected by the licensee. The area was physically inspected by the resident inspector on January 17, 1990, and it was determined the condition of the paint did not indicate there were currently any adherence problems. A previous allegation regarding paint peeling is discussed in Inspection Report 50-443/86-52, paragraph 9. The "refueling pool" area is lined with stainless steel and is therefore not painted. Based on the recent visual inspection and the resolution of the previous allegation, this item is considered closed.

2.3.19 CONCERN

A ratchet fell into reactor vessel from top of dome. Ratchet rattled around and made noise. Was any damage done to the reactor vessel.

EVALUATION

This is a new allegation and was not specific regarding the time when the ratchet wrench fell into the reactor vessel. Two concerns derive from this allegation. First, the fact that a wrench may be loose inside the reactor vessel that can potentially cause damage, and that the impact of the wrench may have damaged the vessel cladding.

Final cladding surface inspections were performed in the 1982 time frame. Subsequent to the hot functional test, the vessel internals were removed and the water drained to permit another visual inspection of the vessel and vessel cladding. Once these inspections were completed, no overhead work was performed with the vessel head removed. These documented inspections of the vessel condition remove any concern that possible damage caused by the incident went undetected. Review of the licensee's January 24, 1990, assessment of the allegation confirms the foregoing evaluation. No further action regarding this matter is planned.

2.3.20 CONCERN

Painters QC'd other painters, they said they were not vital spots.

EVALUATION

Inspection Report 50-443/86-52, paragraph 15, addressed this allegation. The licensee did have a paint monitor program wherein craftsmen did in-process checks of other painters work prior to the final quality control verification. This is an acceptable practice and did not replace the mandated quality control inspections.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.21 CONCERN

87-074-001. Due to a misinterpretation in measuring the lengths of pipe leading from the reactor to the steam generators and pumps, the column bases were set 3/4" further from the reactor than design had called for. When the cross-over piping was installed, the pipe was found to be close to one of the pump columns. The space was less than one inch where six inches of insulation had to be installed... Since this pipe is quite rigid, most of the stress would, I believe, fall on the welds at the pump and the reactor. This condition would also cause a slight twist in the cross-over piping...

EVALUATION

Inspection Report 50-443/87-07, paragraph 2.25, addressed this allegation. A documented interview with the alleger indicated that this was not an allegation in the literal sense, but a question regarding the resolution of a problem in which he was originally involved. The allegation inspection team agreed to

examine this issue in an effort to be responsive to public concerns. A detailed review of the allegation disclosed that this was a well documented condition in the licensee's Engineering Change Authorization (ECA) program. The NRC review included the design stress analysis and independent measurements. Also, the licensee handling and resolution of the subject ECA was inspected and documented in IR 84-07 before the allegation was raised and in IR 88-10 relative to reactor coolant pump level conditions based upon additional ELP questions.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.22 CONCERN

The movement of the RCP column support legs that was accomplished earlier and as identified in NRC report 87-07. How were the legs moved. The embedment bolts for this installation were either welded or bolted to the base plate of the containment building. The bolts are approximately 6 ft. long. The concrete has been poured around the bolts. How was the leg moved and then bolted down with the proper strength bolts. Were the embedded bolts cut? How were the legs moved 2" (per NRC report) or 5" (per concerned individual). The strength requirement by the design drawing for the embedded bolts is 115kpsi. If the bolts were cut does the new installation meet this strength requirement? Were Hilti bolts installed? Do they have the necessary strength to support the RCP in the event of an earthquake? The pictures provided do not show any offsetting of the bolts from center.

EVALUATION

This issue is a question stemming from the QTC review of the ELP allegation discussed in item 21 above. The anchor bolts are, in fact, 48" long and 2" in diameter. The anchor bolt holes in the 3" thick base plate are 7" in diameter to accommodate the 2" diameter anchor bolts; 2" thick washer plates that cover the 7" diameter holes were installed above and below the base plate along with leveling nuts, load nuts, jam nuts and standard washers. The assembly was then grouted to complete the installation. The oversized holes could accommodate the small offset necessary to realign the pump, thus, precluding the need to move the anchor bolts.

This allegation was reviewed by NRC personnel not previously involved in the concern and determined this allegation is satisfactorily resolved.

2.3.23 CONCERN

Control building air conditioning system refrigerant lines (CBA). All compressors are located within an area of approximately 30 x 10 ft. on second floor of the diesel generator building. The condensers are in a similar area in the control building. There is no physical barrier between compressors or condensers. There is a common mode failure problem.

EVALUATION

Inspection Report 50-443/86-52, paragraph 51, addressed this allegation or a similar one. The allegation was substantiated that the equipment and piping for the control building air conditioning system is not separated. However, the system is redundant and seismically qualified and was reviewed previously and accepted by the NRR staff reviewer in section 9.4.1 of the FSAR. The SRI also reviewed the control room air conditioning system refrigerant piping design in 1988 in response to ELP concerns. A letter from Region I, dated April 21, 1988 was sent to ELP to address these concerns which were unsubstantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.24 CONCERN

Only one common supply tank for feedwater, emergency feedwater.

EVALUATION

Inspection Report 50-443/86-52, paragraph 52, addressed this allegation or one very similar. The concern is that the condensate storage tank (CST) is the sole supply for the emergency feedwater system and the water level is not controlled, thus, other systems may drain it below technical specification limits. The review in the subject inspection report evaluated this concern and demonstrated that the level is controlled to prevent drain down. Also, a plant as-built inspection for conformance to the Technical Specifications was conducted by NRC contractor personnel (IR 86-27). Licensee control of the dedicated safety-related volume of water in the CST was inspected, questioned and resolved.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.25 CONCERN

Both trains of EFW run near each other from the tank outlet, thru the yard, to EFW pumphouse, common hangers and supports. No physical barrier between pumps.

EVALUATION

Inspection Report 50-443/86-52, paragraph 48, addressed this allegation or one with a common theme dealing with the a lack of separation between redundant emergency feedwater system components and piping. The concern is that in several places the systems are supported by a single structure. This is addressed by the fact that the structures are seismic category I.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.26 CONCERN

Concerned that control room is protected by sprinkler system. Exposing equipment to possible water damage.

EVALUATION

Inspection Report 50-443/86-52, paragraph 53, addressed this allegation. The control room is not protected by an automatic fire water sprinkler system. The evaluation performed in the subject inspection report describes the fire protection available and reviewed the 10 CFR 50.48 and Appendix R requirements. The fire protection program was reviewed and approved in the Safety Evaluation Report, dated March 1983.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.27 CONCERN

Pars (SIC) of CBA system were constructed without design drawings, these were added after the initial design was found to be inadequate for cooling the control room, components installed contrary to vendor drawings.

EVALUATION

Inspection Report 50-443/86-52, paragraph 54, addressed this allegation. The original allegation stated," Parts of CBA system were constructed without design drawings." The alleger was interviewed on November 1, 1986, to gather any additional information and concerns regarding the issue. The inspection disclosed that detailed design drawings were available for the control building air conditioning (CBA) system. Resident inspections conducted in 1983 also reviewed the adequacy of the design and construction of the CBA system.

Further, the NRC inspected the physical installation of the CBA system in conjunction with another allegation described in paragraph 51 of Inspection Report 50-443/86-52 and did not identify any deviations from the drawings.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.28 CONCERN

Turbine exhaust piping was installed with several reverse slopes.

EVALUATION

Inspection Report 50-443/86-52, paragraph 55, addressed this allegation. The equipment described is not safety related and is outside the scope of NRC inspection. However, in an effort to be responsive to the allegers concerns, the area was examined to ensure conditions did not exist that could impact safety related equipment. No equipment deficiencies were noted that would support the allegation.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.29 CONCERN

Some heat exchanges (SIC) (turbine, feed heaters) were installed out of level.

EVALUATION

Inspection Report 50-443/86-52, paragraph 55, addressed this allegation and the evaluation described in item 2.3.28 above is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.30 CONCERN

Unmarked or incorrectly identified welds.

EVALUATION

Inspection Report 50-443/86-52, paragraph 55, addressed this allegation and the evaluation described in item 28 above is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.31 CONCERN

Old welds that had not been marked were marked after being brought to the attention of the supervisor (falsification).

EVALUATION

Inspection Report 50-443/86-52, paragraph 55, addressed this allegation and the evaluation described in item 28 above is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.32 CONCERN

Piping drawings were not adequately controlled. They were left in desk drawers. A fire in a Johnson Control trailer caused a loss of drawings.

EVALUATION

Inspection Report 50-443/86-52, paragraph 56, addressed this allegation. In anticipation of this kind of loss, the contractor maintained a duplicate set of documents to preclude their destruction.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.33 CONCERN

Training was of uneven quality. People were not taught what they needed to know. Students would sleep through class, tests were taught, questions were identified and answers given.

EVALUATION

Inspection Report 50-443/86-52, paragraph 58, addressed this allegation. The interviews of the allegers provided more details and focussed the allegation. The allegation deals specifically with training of new hires by the Pullman - Higgins Company. The training that was being provided consisted of safety orientations, locations of restricted areas, disciplinary action and other similar topics. This training has no impact on the nuclear safety of the facility.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.34 CONCERN

The relationship between P&H and UE&C was adversial(sic). Cost, time, and schedule.

EVALUATION

Inspection Report 50-443/86-52, paragraph 59, specifically addressed this allegation. This allegation is similar in content to items 2.3.10 and 2.3.11 above. The fact that cost, time and schedule were affected does not impact the safety of the equipment.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.35 CONCERN

UE&C used Seabrook to make work for their own company, train their people and generally keep things going in their own best interests, instead of Seabrook's.

EVALUATION

Inspection Report 50-443/86-52, paragraph 33, addressed this allegation and is related to item 34 above. The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.36 CONCERN

Work on site was chronically behind schedule, resulting in management depending on extensive overtime to meet deadlines.

EVALUATION

Inspection Report 50-443/86-52, paragraph 60, addressed this allegation and is similar in content to item 2.3.7 above. The evaluation for item 2.3.7 is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.37 CONCERN

High employee turnover 50% in nine months at P&H. 25% UE&C. Required extensive training efforts and problems with incomplete work having to be given to others to be completed.

EVALUATION

This appears to be a new allegation which deals with a high turnover rate and the training efforts involved. It does not specify the time period for this incident nor does it state or imply there were equipment problems associated with it. However, the adequacy of training has been previously addressed in the evaluation of other allegations (see item 2.3.12, 13, and 33).

Because of its lack of specificity and previous NRC inspection of the subject matter, it was evaluated by the review team to not be material to the licensing process.

2.3.38 CONCERN

Worker confidence in plant future safety low. Heard allegations of: 1: cost over runs; 2: faulty construction; 3: drug and alcohol abuse; 4:control room instrumentation problems; 5: design inadequacies; 6: inadequate inspections.

EVALUATION

This is a new allegation that consists of six very general statements. The concern regarding drugs was addressed in Inspection Report 50-443/86-52, paragraph 13. The statement regarding cost overruns does not directly affect the plant equipment and, therefore, nuclear safety is not impacted. The statements that there were design inadequacies, faulty construction and inadequate inspections are too vague for followup inspections, but are dealt with generally in Inspection Report 50-443/86-52, paragraphs 1.4 and 1.5.

The statements regarding the control room instrumentation problems, although too vague to inspect, should be pursued with the alleger to determine if more information can be obtained for this item and the other general statements. (443/90-80-01)

Because the statements are very general and the subjects have been dealt with in the main, the statements are not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.39 CONCERN

Severe sediment in fire main piping, believes it to be (MIC) in sprinkler system pipes were blocked with growth. Covered fire main piping is plugged around the plant due to build up of material i.e., sediment, growth, etc.

EVALUATION

Inspection Report 50-443/86-52, paragraph 6 and 50-443/87-07, paragraph 2.6, examined this allegation or one very similar in content. MIC is microbiological induced corrosion or more plainly stated, corrosion caused by living cells. In response to this allegation, the NRC witnessed fire water main testing and discussed the issue with the fire insurance inspector who has a vested interest in ensuring the fire systems are capable of performing their functions. Based on previous NRC inspections in this area, the successful completion of witnessed testing and assertions of the fire insurance inspector, the fire system was concluded to be operational.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.40 CONCERN

Cold pulling of Turbvine (sic) drain piping.

EVALUATION

Inspection Report 50-443/86-52, paragraphs 40 and 55 and Inspection Report 50-443/87-07, paragraph 2.18, addressed this concern or one very similar in content. The cold pulling of piping has been dealt with in detail for the safety

related systems. In this case, the turbine drain piping is not safety related and, therefore, beyond the NRC inspection scope. This issue was inspected in an effort to be responsive to the concerns of the employees who provided the information.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.41 CONCERN

Piping ends left open overnight. Pipe wrench left in one pipe in waste treatment building.

EVALUATION

Inspection Report 50-443/87-07, paragraph 2.28, addressed this allegation. The allegation did not provide any specific pipes that were deficient, but implied a widespread problem existed. NRC inspections throughout construction noted the presence of pipe caps and did, in a few instances, note that caps were absent. Based on these inspections, the process for quality control on cleanliness in piping systems, and the post construction flushing program, it was concluded the problem was not prevalent.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.42 CONCERN

Quality and product suffered because of an attitude problem and mis-management.

EVALUATION

This allegation was provided to the NRC on April 20, 1987, by ELP. The statement is very general and does not provide enough specific information to permit inspection to verify the assertion. However, the topic of product quality has been dealt with extensively in previous NRC inspection reports that are listed in tables 1 through 6 of Inspection Report 50-443/86-52.

Because the statement is very general and the subject has been dealt with in previous NCR inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.43 CONCERN

Debris thrown in concrete in Unit II Containment.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The allegation is different from those previously received regarding debris in the concrete in that it specifies the Unit 2 containment structure. The Unit 2 construction permit is no longer active, therefore, it has no bearing on the licensing of Unit 1. The materiality of this particular issue lies in the impact of the act on Unit 1. This aspect of the concern has been evaluated in Inspection Report 50-443/86-52, paragraph 3, and determined to have no safety significance.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.44 CONCERN

Piping was rusty internally prior to welding-installation.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement lacks sufficient specificity to permit direct inspection. A large number of observations, listed in table 2 of this report, have been made in the area of pipe welding including fitup and cleanliness.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.45 CONCERN

Unpainted rusty welds, not identified.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It is similar to item 2.3.44 in content. The rationale for the disposition of this item is the same as the preceding statement.

2.3.46 CONCERN

Welders being told to stencil welds they did not make in order to get requirements met.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The full statement of this allegation was, "It was common to see unpainted rusty welds with welder's stencils not even etched into the weld area for ID..." Inspection Report 50-443/86-52, paragraph 55, discusses a similar concern. This appears to be a restatement of that concern: " All field welds were required to be stenciled by the welder with his identification symbol and the field weld number. In numerous instances I found unmarked welds, and in in some cases, incorrectly identified welds.... Identification marks were inscribed on these welds after I brought them to the craft supervisor's attention." The foregoing concern was evaluated in items 2.3.30 and 2.3.31 of this report. Additionally, Inspection Report 50-443/ 85-20 addresses and closes a similar allegation involving one case of a welder stencil problem.

Because the statement is very general and the subject has been dealt with in previous NCR inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.47 CONCERN

People doing things to "make it right" to prevent NCR being written.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. This is a general statement and now that construction is completed, this has no meaning relative to the plant equipment. The inference in this concern is that errors were being detected and corrected without the required nonconformance report (NCR) being written. The inherent problem with this is that underlying causes were not identified and corrected, thus, the condition may have recurred. The positive aspect of this concern is that the condition was being corrected such that no equipment deficiencies remained to affect the plants operability. The successful completion of the construction, pre-operational and operational testing attests to the quality of the completed construction.

Because the statement is very general and no equipment deficiencies resulted from the practice, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.48 CONCERN

Bad welds covered up by welding over them. Welders had inadequate backgrounds, experience or knowledge of metallurgy.

EVALUATION

This allegation was presented to the NRC in a meeting on April 20, 1987. Additional information was requested from the ELP, but no response was provided. This is a general statement without sufficient detail to permit inspection to verify the concern. The statement does not specify which kinds of welding are

suspect, piping, structural or electrical. Further, the most critical welds were required to have a volumetric examination to ensure their structural integrity. Also, the NRC did independent volumetric examinations using the Mobile Nondestructive Examination Laboratory to verify the licensee's process. The area of welding has received significant NRC inspection coverage as examples are listed in Table 6.

Because the statement is very general and the subject has been dealt with in previous NCR inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.49 CONCERN

Many welders could not read blueprints. This led to location errors in piping and support installation.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it lacks sufficient specificity to permit inspection; no response was provided.

Welders do not locate pipe and pipe supports, this is the responsibility of the engineers and pipe fitters. Welders do need to be able to interpret welding symbols on drawings that specify the type, size and configuration of the weld to be made. Any errors in the location of the piping and supports would be noted by the engineers and quality control inspectors. This would also be noted by the stress walkdown analyst. The NRC performed independent walkdowns of several important piping systems and did not identify any substantial deviations from the drawings. Also, NRC IRs 85-15, 85-29 and 86-51 discuss the licensee piping as-building efforts and design reconciliation program regarding piping and support installation.

Because the statements are very general and the subjects have been dealt with in previous NCR inspections, the statements are not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.50 CONCERN

Blueprints were wrong at times. They would show incorrect systems, in that a blue print called for an installation in a designated area, other already installed equipment would require changes to drawings.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It does not provide sufficient information to permit inspection to verify the alleged problem. Equipment interference problems are commonplace in complex construction such as a nuclear power plant. Systems are generally designed with a hierarchy of placement in the plant, with the more important and difficult equipment placed first, knowing that interferences will be encountered later.

Architect-Engineering companies have several methods to minimize this problem, but none of these totally eliminate it. One method is to construct elaborate scale models of the construction and trial fit things into the model. Others use sophisticated computer programs to construct three dimensional models to identify potential interferences. Obvious interferences must be resolved to accommodate installation. The NRC has inspected equipment installation as a matter of the routine inspection program.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not condsidered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.51 CONCERN

Local 131 of the pipe fitters union ran a welding school which was attended to 2 1/2 weeks. A lot of people attending were friends or family of "Higher Ups". Often these people had no previous welding experience, they were just put through the program at times when welder needs were high. It was not possible to become a good welder in the amount of time the school gave them to "pass" the test.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. NRC Inspection Report 50-443/86-52, paragraph 12, deals with the issue of welder qualification in detail. Extensive inspections have been performed by the NRC in this area and are discussed in the subject report. All pipe welders performing on safety related systems were required to pass an ASME welding test to demonstrate their ability to make sound welds regardless of their prior training or experience. Additional NRC inspections of welder qualifications can be found documented in IRs 84-01, 84-10 and 84-15.

The statement that the attendees were "friends or family of higher ups," does not affect equipment safety. Even these people would be required to take the ASME certification test. Further, in-process nondestructive testing would quickly identify unqualified welders.

Because the statements are very general and the subjects have been dealt with in previous NCR inspections, the statements are not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.52 CONCERN

On one occasion, an individual witnessed a welder welding stainless steel when he had not been qualified to do so.

EVALUATION

This is a previous allegation raised by ELP for which specific questions were asked by the NRC; no response was provided. No specific weld number, system or ASME Code classification was given to permit evaluation. If the event occurred in a nonsafety system, it would have no impact on plant safety. If the weld were in a safety related system, several layers of protection exist to ensure the weld can perform its function. First, if the weld were safety related, it would require the welder to draw welding material from the weld rod storage room that had controlled issues. Second, the quality control inspector would need to verify the welders qualification. Third, the weld would receive a final inspection and for those of ASME Code classes 1 or 2, they would receive a volumetric examination of radiography. ASME Code Class 3 pipe welds receive an NDT surface examination. Lastly, for ASME Code systems, the piping receives a hydrostatic test to demonstrate its structural integrity.

Because the statement is very general and the subject of welding has been dealt with in previous NCR inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.53 CONCERN

Witnessed one person etch another welders initial into a completed weld, because he was not qualified to do the weld. See 012.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It is related to item 2.3.52 in that the affect is the same. The end result is a person making a weld for which he is not qualified. The evaluation and conclusion are the same as for item 2.3.52.

2.3.54 CONCERN

Cherry picker dropped a valve, considerable investigation no known resolution. Where is the valve now?

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It lacks sufficient detail to perform a meaningful followup. The allegation is more of a question than a statement that anything wrong occurred. The statement alludes to "considerable investigation" which implies it was a documented event and possibly processed within the corrective action program. In addition, subsequent functional tests were required for components in safety related systems which would identify deficiencies that would preclude having a valve installed that could not function because it was dropped. Further, after the preoperational tests are performed, critical valves are tested on a periodic basis under the requirements of the ASME Code, Section XI, for inservice testing.

Because the statement is very general and the subject has other adequate safeguards to ensure satisfactory operation, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.55 CONCERN

Individual was familiar with a few weld inspectors (QC) who were regularly high on "pot".

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It is very similar to other concerns addressed in NRC Inspection Report 50-443/86-52, paragraph 13, concerning the use of drugs on the site. The allegation does not provide enough specificity to indicate if the incident occurred on site or if it impacted the QC inspector's ability to perform their job. The licensee recognized the need to address the problem in 1976 and established a policy regarding drug and alcohol use. Added measures were instituted in the form of audits and supervisory controls. This issue has been subsequently address by the NRC staff and the licensee in detail.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.56 CONCERN

Weld (QC) inspector would sign off or reject welds without inspection based on who the welder was.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is very general in its content. The allegation does not specify the kinds of welds that were being inspected, piping, structural steel, electrical cable supports or if the welds were on safety or nonsafety related components.The act of rejecting a weld based on the identity of the welder has no impact on safety. The result of this would be the weld having to be reworked unnecessarily. If the QC inspector accepted an unsatisfactory weld, the consequence would depend on the kind of weld. ASME Code pipe welds receive a final visual inspection and, if this was the inspection in question, would also receive a nondestructive surface or volumetric examination performed by a separate person. Welds on other kinds of components would receive varying degrees of inspection based on the applicable code. The statement also presupposes that the weld was made incorrectly. Most craftsmen do the job correctly and the function of quality control is to detect the few who do not, not the reverse.

Because the statement is very general and the process has built in constraints to minimize or preclude this, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.57 CONCERN

Large amount of drug abuse both alcohol and other substances. All were also for sale readily.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is similar to the issues dealt with in NRC Inspection Report 50-443/86-52, paragraph 13, and the evaluation is the same as item 2.3.55 above.

The licensee recognized the need to address the problem in 1976 and established a policy regarding drug and alcohol use. Added measures were instituted in the form of audits and supervisory controls. This issue has been subsequently address by the NRC staff and the licensee in detail in a staff review of the licensee's response, May 1988, to Congressman Markey's January, 1988 investigation report. The issues of drug and alcohol awareness and related programs, protentional construction deficiencies due to substance abuse and reporting requirements in this area have been thoroughly addressed.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.58 CONCERN

Observed a worker urinating down an uncapped riser pipe.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement lacks the specificity to permit evaluation. The piping in question has by this time been welded closed to preclude any followup inspection. The lack of specificity does not allow an assessment of the significance of the act. The consequence of the act depends on whether the pipe was safety related, the materials involved, the temperature the pipe was exposed to before the contaminate was removed and the duration of the contact with the material. It was routine procedure for the piping to be flushed before being put into operation which would remove the contaminates before the pipe was taken above ambient temperature. The likelihood of detrimental effects on the pipe is very remote.

Because the statement is very general and the low likelihood of damage to the pipe, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.59 CONCERN

Thousands of arc strikes, some enormous, others small. It would take a year to correct all strikes.

EVALUATION

This allegation is related to item 2.3.60 below. This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested by the NRC but, no response was provided. It was origianlly stated as," Thousands of arc strikes occurred." This was part of a larger statement provided by a Pullman -Higgins welder. The NRC wrote to the ELP on May 27, 1987, requesting additional information to permit further evaluation; the ELP was unable to provide the additional information. The NRC invoked the provision of the NRC Manual Chapter 0517, which prescribes the allegation may be closed if it is too vague or general to permit followup.

Review of the allegation at this time determined that the condition is not generally detrimental to the functionality of carbon, low alloy or stainless steel materials used in the construction of the plant. An arc strike, by definition, cannot be enormous. Further, the NRC inspected welding and observed the piping and equipment condition throughout construction and did not note a widespread problem with arc strikes.

This issue was reviewed by NRC personnel not previously associated with this issue; they concurred in the assessment.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not condsidered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.60 CONCERN

Some arc strikes went very deep, to below minimum wall of pipe. Welders would clad weld up the pit and fitters would grind smooth, no QC involvement, no testing.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested by the NRC, but no response was provided. This allegation is similar to item 2.3.59 and the same evaluation applies to this one. The new aspect to this one is the fact that the "arc strike" went below the minimum wall of the pipe. It is unlikely that an arc strike would peratrate the wall of the pipe to that depth with an inadvertant contact of the electrode. Arc strikes generally occur when a welder has a hot or energized electrode and inadvertantly contacts the pipe or other grounded metal structures. The contact is only momentary and arc penetration is only the upper most surface of the material. The electrodes normally used by pipe welders are 3/32" in diameter up to 5/32". The amperage used is approximately 100 amps or less. This combination of electrode and amperage will not penetrate the pipe to any extent in a classical arc strike.

The major concern with this issue is the undocumented weld metal in the pipe wall resulting from the repair. Even this is not serious if it was performed by a qualified welder using approved material. The allegation does not provide sufficient detail to permit an indepth evaluation.

Because the statement is very general and the subject of welding has been dealt with extensively in previous NRC inspections, the statement is not condsidered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.61 CONCERN

Had to work excessively long hours, this contributed to poor worker attitude.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is similar to items 2.3.7 and 2.3.8 discussed previously. The evaluation for this item is the same.

2.3.62 CONCERN

Workers had problems locating the material that was designated for a specific use. They would get any material that was the correct size, cut it to fit, grind off traceability numbers and air scribe the numbers that were to be there on the piece.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it lacks the specificity to permit detailed evaluation or inspection. No response was provided to the request. The statement does not specify the kinds of material nor the designated use. Was this piping, pipe supports, structural material or cable tray supports? The allegation is very similar to another one that the ELP provided to the NRC on or after April 1987 which stated, "Pipe and pipe supports were assembled using the wrong materials: when the proper material couldn't be located according to the required number, other material would be used after the identification number was ground out and re-scribed." The ELP was requested to provide more detailed information to permit verification of the alleged practice. No response was given. The use of alternate material does not mean inferior materials were used. If the workman had to grind off identifying numbers, it was quality material designated for another piping installation that was diverted to the ongoing job.

An allegation regarding pipe material traceability was reviewed and closed in IR 86-12. For piping welds, material traceability was provided on the Field Work Process Sheets which were available in the field and subject to required QC inspection. Several NRC inspections of field welding process sheets identified no material traceability problems. The NRC performed several inspections of pipe support fabrication and installation as listed in Table 2.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not condsidered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.63 CONCERN

Cold pulling (springing, forcing into place) of piping due to poor fitups, installation.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it does not contain enough information to allow direct inspection. No response was provided. NRC Inspection Report 50-443/84-12, paragraph 4, NRC Inspection Report 50-443/86-52, paragraph 40, and NRC Inspection Report 50-443/87-07, paragraph 2.18 deal with this subject extensively. Although the exact words are not the same, the theme is. Cold pulling (springing) of pipe has been thoroughly evaluated in the listed inspection reports and items 2.3.16 and 2.3.40 of this report.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.64 CONCERN

Performed welding on pipe when it was wet. This caused porosity throughout the welds.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested, but no response was provided. The original allegation stated," It was a very common fact that many welds which I witnessed, were welded wet. This means that no preheat was used on the material before being welded. Welding wet metal creates porousity (sic) in the weld metal and is not a proper nor adequate procedure. Porousity (sic) is a hole or holes in the weld that go deep in the weld, usually appearing throughout the entire weld from top to bottom."

NRC Inspection Report 50-443/87-07, paragraph 2.20, addressed a similar allegation regarding the welding of pipes when moisture was present. Although an undesirable condition and one which precautions should be taken to prevent, most welds have some porosity in them in varying amounts. The ASME Code recognizes this and provides tables of acceptable amounts of porosity in welds (see ASME III Code, sections NB-5000 and Appendix VI). Porosity is known to be less of a problem in welds than certain other flaws and the codes provide some tolerance for it. Porosity to the degree the alleger described would be obvious during a visual inspection and certainly would manifest itself during the hydrostatic testing.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable. The review group determined that additional assurance would be provided if the details of the welding procedures were established regarding the precautions to the welders and the welding electrode controls. This item will be inspected in a future NRC inspection and is unresolved (443/90-80-02).

2.3.65 CONCERN

When UE&C replaced P&H the welders were no longer allowed to do ASME welds only B31.1.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. This is an administrative decision that has no impact on plant safety. The safety related welding in the plant was done under the American Society of Mechanical Engineers Code; while the nonsafety related portions of the piping were done to the American National Standard Institute Code for Pressure Piping, B31.1 (as described in the Seabrook Station FSAR, section 3.2). Additionally, NRC SALP report 85-99 discusses an assessment of this concern based upon the subject licensee management decision.

This allegation has no safety impact; this item is closed.

2.3.66 CONCERN

Problems in paperwork in the "rod room". Welders lost considerable time etc,. there. Paperwork people handing out rod.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is general in content. The allegation does not specify what the paper problems were, only that the welders incurred a time delay in being issued their welding rod. Although this is an efficiency problem and affects productivity, it would have no impact on the integrity of plant equipment. This is not a safety issue.

2.3.67 CONCERN

Drug use by personnel was wide spread.

EVALUATION

This allegation is similar, if not the same as, the drug related allegations that have been addressed in NRC Inspection Report 50-443/86-52, paragraph 13, and evaluated in items 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.68 CONCERN

QC Inspector urged to sign off unacceptable work so company could receive license.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement lacks sufficient specificity to permit inspection to verify the content. The allegation does not provide a time frame for when the incident occurred, but it would appear that the allegation was made near the end of construction or during the preoperational testing phase if it were going to affect the licensing process. It does not specify in what discipline the inspector worked. The statement is worded such that the QC inspector was urged to accept the work but, in fact, did not. The allegation is similar to item 2.3.56 in the consequence of the statement if it were true. First, the quality control umbrella has multiple layers to preclude a flaw in one area of the program from propagating to other areas; thus, obviating a deficient piece of work from compromising the systems ability to function. This is a subset of the defense in depth concept. If an in-process inspection was not performed properly, other, subsequent tests and inspections are required that would identify severely deficient equipment. Further, once construction and preoperational testing is complete, testing continues throughout the life of the plant. Lastly, NRC Inspection Report 50-443/86-52, paragraph 1.4 and 1.5 generally discuss the quality assurance program and the NRC inspection program that provide the confidence that the plant is safe.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.69 CONCERN

Blueprints destroyed to prevent having to do work.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is very general and lacks the specificity to permit verification through inspection. Also, the act of destroying blueprints would not preclude the work from being done. The consequence of destroying blueprints would depend on who did it. If it were the people who distribute the prints to the work site, it would delay construction but not stop it. If it was a worker, someone would have to do the work sooner or later to complete the plant. This does not appear to have an impact on the safety of plant equipment and without further details, it can not be substantiated. Based on the inspections listed in the Tables 1 through 6 of the attachment to this report, the staff is confident this had no impact on the safety of the plant.

Because the statement is very general and the as built condition of the plant has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.70 CONCERN

Blueprints incorrect, people spent hours trying to locate a manhole cover. Area was dug up over an area of approximately 10' x 20' and did not find it.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement does not provide enough specificity to permit inspection. The allegation does not state the blueprint number in question, the technical discipline that was involved (civil, electrical, piping) nor does it provide the specific area where the search was undertaken. Based on the information provided, the incident does not appear to impact the safety of plant equipment and, therefore, does not constitute a safety concern. The accuracy of plant drawings has been verified by the NRC on many occasions, some of which are listed in Table 5 of this report. Other examples of this verification are contained in the routine plant installation inspections performed by the resident and regional based specialist inspectors.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.71 CONCERN

Worked overtime for no reason. No work accomplished. Many times people slept or read books when on overtime.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement is very general in content. The subject of this concern is not a safety issue but one of productivity. There is no inference made to the adequacy of the work being done. This is not a nuclear safety issue.

2.3.72 CONCERN

There was a lot of theft.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It is a very general statement. The misappropriation of equipment and tools does not impact nuclear safety. This is not a nuclear safety issue.

2.3.73 CONCERN

On the -31 level there were huge cracks in the concrete walls. There was something white seeping through. It might have been sea water or salt. They came down on a number of occasions when individual was there and brushed out the cracks and patched them up. This never seemed to solve the problems and the cracks would reappear.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. NRC Inspection Report 50-443/84-12, paragraph 3, NRC Inspection Report 50-443/86-52, paragraph 4, and NRC Inspection Report 50-443/87-07, paragraph 2.17, all address cracks in structures ranging from the primary containment to the waste process building. The waste processing building cracks addressed in Inspection Report 50-443/ 84-12 were located at the alleged elevation. Other adjacent elevations have been cited also and the waste process building has been generally surveyed for cracks and water seepage by the NRC and their consultant from Brookhaven National Laboratories. The NRC consultant wrote a report assessing the cracks and the affect of water on the reinforcing steel which was documented in an October 25, 1988, report. Elevation (-) 31' is specifically addressed in this report. The conclusions of the report were that the cracks have resulted from shrinkage strains and that the water seepage will not be detrimental to the reinforcing steel.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.74 CONCERN

Cracks in the concrete of the equipment vault which leaked water.

EVALUATION

This allegation was previously identified and discussed in NRC Inspection Reports as evaluated in item 2.3.73 above. The above evaluation is pertinent to this allegation.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.75 CONCERN

There were cracks in the concrete inside and outside the containment dome which were patched over.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 4 and 17, address this specific allegation. The subject of concrete cracking has been dealt with thoroughly and the evaluation for item 2.3.73 also applies to this concern.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.76 CONCERN

Rebar, wire, pieces of steel, and other debris was (SIC) thrown into an electric generator on the second floor of the north side of the equipment vault.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 18, addressed this specific allegation. The inspection determined there were no generators in the equipment vault; however, there are pump motors that resemble generators. The equipment was in operation and had completed functional testing at the time of the inspection. No debris was noted in the equipment and the access to the area was controlled.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.77 CONCERN

A cigarette fell into a 4" conduit full or wires. The wires caught fire and 4 or 5 gallons of water were poured down the pipe to put out the fire. This incident was never reported.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 19, and NRC Inspection Report 50-443/87-07, paragraph 2.14, address this allegation. The subject conduit was identified from the description given by the concerned individual and from a hand drawn map with landmarks of the area. The equipment was nonsafety related and there was no evidence of a fire in the conduit.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.78 CONCERN

Drugs of all kinds were available.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 13, addressed this allegation or one very similar. The original statement was," Any kind of drug there is was available there." The allegation was previously addressed in the inspection report and was further addressed subsequently by the licensee and the NRC in detail. The evaluation for item 2.3.57 is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.79 CONCERN

Security was very slack. To see if the security system worked, someone put gun powder in their pockets and mixed up a paste and rubbed it on their pants, then stood against the machine which detects these things, it did not go off.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 22, addressed this specific allegation. The resolution of this allegation dealt with security information and was not discussed in detail. The inspector concluded that the licensee was in compliance with the approved security plan.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.80 CONCERN

Guards would smoke in the doorway of the area where fuel is held with both doors open. Much of the time the back door of that area was held open with a block of wood.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 23, addressed this allegation. The allegation was substantiated, however, the guards were authorized to smoke in the doorway. The doors were permitted to be open for authorized purposes.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.81 CONCERN

Service water lines had cement coating breaking off during testing. They monitored by sound (ultrasonics) before hot functional testing instead of replacing it. They cut elbows out and replaced with fiberglass or plastic.

EVALUATION

This appears to be a new allegation but is very similar to a previously reviewed concern. In Inspection Report 50-443/86-52, paragraph 7, an allegation dealing with the cement lined service water piping was evaluated. The original allegation stated," When the service water lines were tested, some of the inside cement coating broke off. This system cools essential parts of the plant and must be debris-free. The only parts of the lines replaced were the elbows where the greatest friction occurs."

There has been extensive inspection of the service water system by the licensee and the NRC. The licensee's actions are documented in the following task force reports: "Report on Service Water System, dated 12/11/87; Service Water System Operability Assuming Underground Piping Degradation, Engineering Evaluation, 88-15; Final Summary on the Service Water System Piping, dated 6/15/88 and the Nuclear Quality Group Evaluation of Remote Inspection of Service Water Piping, dated 6/21/88. The NRC has examined the service water system with a regional based specialist inspector on at least three occasions (Inspection Report 50-443/84-12, Inspection Report 50-443/86-52, and Inspection Report 50-443/87-18.

Additionally, the licensee's actions to investigate and resolve service water piping and valve lining problems have been inspected by the NRC resident inspectors. An overview of the service water piping and valve lining problem resolution are contained in NRC Inspection Report 50-443/87-24. Related inspection findings including closeout of an open item are discussed in NRC Inspection Reports 50-443/88-07 and 87-18.

In regards to the use of ultrasonic sound monitoring, ultrasonic testing was used to measure the pipe wall thickness and verify the operability of the system. Also, no service water safety related piping elbows were cut out and replaced with fiberglass or plastic, although portions of the service water pipe lining have been removed and replaced with a coating of Belzona, a plastic like material especially formulated for lining piping and valves for resistance to wear.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.82 CONCERN

During testing a large leak occurred sending salt water into equipment vaults. 768,000 gallons of water in 7 minutes, went to 2- 2 1/2' deep. Utility replaced all insulation.

EVALUATION

Inspection Report 50-443/86-52, paragraph 8, addressed this allegation. The allegation was substantiated that the service water system did overflow; it appears the volume of water released was less than 100,000 gallons. The incident was reported on a Station Incident Report and corrective actions taken to restore insulation, piping, electrical and instrumentation equipment.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.83 CONCERN

Vice President of construction pushed QC around, i.e., stopped supplying pens, caused change in numbers of ECA's higher before and after his time.

EVALUATION

The concern is a new allegation. There is no statement of wrongdoing and, the alleged treatment of quality control by the vice-president did not prevent them from doing their jobs. This is not a nuclear safety concern.

2.3.84 CONCERN

Procedures loosely written. If not followed then they were changed to match what was done.

EVALUATION

This allegation is the same or similar to one addressed in Inspection Report 50-443/86-52, paragraph 26. The original allegation stated,"Procedures written to allow conditions to exist that are unsafe, but since a procedure has been written to cover the given condition that makes it acceptable." Further clarification of this allegation was obtained during an interview of the alleger:" Equipment was installed incorrectly relative to the procedure, but once it was installed the procedure was rewritten to reflect the installation." The allegation is very general and does not specify what equipment was installed with the procedures in question or what procedures were deficient. The normal sequence would be the identification of the procedures deficiency, rewriting of the procedure to correct the deficiency, and completion of the installation. If the equipment was installed using the deficient procedure and the equipment was installed incorrectly, then a nonconformance report should be written. The fact that the procedure was changed does not necessarily mean something improper was done. The allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.85 CONCERN

Procedures changed to match what was done. Procedures hard to understand.

EVALUATION

This allegation is the same or similar to item 2.3.84 above and to one evaluated in Inspection Report 50-443/86-52, paragraph 25, and will be treated as one previously identified. The first part of this allegation parallels item 2.3.84 and the evaluation is the same.

The second part that states,"Procedures hard to understand," is essentially the same as the one inspected in paragraph 25 of the subject inspection report. The original allegation stated," Safety related construction procedures written in ambiguous, hard to interpret language in order to make conformance to them up to the reader..." The NRC inspected construction procedures to ensure they complied with appropriate codes and standards. Examples of these inspections can be found in Inspection Reports 50-443/76-02, 77-10, 79-06, 81-07, 83-02, 83-09, 85-11 and 86-11. It is understandable that some nontechnical workers may have difficulty in interpreting the more complex aspects of the procedures. However, for those with a true need to understand, engineers were available to explain the concept in simpler terms.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.86 CONCERN

Peeling paint was painted over and not discovered.

EVALUATION

This allegation is similar or the same as the one addressed in NRC Inspection Report 50-443/86-52, paragraph 9, which stated, "Paint is crucial to the plants safe operation in keeping dust down and so radiation can be easily washed away. The paint on the floor of the containment is peeling." The allegation is very general and does not specify the location where the paint is peeling. The critical aspect of the paint relative to plant safety is that it does not peel off during an accident condition and clog the recirculation sumps and impede long term cooldown. The containment paint was surveyed by the NRC inspector in NRC Inspection Report 50-443/86-52 and no peeling or bubbled paint was identified. Recently the resident inspector checked the paint condition of the refueling floor and determined the paint was not peeling. Peeling paint is generally obvious and does not require special training to detect.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.87 CONCERN

Saw cracks in concrete in vault which leaked water.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 17, addressed this allegation or one very similar in content. The original concern was stated as," There were cracks in the cement of the equipment vault which were leaking water..." The concern regarding concrete cracking and water seepage is dealt with in item 2.3.73 of this report.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.88 CONCERN

Saw people using drugs.

EVALUATION

This is a very general statement that does not contain enough information to inspect; however, it is similar to the issues discussed in NRC Inspection Report 50-443/86-52, paragraphs 13 and 21. These issues were evaluated in items 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.89 CONCERN

Service water lines were lined with a rubber (metalone) where pipes were jointed. During cold functional test the rubber came loose. This was replaced with a ceramic (Belzone) but only at joints that were accessible. Concerned about the others and the material coming loose in the operating systems.

EVALUATION

This is a new allegation and describes conditions that were being followed by the NRC; however, it is similar to item 2.3.81. The rubber material that was coming loose was the pliable seats for the butterfly valves. The licensee went through an extensive program to correct this problem. The details of the resolution of the valve seat lining problem are described in NRC Inspection Report 50-443/87-18. For the resolution of the service water line coating issue, refer to the evaluation section of concern 2.3.81 for additional details regarding the NRC's inspection of licensee activities on the service water system to assure operability.

Because the statement is general and has been dealt with extensively in previous NRC and licensee reports, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.90 CONCERN

Heard that the sea water tunnels had exposed rebar and major voids in the concrete, and thin concrete. Morrison Knudson was paid to drill holes, reinforce it with steel and line it with concrete. Concerned that warm sea water is corrosive to rebar.

EVALUATION

This allegation was provided to the NRC by the ELP in a meeting on April 20,1987. The allegation appears to be based on hearsay evidence. The sea water tunnels are not safety related construction but are the normal supply of cooling during emergency plant cooling conditions. The sea water tunnels can withstand 95% blockage and perform their function. The mechanical draft cooling tower provides the ultimate heat sink for plant cooling.

The senior resident inspector conducted periodic tours of the tunnels during construction and a regional inspector, accompanied by an NRR geologist, examined the tunnel bedrock and concrete lining work in 1981 (reference: Inspection Report 50-443/81-12). General concerns regarding the sea water tunnel construction and concrete lining activities were previously discussed with the licensee management relative to nonsafety related activities.

Because the statement is general and has been dealt with in previous NRC reports, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.91 CONCERN

Many engineers could not make themselves understood by construction crews and inspectors. They did not speak english.

EVALUATION

This allegation is similar or the same as the one addressed in NRC Inspection Report 50-443/86-52, paragraph 11. The original concern was stated as,"Extensive written procedures and instructions were used as a primary training tool, although some workers were illiterate and many foreign engineers were not fluent in English."

The licensee's hiring practices should have screened severe communication problems. Further, there was an employee performance rating system for professionals, any significant performance problems would have been identified. The allegation does not state that equipment installation problems resulted from the communication difficulty. In addition, NRC inspectors routinely interfaced with construction engineers and would have noted severe communications problems.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.92 CONCERN

Many ECA's were made to match what was built. Many toward the end of construction.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. It is similar to one addressed in NRC Inspection Report 50-443/86-52, paragraph 26. The allegation is very general and does not state there was any wrongdoing. The original allegation stated," Procedures written to allow conditions to exist that are unsafe, but since a procedure has been written to cover the given condition that makes it acceptable."

The following is a paragraph from the NRC Inspection Report 50-443/86-52, paragraph 26:

> "If procedures were not followed this resulted in a deviation or non-conforming condition. Such conditions were evaluated in accordance with the requirements of the Quality Assurance Program and, if required, the initial procedure revised, an Engineering Change Authorization (ECA) written, or disposition made by an NCR. In any of these cases, an engineering evaluation of the situation was made to assure the installation, as actually performed met code, regulatory and design requirements."

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.93 CONCERN

Painters QC'd other painters, happened at the end of construction, company changed procedures went to spot checks not 100% as had been done before. Was shown ANSI permitted % checks.

EVALUATION

This is the same or a very similar allegation to the one discussed in item 2.3.20 above. The evaluation and conclusions for that issue apply to this issue.

2.3.94 CONCERN

Blueprints were hard to track. Construction people worked with out of date prints. Happened to P&H a lot.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. This is the same or a very similar allegation to the one discussed in item 2.3.9 above. That allegation states, "Tracking of drawings/ blueprints is impossible." This concern was addressed in NRC Inspection Report 50-443/86-52, paragraph 32.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.95 CONCERN

Toward end of project inspection criteria got lax in all trade areas.

EVALUATION

This is a new and very general concern. The allegation does not state what inspection criteria are in question nor how it was determined they did not meet acceptable levels. It does not contain sufficient information to permit a meaningful inspection to be performed. The NRC has performed many inspections of the quality control inspection criteria throughout construction, some of these inspections are listed in Tables 1 through 6 of this report. Near the end of the project, many of the safety related systems and structures were completed and such a reduction, if it happened, would have little or no impact on plant equipment.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.96 CONCERN

In the spring of 1984 during layoffs people were throwing documents away and/or taking boxes of documents off site. After management learned of problem, search team were dispatched to go through garbage and locate documents. This went on for one or two weeks until a search procedure was put into effect to leave the site.

EVALUATION

This allegation was presented to the NRC by ELP during a meeting on April 20, 1987. The allegation does not contain enough information to permit verification. Additional information was requested in our letter, dated May 27, 1987, and a response was provided. The alleger did not know what kinds of documents were removed. The fact that documents were taken off site or discarded does not create a safety concern. The master documents and drawings are retained in the document control system. Documents of in-process activities can generally be recreated. To declare the system operational, the licensee does a final document review to verify all required inspections and tests were satisfied. If a critical document was lost, it would be identified and corrective

actions initiated. The NRC resident inspectors routinely examined the licensee's record controls during the layoff as discussed in NRC Inspection Report 50-443/84-04, paragraph 2. Also, a CAT inspection (IR 84-07) was conducted immediately after work suspension in 1984. Record review during this inspection identified no missing quality document problems.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.97 CONCERN

Lack of supervision on back shifts.

EVALUATION

This is a new allegation and does not contain enough information to permit verification. It does not assert that there was any deficiencies or wrongdoing from the alleged lack of supervision. This is not a nuclear safety issue.

Because the statement is very general and the subject does not deal with nuclear safety, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.98 CONCERN

Knew of anti-nuclear people on site, states there was damage done to the plant with equipment being set on fire.

EVALUATION

This is a new allegation and is not specific enough to permit inspection. The act of setting equipment on fire would be readily detectable and corrective actions initiated. Any damage during construction would be noted during the final inspections and functional testing. IR 84-20 documents a case of fire that destroyed air conditioning equipment. No impact on permanent plant equipment was identified.

Because the statement is very general and post construction inspection and tests did not reveal any associated conditions, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.99 CONCERN

Had an NCR dealing with weld documentation cancelled by a QA Supervisor. NCR was written against the inspection procedures being violated. This was one of 20 or 30 procedural violations in weld procedures he discovered.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested and a response received. The original allegation stated, " On one particular weld whose documentation he inspected , the inspection procedure was violated. He wrote a Nonconformance Report on the violated procedure, but the Quality Assurance supervisor cancelled the NCR. This was one of twenty to thirty procedural violations in weld inspections he discovered." The statement did not contain sufficient information to be inspected. The ELP response provided more information on the matter. The allegation is related to item 2.3.100 below; the issue being the alleger believes there are welding processes that require two welders to make a weld on thick pipe. As discussed in 2.3.115 and 2.3.116, this is not a requirement of the governing ASME Code, and, if the NCR was written because of the erroneous belief that two welders were required, the cancellation was appropriate.

It is not unusual for a nonconformance report to be written in error and then later determined to be inappropriate. The NRC inspected the nonconformance reporting system on multiple occasions; an example is provided in NRC Inspection Report 50-443/84-06, paragraph 5. Other inspections of NCRs, including one involving a "voided" NCR as documented in Inspection Report 50-443/ 84-17, were routinely conducted by the resident inspectors.

Because the cancellation of the nonconformance report appears to be appropriate and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.100 CONCERN

Some large bore piping had been weld repaired beyond maximum thickness. Repairs documented by NCR.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it did not contain sufficient information to permit verification. The allegation is related to item 2.3.99 above and the evaluation for this item is similar. The allegation does not mean piping repaired beyond its maximum thickness as this would mean a weld buildup on the outside diameter extending beyond the pipe surface. Weld buildup or reinforcement is limited by the fabrication/ installation code. The additional information provided by the ELP stated that the alleger means that a weld repair was performed by a welder who welded beyond his qualified maximum thickness range. Even if the allegation was correct, the consequence of a welder performing beyond his qualified thickness range has no direct safety implication. If the weld were on a safety class system, there would be the normal repair weld quality control process inspections and surface or volumetric examinations. The welder was a qualified welder and, although seldom used in nuclear applications, the welder could be qualified for the thickness range using the production qualification provision of the ASME code. However, as discussed in items 2.3.115 and 2.3.116 the applicable code does not require two welders to complete a weld joint.

Because the statement has no basis i the applicable construction code and the consequence of the alleged activity has no direct safety impact on the equipment, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.101 CONCERN

Harassed and fired because of a problem with large bore piping repairs done incorrectly, and his follow up on this issue.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it did not contain sufficient information to permit verification. The supplemental response from ELP disclosed that the individual was a quality control engineer. This issue and items 2.3.99, 2.3.100 and 2.3.101 all came from the same person and resulted from a simple allegation. The individual did not assert there was anything untoward done that would warrant NRC involvement or affect the plant equipment. The allegation states that the person was searching through weld rod slips looking for documentation that two welders had completed the work so he could certify the weld when he was fired. Based on the large number of NRC inspections performed in this area, see Table 2, there is confidence that the safety related piping meets NRC requirements.

Because the statement does not appear to impact the welding and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.102 CONCERN

Believes entire Seabrook project is filled with welds which are not properly certified.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it does not contain enough information to permit verification. The statement is a belief not an assertion. Based on the large numbers of inspections in this area as listed in Table 2, the NRC staff is confident that the safety related welds meet NRC requirements.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.103 CONCERN

General Use of Drugs, not of great concern.

EVALUATION

This is a general statement that is the same or very similar to the issues dealt with in Inspection Report 50-443/86-52, paragraph 13, and the evaluation is the same as item 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.104 CONCERN

General drug use.

EVALUATION

This is a general statement that is the same or very similar to the issues dealt with in Inspection Report 50-443/86-52, paragraph 13, and the evaluation is the same as item 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They conducted that the previous resolution was acceptable.

2.3.105 CONCERN

Two men hired by NHY as QA engineers. These men then reviewed their own work done when they worked for Fishback (sic) and Moore as electricians.

EVALUATION

This is a new allegation. In discussions with the licensee, which was later formally provided in their January 24, 1990, submittal, it was determined that the individuals were not working for Fishbach, Boulos & Manzi (FBM) as electricians but record reviewers. They subsequently went to work for NHY as record reviewers as they had done previously for FBM. This is acceptable under NRC regulations. This is not a nuclear safety issue.

Because the issue is not nuclear safety related, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.106 CONCERN

Use of a process called "grey lining". This involves rewriting a procedure to conform to specification after an NCR is written, the NCR is then voided.

EVALUATION

This allegation was provided to the NRC by ELP in a meeting on April 20, 1987. NRC Inspection Report 50-443/88-07, paragraph 10.b, addressed this specific allegation. The practice was found to be acceptable and was appropriately controlled. Greylining was used when a problem with a procedure was identified and a change was necessary. Subsequent to the procedure change, the non-conformance report that was initiated was voided.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.107 CONCERN

Reported a traceability problem with steam generator relief valves 456 A&B piping. They did not have the manufacturers number engraved on them. It was either removed or welded over during the welding process. Discovered during the first section 11 Hydro. (RCIT 01A).

EVALUATION

NRC Inspection Report 50-443/87-26, paragraph 7, addressed this allegation. The statement is in error in that the valves identified are the pressurizer power operated relief valves not the steam generator relief valves (sic) (safety valves). The NRC determined that the valves were properly marked by visual inspection.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.108 CONCERN

Knows of a program called "retagging". UE&C did this to ensure equipment met specification. Each piece of material coming on site was specifically designated. UE&C would canablize equipment for one unit to another. NCR written approximately 60 retagged pieces of equipment were in use in the tanks and pumps of the diesel generator system in unit one.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The practice of "retagging" is recognized and accepted as long as it is controlled properly. Identical quality parts or components are redirected from one unit to another. In this case, considering Unit No. 2 was not going to be

completed, items of like quality were transferred to Unit No.1 for installation. From the description in the allegation, the process was controlled using a nonconformance report for evaluation and control. This is not a nuclear safety concern. Retagging of components has been inspected and documented in IRs 86-14 and 86-46.

Because the statement does not deal with a nuclear safety concern, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.109 CONCERN

Unable to locate purchase orders with the name os (sic) the manufacturers and suppliers in a number of instances.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it does not contain sufficient information to permit verification. No response was provided by ELP. The allegation does not specify the kind of equipment involved or its safety classification. If the equipment is not safety related it has no merit as an allegation. There have been inspections by the NRC of the procurement program on several occasions. An example of one of these inspections can be found in NRC Inspection Report 50-443/82-03, paragraph 5.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.110 CONCERN

Design requirements changed after NCR was written. Improper hardware was installed, NCR's bought off on this equipment, then this improper installation became the standard.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it does not contain sufficient information to permit verification. No response was provided by the ELP. The purpose of a nonconformance report is to ensure that deviations from the design intent are properly reviewed and approved. Once a nonconformance report is dispositioned "use - as - is" it constitutes a design change and must be processed as such. The foregoing statement is an acceptable practice if properly controlled. There is nothing in the statement that implies wrongdoing. This is not a nuclear safety issue. NRC Inspection Report 50-443/82-06, paragraph 5.3.2, is an example of an indepth review of the nonconformance reporting system.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.111 CONCERN

Concerned with the use of galvanized steel in instrumentation and piping. Even if ground off high levels of lead are left in the base metal. Galvanized steel is unacceptable for ASME applications.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested from the ELP but, no response has been provided. It is assumed the concern is with the use of galvanized steel for instrument supports.The use of galvanized steel for instrumentation supports is a common practice. The issue of welding the galvanized steel has been addressed previously for other nuclear plant applications by the Region I staff. Galvanize is primarily composed of Zinc not Lead. A typical hot dip galvanized plating bath consists of approximately 1.2% lead, .034% iron, .002% aluminum and the remainder zinc. With this low level of lead, any residual from the grinding process would be negligible. In all probability, the residual lead would vaporize in the arc from welding. This is not a technical concern.

Because the statement is not a technical concern and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.112 CONCERN

Was told class II and III supports did not meet ASME specifications, therefore welds at Seabrook are not safe.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement does not contain sufficient information to permit verification. It is assumed the allegation refers to ASME III Code, Class 2 and 3, Section NF, pipe supports and the associated welding. The allegation does not specify which supports are suspect nor provide a location to inspect. From the content of the statement, it appears to be hearsay information. Based on the number of inspections in this area, see Table 2, and the lack of specificity in the allegation, the NRC staff is confident the systems meet NRC requirements.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.113 CONCERN

When he raised concerns about the plant's safety to the Allegation Organization (EAR) he received unsatisfactory responses. Therefore he did not bother to report other violations. All problems he saw were reported but not necessarily resolved to his satisfaction.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement does not contain sufficient information to permit verification. There is a more detailed discussion of the employees allegation resolution program in Section 2.1.2. of this report.

There is a major inconsistency in the statement," Therefore he did not bother to report other violations. All problems he saw were reported..." Either problems were reported or they were not, it is unclear whether the alleger continued to report problems. The alleger does not elaborate on the specifics of the problems he reported or the dissatisfaction he had with the responses. There does not appear to be any nuclear safety issues with this statement.

Because the statement is very general and violations were reported, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.114 CONCERN

Believes he was fired for questioning welding and welders.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. Additional information was requested because it does not contain enough information to permit verification. This is the same statement as, or very similar to, item 2.3.101 above. The ELP provided a response to this issue. In the subsequent response, the alleger stated that his supervisor harassed him but, the incident was never reported by the alleger to higher supervision. The statement is not an assertion but a belief. The is no supporting information to explain why he was fired or what questions he was asking welders. There is no nuclear safety concern in this allegation.

Because the statement is very general and does not implicate any safety related equipment, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059

2.3.115 CONCERN

Located a documentation problem with large bore pipe, which did not conform to code. Code requires that two welders be used to make certain welds (stacking the welders). In spite of which he was unable to identify two welders who made certain welds.

EVALUATION

This allegation was provided to the NRC at the April 20, 1987, meeting with ELP. Additional information was requested from the ELP and a response was provided. This is the same statement as, or very similar to, item 2.3.100 above. The alleger believes there is a welding process that requires two welders to complete certain kinds of large bore piping welds. The alleger was not able to provide any specific welds that were deficient because of this practice and had no nonconformance report numbers to give as examples.

The alleger believes the governing requirements insist more than one welder be used to perform certain welds. The applicable code for pipe and pipe support welding is the ASME Codes, Sections III and IX. Section IX of the Code, Welding and Brazing Qualifications, QW 452, does not require that two welders be used to make welds. It does permit two welders to make one weld as long as they are qualified for the thickness range they are welding, and the process they are using. A welder may weld on a pipe thickness greater than the one he is qualified for as long as he does not weld beyond the thickness range he is qualified for. This would be stacking welders, i.e. you would use more than one welder to complete the weld. This is an acceptable practice also, but there is no requirement to stack welders. Table 2 lists NRC inspection reports that deal with welding and welder qualifications.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.116 CONCERN

Concern (ELP's) that welders may have been used to make specific weld repairs at various depths on large bore piping, i.e., qualified for 1/2" used three welders to get the 1 1/2" weld thickness.

EVALUATION

This allegation is similar to item 2.3.115 above. The performance qualification of welders for pipe welding is done under the rules of Section IX of the ASME Code. Paragraph QW-452 of Section IX provides that a welder is qualified to deposit up to twice the thickness of weld metal deposited in the welder performance qualification test. The Code does not prohibit the use of multiple welders on one weld providing each welder does not deposit weld metal to a thickness greater than that qualified for by the performance qualification test (see ASME Code Interpretation IX, QW-462.1,dated May 13, 1981). This is not a nuclear safety concern.

Because the statement is rigorously addressed by the applicable ASME Code and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.117 CONCERN

There were drawings and books used for construction that were never updated.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement does not contain sufficient information to permit verification. The statement does not specify whether the drawings and books contained information relative to nuclear safety related equipment nor to what construction discipline they relate. However, Inspection Report 50-442/86-52, paragraphs 32 and 57, dealt with this subject. The drawing control program was a routine part of NRC inspections and has been examined in detail.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.118 CONCERN

People worked off of old prints that they would not update.

EVALUATION

This is the same or very similar to item 2.3.117 above and the previous evaluation is applicable to this item.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.119 CONCERN

Drug and alcohol use by various people, available for sale on site, people drinking and doing drugs on site during work.

EVALUATION

This allegation is similar to or the same as those previously addressed regarding drug and alcohol use. The evaluation is the same for this item as items 2.3.55 and 2.3.57.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.120 CONCERN

Vibrator, lunches, etc. thrown into concrete.

EVALUATION

This is an allegation previously raised by ELP and similar to one discussed in NRC Inspection Report 50-443/86-52, paragraph 3. The original allegation stated, "Empty beer cans and bottles were discarded in the wet cement by workers ... potentially creating air pockets and affecting the integrity of the containment."

The consequence of having debris placed in the concrete was evaluated in the subject inspection report and concluded the affect to be negligible. If the debris was thrown in while the concrete was being placed, it would have to be done with the placement crews and supervisors/engineers in attendance. This is unlikely. If these small objects were thrown in the placement after everyone had left, the concrete is plastic and stiff (i.e. the need for vibrators) and small objects would lie on the surface to be removed before the next placement. The concrete forms are cleaned and inspected before concrete is placed. Therefore, the amount of debris in the concrete can not be significant. The NRC has performed numerous inspections to verify the quality of concrete in the safety related structures, see Table 4 for examples, at the Seabrook Station.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.121 CONCERN

Concrete batches placed in wrong place without documentation.

EVALUATION

This is an allegation previously raised by ELP, for which the NRC requested additional information but there was no response. The statement does not contain enough information to permit verification. The statement does not specify where or when the concrete was placed or what aspect of the placement was deficient. Based on the large number of NRC inspections in this area, see Table 4, the NRC staff is confident that the safety related concrete structures meet regulatory requirements.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.122 CONCERN

UE&C Engineer in the late seventies had a patio poured for his pool by plant employees at plant expense.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The allegaton does not affect plant or equipment safety. The misappropriation of licensee concrete is not a matter for NRC investigation.

Because the statement does not impact nuclear safety, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.123 CONCERN

Employees frequently stole tools and supplies.

EVALUATION

This allegation was presented to the NRC during the April 20,1987, meeting with the ELP. The statement does not affect plant or equipment safety. The misappropriation of licensee's property is not a matter for NRC investigation.

Because the statement does not impact nuclear safety, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.124 CONCERN

Co-workers were untrained, could not read prints. Frequently numbers they put on prints were incorrect.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The statement does not provide enough information to permit verification. The statement does not indicate which construction element employed the alleged untrained co-workers nor does it specify whether the activity was safety related. This is similar to the allegation addressed in Inspection Report 50-443/86-52, paragraph 11, in that it was alleged there were " illiterate" workers. The NRC routinely interviewed professional as well as craft personnel during the course of inspections. The interviews were focused on the individuals understanding and knowledge of the technical content of the procedures, specifications and drawings used for construction.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.125 CONCERN

The welding of galvanized steel (base material) in ASME III Division I, NF instrumentation supports, UE&E welding and the ANI (kemper) said galvanized could be removed by grinding before welding. Individual believes there is lead in galvanized that would not be removed by grinding. Welding would draw lead into weld, this would violate ASME section III and IX.

EVALUATION

This allegation is the same as item 2.3.111 above. The evaluation and conclusion are applicable to this allegation.

2.3.126 CONCERN

NCR-73-011687 R/A identifies falsified QC signatures on weld process sheet. This was changed to read unknown inspector and the disposition addressed obtaining a new signature only. The new signature requested did not adequately resolve the situation. Appears that PH was using welders to QC their own welds prior to this NCR 8-85.

EVALUATION

This is a new allegation but related to an issue addressed in Inspection Report 50-443/84-12, paragraph 16. The NRC requested a copy of the subject Nonconformance Report, NCR-73-011687, from the licensee. Review of the NCR and the attached Hanger Field Weld Process Sheet disclosed that operation number 2, the fitup and tack, had been signed off on 11-3-83 by an unknown individual. The NCR was initiated on 8-12-85 which is nearly two years from the date of the unknown signature. The NCR states," 1) Operation number 2 (fitup & tack) hold point of field weld 111 weld process sheet was signed off by an unknown/ unauthorized person on 11-3-83..." The word "unauthorized" is lined out and initialled and dated as alterations to quality documents are required to be.

Inspection Report 50-443/84-12, paragraph 16, describes a similar welding document falsified signature. The NRC issued a violation for this issue although it was properly identified and documented by the licensee, the inspection team noted that insufficient corrective actions were taken. The subject allegation occurred, in time, before the cited incident in Inspection Report 50-443/84-12, thus, the corrective actions would have no affect on this incident as it pre-dates the NRC inspected case. However, it is obvious that the incident cited by the NRC was not an isolated case and the violation was warranted.

It can be concluded that the quality control program was working given the fact that the inspector noted a falsified signature almost two years old. The incident was properly documented, the step was reinspected and corrected. From the licensee's January 24, 1990, submittal which reviewed this same issue, it was stated that the falsification was identified during the course of a standard quality document signature review and other similar incidents would be noted.

Because the issue was properly documented and dispositioned by the licensee's corrective action system, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.127 CONCERN

P&H did not require field QC to record material heat numbers on process sheets until early 1985. When in 1986, on document review the reviewer would identify this problem, the reviewer used a stamp that certified material numbers without field verification. Many cases were found were (sic) class 2 and 3 material was used in place of class 1 where field verification was done. When NCR's were written UE&C would disposition them by stating the correct heat number was the last number issued against the material in question. There was no real justification for this type of disposition.

EVALUATION

This is a new allegation. A review of NRC records disclosed that the resolution of a previous allegation in 1982 by an NRC inspector verified that the P & H process sheets did require the recording of either the heat number or the mark number. The recording of the mark number would allow tracing the material to the heat number. Additionally, IR 86-12 documents inspection of an allegation involving similar material traceability concerns.

A review of the licensee's January 24, 1990, submittal which reviewed these allegations shows that, from a sampling of NCR's, the disposition of the NCR's required not only the review of documentation but a physical verification to assure traceability.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.128 CONCERN

Upgrading copper instrument emergency backup airlines with work request #86-1572 to class 1. Lines were installed as non-safety, non-seismic application, using copper tubing 1/2" or 3/4" with brass sweglok (sic) fittings.

EVALUATION

This allegation appears to be related or similar to one discussed in NRC Inspection Report 50-443/86-52, paragraph 54; however, Work Request No. 86-1572 has nothing to do with copper tubing. It deals with instrument calibration. The licensee's evaluation of this issue in their January 24, 1990, submittal indicates that there is a Work Request No. MS-1572 that deals with tubing which is installed in accordance with the applicable specification.

Regarding the issue discussed in NRC Inspection Report 50-443/86-52, paragraph 54, there were additional questions relative to the seismic qualification of the system which were answered in a letter to the alleger, dated April 24, 1988.

The independent NRC review team determined this specific issue had not been previously addressed and recommended contacting the alleger for more information. Further, the work request identified in the licensee's January 24, 1990, letter should be reviewed and verified to meet the requirements (443/90-80-03).

Because the statement is unclear regarding the Work Request number, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.129 CONCERN

General waste of time, money, man hours, etc.

EVALUATION

This is a new allegation and does not deal with nuclear safety matters. The misappropriation of licensee resources is not within the investigation scope of the NRC unless it directly impacts nuclear safety equipment. Based on the inspections listed in Tables 1 through 6 and other inspections not listed, the staff is confident this allegation does not impact the safety of the facility.

Because the statement is very general and the subject does not deal with the compromise of nuclear safety equipment, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.130 CONCERN

General drug use, alcohol, etc.

EVALUATION

This allegation is the same or similar to the concerns in previous drug and alcohol related statements addressed in NRC Inspection Report 50-443/86-52, paragraph 13. The evaluation of this issue is the same as that discussed in item 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.131 CONCERN

Drug use, also being informed by foreman when drug dogs would be on site. State and local police arresting people on site but no press coverage to protect PSNH image.

EVALUATION

This is a new concern but very similar to other drug related issues that were dealt with indepth in NRC Inspection Report 50-443/86-52, paragraph 13, and other NRC and licensee followup of the issues. The evaluation for this issue is the same as that described in item 2.3.55 and 2.3.57 above. Also, IR 87-24 discusses inspection of the drug dog detection program at Seabrook and of the dual role of the program to provide a psychological deterrent to the possession of illegal substances, as well as actual drug detection.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.132 CONCERN

Wrong gauge sheet metal used in HVAC equipment vault, -61 level up through the roof of the primary auxiliary building.

EVALUATION

NRC Inspection Report 50-443/87-07, paragraph 29, addressed this specific issue. The original allegation stated, " The air condition system maintains the temperature in the equipment vault and containment. There are four-by six-foot ducts which start at -61 elevation in the equipment vault and go to the roof of the Primary Auxiliary Building. They provide cooling for all the buildings around the containment building. It took six to seven months to install the ducts, and everything was sealed with silicon. Just as the very last bolt was sealed, an engineer told the sheetmetal workers the wrong gauge of steel was used for the ducts. It was never changed."

The inspection disclosed that the safety class designation of this ductwork was upgraded, thus, requiring an engineering review and the addition of stiffeners to the ductwork, but not a change to the ductwork thickness.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.133 CONCERN

Tank farm building wracked about 8" during hot functional test. Licensee welded more steel girders to reinforce it.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 2.30, addressed this specific issue. The original allegation stated, " The Waste Process Building (the tank farm) stores chemicals like Boron, etc., to control a reaction, November, 1985, during the hot functional tests, the pressure on containment was brought up to 160 pounds per square inch, and everything expanded. The tank farm building

(about 100 feet by 150 feet) has walls of poured concrete and steel. An improper thickness of structural steel was used in the main skeleton. The building wracked about eight inches (as if someone put their hands on opposite corners and twisted). They welded more plates of steel to the girders to reinforce it...".

The NRC inspection determined that the Independent Design Inspection (IDI) identified that the seismic analysis model for this structure did not take into account the " as-built" arrangements of the structure, and found that the structure did require modification to resist the changed loads and stresses. The building was modified in 1986 during the hot functional tests.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.134 CONCERN

In the equipment vault at the -61 elevation a pump was wetted. This pump was not cleaned for something greater than six months.

EVALUATION

NRC Inspection Report 50-443/87-07, paragraph 26, addressed this specific allegation. The original allegation stated, " In the equipment vault, at elevation -61, he and his partner were told to put in a bulkhead at the bottom ... there is a $50,000 Westinghouse pump the size of a car ... someone forgot to close a sumphole in the floor. That hole is connected to all cells, so when the system was flooded, so was the motor." The inspection determined the event did occur, was properly reported on a nonconformance report and the proper corrective actions taken.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.135 CONCERN

In the waste process building at the bottom there are 3 - 200 hp motors/pumps to circulate water. These are mounted on skids supported by springs. The skids did not work right and the motor shafts were bent. The shafts were not repaired.

EVALUATION

NRC Inspection Report 50-443/86-52, paragraph 27, addressed this specific concern. The pumps described by the allegation are the recovery evaporator reboiler pumps and the waste evaporator reboiler pump which are not safety related. The condition described by the allegation was confirmed and it was determined that the licensee had initiated a design change to correct the problem.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.136 CONCERN

When the cooling towers were built, it was determined that the walls were not thick enough, rather than chipoff concrete to expose old rebar before pouring the new layer of concrete, they used Hilti bolts (or shields), they drilled a hole in the concrete and attached rebar to the bolts so there are actually two walls instead of one.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. The issue was identified by the licensee, reported in a 10 CFR 50.55(e) construction deficiency report (CDR 83-00-04) and the issue closed in NRC Inspection Report 50-443/83-15, paragraph 4. No further action on this item is intended.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.137 CONCERN

In the equipment vault a welder used a graphite pencil and penciled in weld, used this to hide porosity of weld. This occurred in 1983-1984. QC inspector accepted it.

EVALUATION

This is a previously identified allegation for which additional information was requested from the ELP in a letter dated 2/18/88. No additional information was provided by the ELP.

The allegation is not credible in that ASME Code class 1 and 2 welds are required to have volumetric and/or surface nondestructive examinations performed. The graphite would not mask these examinations. Also, it would be very difficult to obscure a code rejectable weld porosity from a visual examination. Based on the extensive welding inspections performed by the NRC (see Table 2), the staff is confident the welding satisfies the regulatory requirements.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.138 CONCERN

No first hand information, however the individual is a police officer. He is concerned with drug and alcohol use on site during construction.

EVALUATION

This is a new allegation and is related to the concerns discussed in NRC Inspection Report 50-443/86-52, paragraph 13. This allegation is very general and does not contain enough information to permit verification.The evaluation for this item is the same as that given for items 2.3.55 and 2.3.57.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was accepable.

2.3.139 CONCERN

Bought and brought on site 1/2 dozen bottles of liquor per day from "Dr. Green" a code name for the liquor store.

EVALUATION

This is a new allegation and is related to the concerns discussed in NRC Inspection Report 50-443/86-52, paragraph 13. This allegation is very general and does not contain enough information to permit verification.The evaluation for this item is the same as that given for items 2.3.55 and 2.3.57.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.140 CONCERN

Delivered cocaine and marijuana on site.

EVALUATION

This is a new allegation and is related to the concerns discussed in NRC Inspection Report 50-443/86-52, paragraph 13. This allegation is very general and does not contain enough information to permit verification. The evaluation for this item is the same as that given for items 2.3.55 and 2.3.57.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.141 CONCERN

The bosses did not want you to work too hard because they wanted to drag out the job.

EVALUATION

This is a new allegation and does not represent a nuclear safety concern. The lack of productivity is not within the regulatory scope of the NRC.

Because the statement is very general and the subject does not represent a nuclear safety concern, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.142 CONCERN

Individual worked first shift, during rebar installation. Crew often had to redo the rebar work that was done by the 2nd and 3rd shifts because these shifts contained the largest concentrations of inexperienced "permit" workers. Worked primarily on the waste process building.

EVALUATION

This allegation was transmitted to the NRC in the April 20, 1987, meeting with ELP. The statement does not convey any wrongdoing regarding safety related work. In fact, it shows that unsatisfactory work was identified and corrected. Additional information was requested from the ELP but no new information was provided. The NRC performed extensive inspections of the safety related concrete program, see Table 4, and is confident the structures meet regulatory requirements. Typically, concrete placements were made on the day shift with final QC acceptance signoff of the rebar readiness accomplished by preplacement inspection documented in quality recorder.

The NRC independent review team determined this was not previously reviewed but did confirm it was adequately addressed by licensee programs and NRC inspections.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.143 CONCERN

Individual; saw concrete poured when the temperature was to (SIC) low thereby creating a cold seam.

EVALUATION

This allegation was presented to the NRC by ELP in a meeting on April 20, 1987. NRC Inspection Report 50-443/86-52, paragraph 2.1, addressed an allegation which was very similar. The allegation stated, " Cement was poured in below freezing temperature (contrary to product recommendation designed to produce proper

solidification and strength). The NRC review of the Unit No.1 primary concrete placement records disclosed that only four placements took place in below freezing temperatures. In all cases, the concrete temperatures were above freezing as measured and recorded by quality control inspectors.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.144 CONCERN

Rebar in cooling tower that do not have correct concrete mix covering them. (concrete strength incorrect for the location).

EVALUATION

This allegation was provided to the NRC in the ELP April 20, 1987 submittal. The original allegation stated ," I have personal knowledge of reinforcing dowels in the cooling tower that did not have concrete covering which met the design specifications." The allegation did not contain sufficeint information to permit verification. This allegation has similar aspects to one examined in Inspection Report 50-443/86-52, paragraph 42, which discusses the strength of the concrete mix used on site. Also, a problem with the "concrete cover" of the rebar in the cooling tower was identified by the licensee, reported as a potential deficiency in accordance with 10 CFR 50.55(c), and inspected by the NRC in IRs 80-03, 80-12 and 81-07.

Based on the inspections performed, see Table 4, and the independent concrete stength tests performed by the NRC's Mobile Nondestructive Examination Team, the staff is confident the concrete structures meet the design requirements.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.145 CONCERN

Reinforcing dowels in the cooling towers were cracked or out of location. NCR's were generated they would either leave the dowels as is or bend the dowels to fit.

EVALUATION

This allegation was presented to the NRC in the ELP April 20, 1987, meeting. The above version of the allegation is misstated; the statement should be," I have personnol knowledge of reinforcing dowels in the cooling tower which were crooked or out of location... (underlining added for emphasis)." The allegation did not state the dowels were cracked.

Although the allegation was never formally inspected, the NRC did inspect this issue as a matter of routine followup of a potentially reportable construction deficiency report. Inspection Report 50-443/81-07, paragraph 3.b addressed this issue. The inspector examined the associated test reports, engineering evaluation, and other UE&C documentation supporting the licensee's position and found it acceptable.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.146 CONCERN

The blueprints were very hard to interpret for all levels of experience. This was because the prints were inadequate and of a different style than most people were used to. Sometimes people would attain (SIC) help in deciphering them, other times they would not.

EVALUATION

This allegation is a general statement and was presented to the NRC by ELP in a April 20, 1987, meeting. The allegation as stated above has been paraphrased relative to its original version. The original version stated," The blueprints that we used were very difficult to interpret even for people on the general foreman level. This was because the print was inadequate and the blueprints were of a different style than what many of the workers and foremen were accustomed to. Sometimes the foreman would get the engineers, the general foreman or quality assurance persons to interpret the blueprints; sometimes the foreman would make his own determination of what the blueprints meant."

The allegation states that when workers were unsure of the meaning of a blueprint they would ask the people who were there to help them. For those occasions when they did not seek assistance and safety related work was not done to specification, the engineers and quality control personnel would identify the deficient conditions. The allegation does not state that deficient work was done.

Because the statement is very general, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.147 CONCERN

Cost overruns due to design errors and interference.

EVALUATION

This allegation is also a paraphrase of the original allegation which was presented to the NRC by ELP in a April 20, 1987, meeting. The original statement was," My crew often experienced conflicts in attempting to follow the

blueprints. For example, the prints would show sleeves which were supposed to go in a particular location, but we would find that there was already something else in that location. The design conflicts led to cost overruns because the work had to be stopped while the section was redesigned."

This allegation is similar to item 2.3.50 above in that it deals with equipment interferences. The evaluation for this issue is the same as the previous item.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.148 CONCERN

Rework eading (sic) cost overruns because of improper installation.

EVALUATION

This allegation was presented to the NRC by the ELP in a meeting on April 20, 1987. The allegation was general and did not appear to affect safety related equipment. The above stated allegation is a paraphrase of the original statement which is as follows," Several factors would contribute to cost overruns. For example, in the field, workers would run into a problem following the blueprints or another design conflict. Using their knowledge from past construction work, the worker would inform the quality assurance crew or the engineers how the problem could best be resolved. Work would stop on that portion of the construction. A few days to a few weeks later the engineers would come back and tell the workers to go ahead and do what the workers had suggested in the first place."

This does not affect the nuclear safety of the facility. In fact, this is an example of quality assurance working. The fact that work was stopped to correct design conflicts, the workers informed quality control without a hold point inspection, and the engineer approving the corrective action is the way it is intended to work.

Because the statement is very general and the subject does not impact nuclear safety, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.149 CONCERN

It was common knowledge on the site that an inspector was caught using the same x-ray on different welds.

EVALUATION

This allegation was presented to the NRC by the ELP in a meeting on April 20, 1987. The statement lacks credibility in that to use the same x-ray for multiple welds, you must expose a piece of film for each instance, thus, an exposure must occur for each weld whether it is the same weld or not. This appears to be a variation of the "Alaskan pipeline story" where the non-destructive testing technician reshot the same weld over and over again and used it to represent other welds. However, there was film exposed for each weld. This would require collusion between the weld radiographer, who actually exposes the film, and the film reviewer, who actually reviews the film. Often, these are not the same people. The licensee and the authorized nuclear inspector also reviewed these films after the contractor completed their reviews. Lastly, the NRC Mobile Nondestructive Examination Team independently radiographed selected welds and compared their film to the licensee's archive films to verify this practice was not used. Also, as documented in CAT IR 84-07 and discussed in IR 85-31; the licensee conducted an independent third party review of all RT film stored onsite, whether provided by vendors or shot by site contractors.

Because the statement is not credible and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.150 CONCERN

General drug and alcohol use on the site.

EVALUATION

This allegation appears to be the one provided in the April 20,1987, meeting which stated," I saw drug and alcohol usage on the site practically every day." This is similar to the other drug allegations that have been addressed in Inspection Report 50-443/86-52, paragraph 13, and is evaluated in items 2.3.55 and 2.3.57 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved with the concern. They concluded that the previous resolution was acceptable.

2.3.151 CONCERN

Concerned with vendor practices. The source inspector for GE signed off for products, passed them for inspection before they had ever been poured.

EVALUATION

This is a new allegation and appears to be related to items 2.3.152, 153,and 154. It does not contain sufficient information to permit verification and, as stated in item 2.3.152, it may not be referring to the Seabrook Station. General Electric did not supply reactor components for the Seabrook Station. Regardless, the statement is too vague to investigate without further information.

Because the statement is very general, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059. This item will be referred to the appropriate NRC office for generic consideration.

2.3.152 CONCERN

GE Vendor -- Xrays of completed welds were procedurally incorrect; they did not show fillet, and all parts of welds could not be seen. Yet the x-rays were used to prove the parts had been tested and passed. As an example the individual mentioned a pump for an auxiliary cooling system. ELP does not know what pump or plant.

EVALUATION

The allegation is new and does not contain sufficient information to permit verification. It is not apparent that the allegation even applies to the Seabrook Station. The allegation does not specify what welds were deficient. Technically, fillet welds in nuclear construction do not normally receive radiography in field fabrication.

Because the statement is very general, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059. This item will be referred to the appropriate NRC office for generic consideration.

2.3.153 CONCERN

GE Vendor -- Some critical complex welds were not x-rayed, only LP inspected, cited a "canopy" in which the rods sit. Do not know plant.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. From the statement, it is not clear that the allegation even applies to the Seabrook Station. It is not clear whether the allegation refers to General Electric or a GE vendor.

Because the statement is very general, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059. This item will be referred to the appropriate NRC office for generic consideration.

2.3.154 CONCERN

GE Vendor -- Upper tie plates which pick up the rods were tested with a sample program; 5 x-rays were to be taken for a total batch of 100. If these 5 x-rays showed no problems, the entire batch was considered fine and shipped. However, fissure cracks in the tie plates were revealed by the x-rays, so they (GE) would continue x-raying the tie plates until they found 5 good ones. Using these 5 x-rays to prove the batch was good, then the company would ship them out.

EVALUATION

This is a new allegation and does not contain enough information to permit inspection. This allegation appears to be related to items 2.3.151, 152 and 153 above. From the context of the statement, it appears to be an offsite fabrication process that is related to the reactor internal components, specifically, the control rods. General Electric did not make the control rods or other associated reactor components for the Seabrook Station.

Because the statement is very general and does not appear to be related to the Seabrook Station, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059. This item will be referred to the appropriate NRC office for generic consideration.

2.3.155 CONCERN

In summer or fall of 1983 a pipe crew was caught stretching pipe. They heated it and then stretched it using a comealong. The pipe may have been main steam or feedwater (northwest azimuth). This crew may have stretched other pipes. Were they checked.

EVALUATION

This allegation is the same or similar to several allegations regarding cold pulling or cold springing of piping. Inspection Report 50-443/86-52, paragraph 40, and Inspection Report 50-443/87-07, paragraph 2.18, deal with the subject of cold springing of piping in detail. In Appendix B, Part 1, of the ELP submittal titled," Unresolved Issues Raised September, 1986, Item 24, states," Prohibited work practices such as cold pulling..." and Appendix B, Part 2," Issues Raised April, 1987 and Thereafter", Item 9,states " A former carpenter states there was an incident of cold pulling in the middle of 1983." This appears to be the issue discussed in Inspection Report 50-443/86-52, paragraph 40, which was documented and reported to the NRC. The only difference is the specific date, all other aspects appear to be the same.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.156 CONCERN

Key components of Seabrook plant computer are obsolete or discontinued products. This is the system that controls safety status displays, alarms, emergency response terminals (DADS). A thorough review of the problem needs to be done. 1) What parts are discontinued; 2) Is there a full stock of parts; 3) Where do they get the spare parts. Is there a procedure to ensure parts received are totally compatible and interchangeable (and qualified).

EVALUATION

This is a new allegation. The plant computer is not safety related and the plant is capable of being operated without its use. The licensee has recognized this concern and implemented actions to ameliorate the problem as discussed in their January 24, 1990, submittal which addresses these allegations. NRC follow-up of licensee actions with respect to the status of replacement or repair parts for the main plant computer system (MPCS) is planned in order to verify licensee attention to long range MPCS availability and/or upgrade activities (50-443/90-80-04).

Because the statement does not impact safety related equipment and the issue is being addressed by the licensee, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.157 CONCERN

During the period 4/12/87 thru 4/9/87 PSHN/NHY employees received training on the "NEW CORRECTIVE ACTION PROCEDURE". While the procedure may be new many of the forms are not. If only now receiving this training does that mean the people have not been knowledgeable all along.

EVALUATION

This allegation was presented to the NRC by the ELP during the April 20, 1987, meeting. It is stated as a question rather than an assertion of something wrong. Procedure changes are an ongoing process and will continue throughout the life of the plant. Procedure changes are required to be controlled by the plant technical specifications and 10 CFR 50, Appendix B. The statement does not assert any wrongdoing and would require more specific information to establish there was an observed deficiency. The NRC continuously monitors the ongoing operations of the facility and is confident that the procedure change and operational training programs are being properly implemented.

Because the statement is very general and does not imply any deficient conditions, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.158 CONCERN

In the waste process building enclosure wall there is a 5 foot space that encircles the dome. This leaks and collects water inside the wall. Told the EARS program, no response.

EVALUATION

This appears to be a new allegation but is very similar to those addressed in Inspection Report 50-443/87-07, paragraph 2.4.3.2 which deals with the cracks and water seepage in the waste process building and other structures. This was extensively evaluated by the NRC, the licensee and an NRC consultant. The evaluation of item 2.3.73 applies to this allegation. There is a five foot

annulus space between containment and the enclosure building. Water has periodically collected in the lower elevation of this space and has been pumped out. No equipment is located in the area at the lower elevations and no adverse impact has been identified with the existence of standing water.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.159 CONCERN

At high tide water flows into the waste process building. There are 4-5 sump pumps used to remove the water.

EVALUATION

This is a new allegation and a variation of items 2.3.73 and the preceding concern, 2.3.158. The evaluation for this item is the same as the evaluation for the referenced items.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.160 CONCERN

Many pipes touch each other in the waste process building.

EVALUATION

This is a new allegation and does not contain enough information to permit verification. Most equipment in the waste process building is not safety related. The NRC staff performed inspections of safety related piping installations on numerous occasions and did not identify significant deficiencies with the clearances between piping. Several examples of these inspections are listed in Table 2.

Because the statement is very general and based on previous NRC inspections in this area, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.161 CONCERN

Debris left in concrete, wood, extension cords, etc.

EVALUATION

This allegation is the same or similar to one previously inspected in Inspection Report 50-443/86-52, paragraph 3. It is also closely related to an allegation provided by the ELP to the NRC during the April 20, 1987,meeting. The evaluation for item 2.3.120 is applicable to this issue.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.162 CONCERN

Attempts to keep NRC from seeing cracks in concrete enclosure wall. Removed scaffolding by cutting up to hurry removal. Area is now inaccessible.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The statement does not specify where the cracks were in sufficient detail to be able to inspect for them. If the cracks are inaccessible they would be impossible to find. Also, regardless of whether the NRC was informed of the cracks, the quality control inspector would have to be denied access to them also for them to remain unreported and properly evaluated. All safety related concrete required a final visual inspection to receive a signoff for completion. Quality control would have the scaffolding reinstalled to complete their inspections. Based on the previous concrete inspections performed, see Table 4, the NRC staff is confident the safety related structures meet design requirements. Also, during the conduct of the Containment Structural Integrity Test (SIT) inspected by the NRC and documented in IR 86-15, scaffolding was erected to provide access to areas of the containment concrete that were being crack mapped. The NRC visually inspected the cracks that were monitored during the SIT. The scaffolding was eventually removed from the enclosure area.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.163 CONCERN

A "MOOG" electric welding unit (serial number known by security and UE&C) was left in the unit #1 Containment when the outer wall was poured.

EVALUATION

This is a new allegation and does not contain enough information to permit verification. It is similar to those previously addressed in Inspection Report 50-443/86-52, paragraph 3. The likelihood of a complete welding unit being left in the containment concrete is very unlikely. It is doubtful that an entire welding machine was missed during a preplacement inspection of the forms. Also, the reinforcing steel grid for the containment walls could not physically allow

any large component to be inadvertently left in place. If the welding machine was left in the forms and was detrimental to the concrete, the containment structural intergrity test and containment integrated leak test would have revealed the weakness. Based on the previous NRC inspections in this area, see Table 4 for examples, the NRC staff is confident the containment meets design requirements.

Because the statement is very general and based on previous NRC inspections in this area, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.164 CONCERN

The original UE&C reference point at 21'6" elevation Azimuth 0, was in error. This caused much confusion and created the need for "reservation" signs to keep trades people away. After many "Faux Pas" a new department was established which accepted errors "As-Built".

EVALUATION

This is a new allegation. In the containment building, all reference points were established by teams of licensee surveyors. In addition, the survey teams provided pipe support location points for other plant groups. Because of the circular shape of the containment, the azimuth points were continually checked against the adjacent azimuth point. During construction, the NRC was not aware of any equipment installed off loacation due to an azimuth point not being properly located. NRC inspections of the as-built condition of the plant, which supports this assertion, are documented in Inspection Reports 50-443/85-15 and 86-14. The reservation signs mentioned by the alleger were used by different plant groups to reserve space for future pipe support installations. The new department which the individual described was the Piping and Pipe Support Closeout Task Team (PAPSCOTT). The PAPSCOTT effort reconcilled location discrepancies between the piping analysis and the as-built drawings. The NRC inspected PAPSCOTT activities in IRs 85-15 and 85-29. No technical basis for this statement could be found.

Based upon previous NRC inspections of this area, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.165 CONCERN

The cooling towers when tested leaked. X-rays revealed materials left in the concrete.

EVALUATION

This is a new allegation and is not credible. The licensee stated in their January 24, 1990, submittal which reviewed this allegation that the concrete walls of the cooling towers were never radiographed. This is consistent with our understanding and knowledge of industry practice. However, a related issue is the cracking of the concrete and lechate observed on the exterior walls by the NRC which was examined in the detailed analysis the agency performed on the general question of cracks in concrete and the affect of water on the reinforcing steel. This is documented in the Technical Evaluation Report on Cracks Found in Seabrook Waste Processing Building and Cooling Tower, dated October 25, 1988. NRC IR 88-17 includes, as an enclosure, the technical evaluation of the cooling tower cracks identified as unresolved item in IR 87-07.

Because the statement is not credible and based on previous analysis performed of the cooling towers, the statement is not considered to he material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.166 CONCERN

Cooling towers were built with inadequate capacity to shut down both units. An "inside-outside" dimension switch had been made.

EVALUATION

This is a new allegation. Based on the licensee's January 24, 1990, submittal which reviewed this allegation and telephone conversations with the Region I staff before January 18, 1990, the allegation is not credible. The licensee's submittal evaluated the volume of water required by the technical specification and that to support the operation of a single unit. The licensee's analysis shows that there is sufficient water to satisfy the operating requirements of a single unit with a substantial margin. Physical measurements were taken on January 13, 1990, to confirm the basin dimensions.

Because the statement is not credible and based on recent measurements, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.167 CONCERN

A swimming pool and patio were built for a UE&C official, using Seabrook money, manpower, and time. After security uncovered the deal it was kept quiet for public relations reasons.

EVALUATION

This concern was received from the ELP during the April 20, 1987, meeting as Appendix E. The statement deals with misappropriation of licensee property and does not impact nuclear safety.

Because the statement does not affect nuclear safety, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.168 CONCERN

In 1986 Seabrook security shredded all written drug reports. Individual believes UE&C has micro filmed copies.

EVALUATION

This concern relates to the other drug issues discussed in Inspection Report 50-443/86-52, paragraph 13, and other agency reviews of this matter. This statement has no direct relationship to nuclear plant safety. The evaluation and conclusion of item 2.3.57 is applicable to this item.

Similar allegations, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.169 CONCERN

Drug dog searches were conducted every night for some time. The inbound workers would inform the outbound workers which access road was being used so they could use the other one. These dogs reacted moderately to lightly every night. No action was taken on the "hits" but records were kept. After the layoffs the workers with hits were called back so they would fail the drug screening. Thereby saving PSNH an unemployment insurance contributions.

EVALUATION

This concern relates to the other drug issues discussed in Inspection Report 50-443/86-52, paragraph 13, and other agency reviews of this matter. This statement has no direct relationship to nuclear plant equipment safety. The evaluation and conclusion of item 2.3.57 is applicable to this item.

Similar allegations, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. Although this specific item was not directly addressed, they concluded that the previous resolution was appropriate and acceptable.

2.3.170 CONCERN

State police narcotics unit would not tell Seabrook Security the name of the "known Drug Pusher" that was/is still employed on the site. The State Police used him/her as an informant.

EVALUATION

This is a new allegation; this concern relates to the other drug issues discussed in Inspection Report 50-443/86-52, paragraph 13, and other agency reviews of this matter. This statement has no direct relationship to nuclear plant safety. The evaluation and conclusion for item 2.3.57 is applicable to this item.

In the January 24, 1990, licensee submittal which responds to this issue it is stated that the New Hampshire State Police did not use an informat employed at the site and would inform the utility if they intended to do so.

Similar allegations, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the item was not previously reviewed.

2.3.171 CONCERN

A random drug dog search of the Administration building on site resulted in a strong reaction by the dog in a Shift Supervisors Office. A report was filed by security. Security was then warned to stay out of the Administration Building.

EVALUATION

This is a new allegation. This concern relates to the other drug issues discussed in Inspection Report 50-443/86-52, paragraph 13, and other agency reviews of this matter. This statement has no direct relationship to nuclear equipment safety.

Similar allegations, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that further follow-up is warranted to determine if this allegation concerns a new event not previously reviewed (443/90-80-05). No outstanding safety issue is associated with this item.

2.3.172 CONCERN

Concerned that the containment dome would not withstand the design loading required of the outside vertical wall of containment (missile shield).

EVALUATION

This is a new concern and is phrased as a question rather than an assertion. The design of the containment structure was reviewed by the NRC and approved. There is no statement in this concern that indicates the individual has direct knowledge of a defect or deficiency. The wording of the statement does not clearly state an understandable technical question regarding the containment dome. By design, the containment dome area has somewhat less thick concrete sections than the containment walls. However, the entire containment structure is designed to withstand a pressure in excess of peak accident pressure and during the structural integrity test, the containment was pressurized to 125% of design pressure with acceptable results.

Because the statement is very general, the design has been reviewed by the NRC and the statement is posed as a question rather than an assertion, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.173 CONCERN

Unit 1 Reactor vessel was damaged/rusted in shipment. The Unit II vessel was set in the Unit I containment. The damage to the Unit I vessel was due to improper storage

EVALUATION

This is a new allegation. Inspection Report 50-443/81-03, paragraph 3.b, closes out an unresolved item the inspection program identified regarding this matter. The NRC inspectors followed this issue in several previous inspections and it was resolved to their satisfaction. The licensee's January 24, 1990, submittal which responded to this concern states that the Unit I reactor vessel is installed in Unit I. Their record review disclosed that the Unit I reactor vessel did have minor rust upon receipt which was properly documented, dispositioned and corrected. No affect on nuclear safety was shown.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.174 CONCERN

Seabrook station was dug out to bedrock which turned out to be limestone. This limestone seeps through cracks in walls in wet weather. Concerned that if limestone can leak in radioactive water can leak out.

EVALUATION

This concern is the same or similar to issues addressed in Inspection Report 50-443/86-52, paragraph 4,and Inspection Report 50-443/87-07, paragraph 2.4. and the evaluation for item 2.3.73 is applicable to this issue regarding the cracked concrete. The licensee's January 24, 1990, submittal states that the plant is built on sound bedrock, on concrete fill extending to bedrock, or on controlled back fill extending to bedrock. The bedrock is not limestone but granitic or metamorphic rock.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.175 CONCERN

Believes original weld work should be inspected as it happens rather than later by x-ray. Does not believe in the process of weld inspection later.

EVALUATION

This is a new allegtion and is stated as a belief rather than an assertion of something wrong. The allegation is general in that it does not state the type of welding he is concerned with. The structural and piping welding are governed by established concensus codes to which the NRC subscribes and participates. The reactor coolant pressure boundary fabrication and construction code is prescribed by 10 CFR 50.55a. The inspection methods and times of examination are explicitly mandated in this code. The methods and times of inspection and examination have evolved over the years and are industry accepted practice. This allegation does not have technical credibility.

Because the statement is not technically correct, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.176 CONCERN

QC Inspectors did not have enough training. They would believe welders who said welds were OK and sign off for them.

EVALUATION

This is a new allegation but does not contain enough specific information to permit verification. The qualification of inspectors is governed by ANSI 45.2.6. During the course of a routine NRC inspection, assessment of the quality control inspector's knowledge and skills is an inherent part of the evaluation. This coupled with the review of training records provides confidence that the inspectors in the field are proficient. Based on over 20,000 hours of inspection effort, examples of the breadth of inspection are presented in Tables 1 through 6, the staff is confident the welding meets design requirements.

2.3.177 CONCERN

Welders quit because of large amount of bad welding being completed and QC accepted.

EVALUATION

This is a new allegation and does not contain enough specific information to permit verification. The statement implies that the welders were conscientious to the point that they were prepared to quit their jobs if the quality control inspectors accepted deficient welds. The acceptance of unacceptable piping welds would be detected through the post weld nondestructive examinations. Based on the number of independent observations made during NRC inspections, the staff is confident the welding at Seabrook meets design requirements.

Because the statement is very general and based on the number of NRC inspections in this area, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.178 CONCERN

Core barrel for unit 1 cracked.

EVALUATION

This concern was provided to the NRC by the ELP during a meeting on April 20, 1987. The allegation was inspected by the NRC and resolved in NRC Inspection Report 50-443/87-26, paragraph 7.b. The allegation was not substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.179 CONCERN

UE&C changed procedures on February 20, 1984, and again in 1985 to lower inspection criteria for welding.

EVALUATION

This is a new allegation but the subject was previously inspected in NRC Inspection Report 50-443/84-01, paragraph 7.d. The licensee realigned the inspection procedures to eliminate differences in the final as-built criteria and the quality control process inspections. NRC SALP Report 85-99 generally discusses this issue and licensee management actions. Also, the licensee's as-building and design reconciliation programs were inspected in IRs 85-15 and 85-29.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.180 CONCERN

In late 1985, early 1986 many in process inspectors became final inspectors. They then inspected their own work.

EVALUATION

This is a new allegation but is not safety significant. The Code of Federal Regulations, 10 CFR 50, Appendix B, does not preclude this. It prohibits craftsmen and engineers from inspecting their own work. The quality control inspector is there to monitor the process and must remain independent of the process. Quality control technicians inspecting work they have previously inspected is an acceptable practice.

Because no deficiency in hardware is alleged and the practice is not prohibited, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.181 CONCERN

Supports in the top of unit 1 dome were sprayed before final acceptance. The final inspection then had to be visual. The coating made it impossible for the inspectors to see potential problems with the welds.

EVALUATION

This is a new allegation. The licensee issued a procedure to permit final inspection of painted joints recognizing that other inspections had been performed while the welds were in-process. This practice has been used at other facilities by the NRC and was qualified by creating flawed samples and demonstrating the process could detect unacceptable flaws thru paint. The inspection procedure was reviewed by the regional inspector that witnessed the qualification of the initial use of this practice and agreed with the acceptability of the procedure.

2.3.182 CONCERN

Document control was poor. ANI signed off documentation that was illegible. ANI signed papers and never looked at work.

EVALUATION

This is a new allegation. The Authorized Nuclear Inspector (ANI) responsibilities include verifying the plant was built to meet the requirements of the ASME Code and provided an independent oversight of the construction work to assure the plant can be insured, and, in some cases, act as the inspector for the state. The Authorized Nuclear Inspector performs field inspections on a sampling basis to verify code work for insurance purposes, not to certify to the NRC that construction meets regulations. The ANI compliments the licensee's quality assurance and quality control programs that are mandated by the NRC. The NRC recognizes that the ANI is inspecting but takes no credit for this third party review.

Because the NRC does not take credit for the presence of the ANI, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.183 CONCERN

Two HVAC contractors (Bluin & H&H Heating) were fired for poor performance. UE&C prevented document review of the work these companies did.

EVALUATION

This is a new allegation. The replacement of contractors is within the purview of the licensee. If substandard work was performed by them, the licensee's quality assurance program would require evaluation and correction of the deficient conditions. It is unclear what document review was prevented by UE&C and the significance of the review. Inspections of the heating, ventilation, and air conditioning system were performed by the NRC to verify its operability, see NRC Inspection Reports 50-443/86-37 and 86-46. Also, SALP reports issued on December 28, 1982, and May 28, 1985, document NRC consideration of the licensee's decision to replace the HVAC contractors. No quality problems or evidence of uncorrected substandard work was identified by these assessments or the NRC inspection that supports them.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.184 CONCERN

Final inspectors were rejecting up to 95% of in-process accepted welds.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The statement does not specify what welding is being rejected, piping, electrical, structural, or supports. Nor does it give the time when this occurred. It is believed that the allegation is related to item 2.3.179 which deals with the reduction of inspection requirements and this evaluation may be applicable, but without further information, it is impossible to determine. The statement implies that the in-process inspection was rejecting an inordinate number of welds. This would indicate the quality control process was demanding a higher level of quality than was required or that the welders were not producing the required quality level. It does indicate the quality process was being enforced. Based on the large number of NRC inspections of this area, the staff is confident the welding meets the design requirements, see Table 2. Also, NRC SALP Report 85-99 discusses the NRC assessment of the licensee's handling of final as-building inspection reject rate and the related evolving acceptance criteria.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.185 CONCERN

In 1984, (6) 10" valves were installed improperly in the primary loop in containment. They were to be installed one way but the flow marking were misinterpreted and they were installed wrong. Valves are on the -26 elevation, 20 ft. toward center from the personnel hatch.

EVALUATION

This is a new allegation. The licensee was contacted and requested to identify the valves in question. Their review identified that the only 10" valves associated with the reactor coolant loop are the 4 accumulator lines which consist of two check valves in series with a motor operated gate valve between them. The licensee was requested to perform a physical inspection of the valves and verify the flow direction. The licensee was able to verify the outboard check valves and the motor operated valve. The inboard check valves were covered by insulation and inaccessible. However, review of the functional test data and the inservice inspection records demonstrates the operability of these valves. This allegation could not be substantiated.

Based on the physical inspections performed by the licensee, documented functional test data and inservice test records, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.186 CONCERN

In late 1983 or early 1984 the individual was inspecting socket welds on piping in the water level control building. They were near the door located to the left of the containment equipment hatch. The welding crew did not do pull-backs in fitting the joints. The individual put a hold tag on the system and wrote an NCR. Bob Bent, the general foreman, told the welders to disregard the hold tag. They objected but continued work. The disposition of the NCR was to accept the system because it would not be subjected to temperatures over 200 degrees even though procedures say there must be 1/16th inch pull-back, regardless of the temperature.

EVALUATION

This is new allegation. The ASME III Code, NB-4427, requires that socket weld fitups be provided with a 1/16" gap between the bottom of the fitting and the end of the pipe. The current edition of the code states, "In making socket welds, a gap as shown in Fig. NB-4427-1 shall be provided prior to welding. The gap need not be present nor verified after welding." The purpose of the gap is to prevent thermal stresses which may result from differential growth of the pipe relative to the fitting during welding. This could result in undesirable stresses on the weld. If the weld did not crack during welding and was not going to be subjected to cyclic, elevated temperatures during operation, the lack of a gap would not be serious to its functioning. ASME Code Interpretation III-82-05 states in reply to a query regarding this requirement," The 1/16 in. is neither a minimum nor maximum but is an approximate dimension that is provided as a guideline to protect against bottoming out during welding." This ASME Code interpretation supports the "accept as is" engineering disposition for the subject NCR.

It is stated in the allegation that a nonconformance report was written and dispositioned "use-as-is." This is the proper method of identifying deficiencies and getting an engineering disposition. A review of this issue by the NRC technical staff has concluded this is an appropriate disposition. Although the disposition of the NCR appears to be adequate and not an immediate nuclear safety concern to impact licensing, this item remains open pending NRC review of the subject nonconformance report (443-90-80-06).

Based on the current review of the available information and the stated engineering disposition, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.187 CONCERN

Drug use by draftsmen on site.

EVALUATION

This is a new allegation but similar to previous drug issues that were dealt with in NRC Inspection Report 50-443/86-52, paragraph 13, and evaluated in items 2.3.55 and 2.3.57 above and other NRC and licensee reviews.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.188 CONCERN

Wasting time during UE&C takeover from P&H. Worked only 45 minutes a day out of 10 hours. Everyone was trying to make the job last longer.

EVALUATION

This is a new allegation and is very general in content. The subject of this concern is not a safety issue but one of productivity. There is no inference made to the adequacy of the work being done. This is not a nuclear safety issue.

2.3.189 CONCERN

Many documents were destroyed the week before UE&C took over for P&H. This was done by a woman in the document section of P&H.

EVALUATION

This is a new allegation and similar to item 2.3.96 above. The statement is very general and does not contain sufficient information to permit verification. The evaluation for item 2.3.96 is applicable to this issue which is not considered a safety matter. Final documentation for completed construction was the subject matter of several NRC inspections as listed in Tables 1 through 6 and NRC Inspection Reports 50-443/85-15 and 86-14. Also, an NRC HQs Construction Assessment Team (CAT) inspection (IR 84-07) reviewed Seabrook construction and records immediately after the work stoppage in 1984 when several contractors were terminated and replaced by UE&C. No missing record problem was identified.

Because the statement is very general and the subject has been adequately dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.190 CONCERN

Some draftsmen employed by Johnson Controls had never drawn before, so they were trained on the site.

EVALUATION

This allegation is new and does not specify the date this occurred, if the work was safety related, the names of the employees, nor if Johnson Controls had an on-the-job-training program for these individuals. All safety related drafting work must be reviewed by a checker and approved. The applicable standards for design are silent on qualification requirements for draftsmen but do specify the review and approval of the drawings. This is not a regulatory issue.

Because the statement is very general and the subject is not covered by regulations, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.191 CONCERN

Fab shops often received material without proper certification. They would use it anyway because they were to be installed in non-safety parts of plant.

EVALUATION

This is a new allegation and does not affect the safety related equipment of the facility. The materials used in the balance of plant, although of concern because of possible interactions with the nuclear side, is not regulated. The plant is designed to be safely shutdown without relying on the balance of plant equipment.

Because the statement is very general and the subject does not deal with the safety related equipment, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.192 CONCERN

Third shift security turned off their office lights shortly after coming to work. Assumed they were sleeping.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The statement does not provide the time period when this occurred; however, it is assumed to relate to the construction phase. If this is true, the statement has no safety significance because security during construction is not mandated by the regulations. If the event occurred during licensed operation, this activity is regulated and further investigation is warranted. Additional information should be requested from the alleger to determine the significance of the statement.

The statement is not an assertion that sleeping occurred, but a question. Follow-up with the alleger should be undertaken to determine if this is a construction or operating phase incident (443/90-80-07).

Because the statement is very general and the statement is a question rather than an assertion, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.193 CONCERN

Saw one individual at Massachusetts Gas falsify certification for materials he ordered for UE&C from another supplier for Seabrook. Individual wrote his own name on certification papers that were to be signed by the supplier.

EVALUATION

NRC Inspection Report 50-443/88-10, paragraph 9.b, addressed this issue. There was no indication of improperly certified materials noted during a review by the NRC inspector of purchase orders from the subject company. Further, the majority of equipment supplied by this company was for temporary installations.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.194 CONCERN

Faulty Welds, mismatches, out or round pipe, in auxiliary cooling systems.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 6, addressed this allegation. The NRC performed radiography of the pipe and physical measurements for the mismatch and ovality conditions. The allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.195 CONCERN

Grinding pipes to below minimum wall. Line (E2936-283-1-CBS-1211) is an example.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 7, addressed this allegation. The NRC performed radiography and ultrasonic thickness measurements of the specific pipe cited and could not identify any locations below the minimum pipe wall tolerance.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.196 CONCERN

Company using cheaper piping as money got tight, ovality present, 1/16th in. concentricity maximum. Had 1/4" on larger pipe. When mismatch was greater than 1/16th the welders would be sent in to grind inside of pipe to make it acceptable.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraphs 6 and 7, addressed this issue; it is a variation of items 2.3.194 and 195 above.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.197 CONCERN

Normal practice to grind down excessive mismatch, center line shrinkage, suck back, and unconsumed ring.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 6, addressed this issue. The original allegation stated," On the reactor coolant line, it was normal practice to grind down excessive mismatch, center line shrinkage, suck back and unconsumed ring..."

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.198 CONCERN

Cladding separation at Steam Generator Nozzle, one was repaired, others were not checked.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 14, addressed this allegation. The licensee identified that there were indications in the steam generator nozzles. The nozzles were penetrant examined prior to welding the pipe to the nozzles. The allegation that the others were not checked was not substantiated. Additionally, IRs 83-02, 83-19 and 84-10 documented NRC inspection of the steam generator nozzle safe ends and review of the safe end weld radiographs.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.199 CONCERN

Diametric machines made faulty welds in the pipe tunnel, 100 welds were suspect and not inspected. Caused by size of insert ring. Results are "fingernailing" inside weld.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 8, addressed this allegation. The alleged welds were in the waste process building, are not safety related and were fabricated to ANSI B31.1; however, the NRC examined the subject welds and determined they were of good quality.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.200 CONCERN

QC inspector ordered not to inspect welds.

EVALUATION

This allegation was investigated and reported in Report of Inquiry, OI-1-84-020. The allegation could not be substantiated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.201 CONCERN

Cracks have appeared in the waste process building because of improper concrete pouring. One 30 ft. crack was chiseled out and filled with ordinary grout.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 3, addressed this specific allegation. NRC Inspection Report 50-443/87-07, paragraph 2.4, also addresses a similar question which received extensive review by the agency and their consultant.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.202 CONCERN

Perine Corp. violated standards by placing concrete in 30 ft deep pours. Limit is 10 ft. depth.

EVALUATION

Inspection Report 50-443/84-12, paragraph 3.0 addressed this allegation. The applicable concrete standards, ACI 301 and ACI 318 do not limit the pour depth to 10 feet.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.203 CONCERN

Concrete lining of several sections of Ferro-Cement lined pipe is cracked. Pipes were "cold pulled" to fit. This occurred in the pipe slot.

EVALUATION

Inspection Report 50-443/84-12, paragraph 5, addressed this allegation. The NRC inspector reviewed the installation records, interviewed construction personnel and physically entered a section of the concrete lined piping to perform a visual inspection of the lining. The inspection concluded the piping would perform its function.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved on the concern. They concluded that the previous resolution was acceptable.

2.3.204 CONCERN

In May 1983, the company issued a memo forbidding any more cold springing, pulling.

EVALUATION

Inspection Report 50-443/84-12, paragraph 4, addressed this allegation. The original allegation stated," In May, 1983, the company issued a memo forbidding any more "cold springing" of pipes and indicating that anyone found to be engaging in the practice would be disciplined and perhaps terminated. However, following the memo, at least one area supervisor instructed workers to "cold spring" a pipe from the Tank Farm near the Pump (sic) auxiliary building to a valve." The inspection could not detect any abnormal piping conditions resulting from the installation.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.205 CONCERN

Faulty shop welds provided in "Dravo Pipe". Line EX-4125-010-Rev. 1. Field weld #108 had 1" lack of fusion in the root.

EVALUATION

Inspection Report 50-443/84-12, paragraph 11, addressed this allegation. This piping is not safety related; however, the NRC performed an ultrasonic volumetric examination on the weld joint. This examination detected an indication which was subsequently radiographed by the licensee for information purposes. The indication was determined not to be lack of fusion associated with the root.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved on the concern. They concluded that the previous resolution was acceptable.

2.3.206 CONCERN

QC stated a "Dravo Weld" was not their concern.

EVALUATION

This allegation was originally part of the allegation discussed in item 2.3.205 and that evaluation is applicable for this item.

2.3.207 CONCERN

Line (4417-01-R/1 FD101, NCR #2168) had sugar deposits from 10:00 to 2:00, the weld was completed in spite of this defect.

EVALUATION

Inspection Report 50-443/84-12, paragraph 9, addressed this allegation. When the inspection was performed, the subject weld was inaccessible because it was buried. The staff performed an analysis of the minimum pipe wall required versus the nominal and determined the required wall thickness was .021 inches versus the nominal of .365 inches. A minor internal oxidation would not prevent the pipe from performing its intended function.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.208 CONCERN

In the waste process building there were several improperly welded valves.

EVALUATION

This allegation was addressed in Inspection Report 50-443/84-12, paragraph 12. The original allegation contained much greater detail than provided above. The allegation stated," In the waste processing building, I observed several instances of improperly welded pipes to valves. Because the valves are made with teflon seating material, a manufacturer's tag warns never to heat them beyond 250 degrees... The welding was apparently so hot it baked the chromium out of the alloy..." The NRC inspected the internals of several valves, operated several others and visually inspected welds and did not identify any deficiencies.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved on the concern. They concluded that the previous resolution was acceptable.

2.3.209 CONCERN

In January 1986, motor operated valves were improperly stored.

EVALUATION

Inspection Report 50-443/84-12, paragraph 13, addressed this allegation. The allegation that the valves were improperly stored was true, however, the licensee's QA program had previously identified the condition and written a NCR. At the time of the NRC inspection, the team partially disassembled some of the valves to inspect and test them. No deficient conditions were identified.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.210 CONCERN

Considerable waste of time, 10 people doing what only one was needed for.

EVALUATION

This is a new allegation and does not have an impact on the safety of the facility. It deals with the productivity of the workers and has no direct affect on the plant equipment. This is not a safety issue.

2.3.211 CONCERN

Drug and alcohol use very prevalent.

EVALUATION

This allegation is the same or similar to the concerns addressed in items 2.3.55 and 57. The evaluation for these items applies to this one.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved on the concern. They concluded that the previous resolution was acceptable.

2.3.212 CONCERN

Fired for allowing someone to enter Reactor Vessel. Lead guard posted a false sign that precluded entry into the space which the individual did not see. Another guard had signed the sign as the NRC.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The act of terminating the individual for a job infraction is not a safety issue. The entry of an unauthorized individual into the reactor vessel only has significance if the individual caused damage. The reactor received several inspections prior to final closure that would detect any damage, see item 2.3.19 above.

Because the statement is very general and final closure inspections of the vessel internal condition were made, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.213 CONCERN

Tool theft on a large scale. Rockingham Security did a poor job.

EVALUATION

This is a new allegation that does not affect nuclear safety. The misappropriation of licensee's property has no nuclear safety implications.

2.3.214 CONCERN

Saw large cracks in concrete on -30 foot level of waste process building. There were lime deposits all over the place.

EVALUATION

NRC Inspection Report 50-443/84-12, paragraph 3, and NRC Inspection Report 50-443/87-07, paragraph 2.4, addressed this issue or one very similar. The evaluation for item 2.3.73 applies to this issue also.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.215 CONCERN

Scale pan hit concrete support in fuel storage building.

EVALUATION

The allegation is new and does not contain sufficient information to permit verification. The allegation does not specify the kind of support that was struck, a steel or concrete column, nor the location of the incident other than it was in the fuel storage building. If the support was concrete, the damage would be visible from the surface and corrective actions taken. A concrete structure can not sustain internal damage from an external force without exhibiting surface damage. Likewise, a steel column would exhibit deformation if it sustained damage which would be readily visible. The resident inspector routinely tours this area and has not detected any structural damage.

Because the statement is very general and routine inspections of this area are made by the NRC inspectors, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.216 CONCERN

The circulating water pump house was inadequately designed. Concrete braces were installed after construction was completed, inside of the water bays at three levels. These braces were tied to the outer walls reinforcing steel and the concrete was poured around the rebar. The concrete where they tied to the outer walls cracked and broke off exposing the rebar to salt water. Then haunches were installed to help support the weight of the braces and to seal the rebar from the salt water. These were made of non shrinking grout. The grout has cracked and the rebar is exposed to salt water through these cracks.

EVALUATION

This is a new allegation; however, the resident inspectors reviewed this issue in NRC Inspection Report 50-443/85-17, paragraph 31. This incident was reported by the licensee in a 10CFR 50.55(e) construction deficiency report, CDR 83-00-06.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.217 CONCERN

The circulating water pumphouse was inadequately designed. Concrete braces were installed inside the water boxes at three levels. These braces were tied to outer wall rebar and then poured in place. After setting their weight was to much for the wall connections. The concrete where they tied to the outer walls cracked and broke off. The haunces (sic) were installed to help support the braces at the ends. This was grouted to prevent salt water reaching the rebar. The grout has cracked and rebar is still exposed to sea water.

EVALUATION

This is the same allegation or very similar to item 2.3.216 above. The evaluation and conclusions of item 2.3.216 are applicable to this allegation.

2.3.218 CONCERN

The braces installed in the bays of the circulating water pumphouse may not withstand an earthquake. (seismic event). There (sic) weight and the way they are tied to the exterior wall rebar causes both the brace and the wall to be in tension.

EVALUATION

This is a new allegation and is generally addressed in item 2.3.216 above. The corrective actions taken to address the original deficiency was reviewed by the NRC inspector during his followup and closeout of the construction deficiency report. No design deficiency was noted. In the licensee's January 24, 1990, submittal, it is stated that the brace is a compression member only with no mechanism for transmitting tensile load. It further states that the calculations for the braces do consider appropriate seismic loads.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.219 CONCERN

The braces installed in the bays of the circulating water pumphouse may not withstand an earthquake. Their weight and the way they were tied into the exterior wall rebar causes both the brace and the wall to be in tension.

EVALUATION

This is the same allegation or very similar to item 2.3.218 above. The evaluation and conclusions of item 2.3.218 are applicable to this allegation.

2.3.220 CONCERN

Concerned with Microbiologically Induced Corrosion of piping and components.

EVALUATION

NRC Inspection Report 50-443/87-07, paragraph 2.9, and NRC Inspection Report 50-443/86-52, paragraph 6, address this concern. This issue has been thoroughly inspected and the corrective actions reviewed in the above cited reports. Piping was identified that contained microbiologically induced corrosion, the piping was disassembled and cleaned, and chlorination treatment introduced.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.221 CONCERN

Codes and standards being bent to save time and money.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The statement does not specify which codes or standards, and does not provide specific information as to which section of the codes were "bent." Further, it implies the codes were not violated but margins were trimmed to save time and money. The NRC requires that the facility meet the minimum requirements of the codes. The codes have safety margins built into the specified standards to ensure the structure, system or component will perform its intended function given there will be variations in the performance of the materials, fabrication practices and design approaches. The purpose of NRC inspections is to ensure the applicable industry codes are applied to the design and construction of the facility. The inspections listed in Tables 1 through 6 are examples of the inspections that verify the licensee's program is capable of satisfying these requirements.

Because the statement is very general and the subject has been adequately dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.222 CONCERN

Supports in Main Feed were being inspected visually only near the end of construction.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The statement does not specify the location of the supports nor what the previous inspection requirements were. The main feed system is covered by two codes; the ASME III Code for those portions inside the containment and

in the main steam and feedwater (MS & FW) pipe chases and ANSI B31.1 for the remainder. Only the portion of the piping from the steam generator out to the check valve upstream of the feedwater isolation valve is safety related and governed by the ASME Code. The visual inspection of the supports must have met the code for the safety related portions of the system to receive the proper code stamp. The NRC performed inspections of the safety related piping and supports and examples of these inspections are listed in Table 2; specifically, NRC Inspection Reports 50-443/81-08, 82-10,83-01, 83-06, 83-09, 83-13, 83-17, and 84-16. Additionally, other pipe support and whip restraints in the MS & FW pipe chases were inspected by the NRC, both as a routine inspection activity (e.g., IR 84-04) and also as follow-up to a similar allegation (references IR 86-12).

Because the statement is very general and the general subject of pipe supports has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.223 CONCERN

Saw a 2x4 spreader left in a concrete pour at the roof line level in the fuel storage building.

EVALUATION

This allegation appears to be the same one that was received during the April 20, 1987, meeting between the NRC and ELP. However, the original allegation differs somewhat from this one. The original statement was, " I was a carpenter at Seabrook Station from the Spring of 1981 to the Fall of 1982. During that time, I saw a 2 by 4 spreader which was left in the containment wall of the missile shield after the concrete was poured. The spreader was at the level of the roofline of the fuel storage building and slightly to the right facing the containment." A sketch was provided.

The ELP was requested to provide additional information regarding this matter in the May 27, 1987, NRC letter, but has not responded to the request at this time. The ELP stated that they were writing the alleger a letter requesting the information.

The subject of debris in containment concrete has been addressed in NRC Inspection Report 50-443/86-52, paragraph 3, and supporting the conclusion that this issue does not impact the structure is the successful completion of the structural integrity test.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.224 CONCERN

NCR changed, modified, etc. to make problem appear to be with Unit 2.

EVALUATION

This appears to be a new allegation, but does not contain enough information to permit inspection or verification. The statement does not specify the original reason for the nonconformance report, who the supervisor was or what contractor was involved. The nonconformance reporting system for several of the contractors was examined during NRC inspections. A specific example of this type of inspection can be found in NRC Inspection Report 50-443/82-06, paragraph 5.3.2. Routine NRC inspection follow-up of the licensee implementation of its NCR program can also be found in several other inspection reports (e.g., IRs 83-12, 83-18, 84-17, 85-15 and 86-14).

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.225 CONCERN

No concern identified.

EVALUATION

This statement was included in the appendix of 255 separate allegations. No assessment is required.

2.3.226 CONCERN

General Drug and Alcohol use.

EVALUATION

This allegation is the same or very similar to the other drug and alcohol issues which have been addressed in items 2.3.55 and 2.3.57. The evaluation and conclusion is the same for this allegation.

2.3.227 CONCERN

Primary auxiliary building closed because of poor pipe welds. (You could see through the welds).

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. It is unlikely that piping welds were in the degraded condition identified. A pipe weld in this condition would not pass a hydrostatic test nor any of the operational tests where the pipe was required to hold a fluid. It is

unclear what the significance of the statement is, "Primary auxiliary building closed because of poor welds". Why was the building closed? Based on the number of welding inspections performed, the NRC staff is confident the alleged condition does not exist.

Because the statement is very general and the adequacy of the licensee's welding program has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.228 CONCERN

The concrete walls on the 04 level of the Waste Process Building were leaking in 1983, 1984. The leakage exuded a white powder that the individual believes was salt. The individual is concerned that the repair by removing the outermost 1 1/2" of concrete and replacing it with new grout is not going to prevent the rebar from rusting and corroding away. The salt water leaking through the large crack will cause damage to the structural integrity of the building.

EVALUATION

This is very similar to an allegation that was presented to the NRC by ELP during the April 20,1987, meeting. The original allegation stated " On the minus 31 level of the waste process building there are huge cracks all the way down the walls with something white seeping through. It might be sea water or salt. I'm not sure, but they came down on a number of occasions when I was there and bushed (sic) it out and patched them up..."

The issue of the cracks in the waste process building has been dealt with extensively in NRC Inspection Report 50-443/84-12, paragraph 3, NRC Inspection Report 50-443/87-07, paragraph 2.17,and NRC Inspection Report 50-443/88-17, paragraph 4.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.229 CONCERN

The concrete walls on the 04 level of the Waste Process Building were leaking in 1983, 1984. The leakage exuded a white powder that the individual believes was salt. the individual is concerned that the repair by removing only the outer 1 1/2" of concrete and then placing new mortar over the crack is not going to prevent the rebar from corroding. The salt water leaking through the large crack will cause damage to the structural integrity of the building. The individual stated that he tasted the material that came through the wall and that it was salty tasting.

EVALUATION

This allegation is essentially the same as item 2.3.228 and the evaluation and conclusion are the same.

2.3.230 CONCERN

Counterfeit bolts are installed throughout the plant. the Unistrut Bolts that were installed between January 1982 and March 1983, were partially replaced in the fall of 1983. This was accomplished because the bolts were of the wrong material and did not have sufficient tensile strength for the intended use. The only bolts that were replaced were those that were easy to get at. All bolts that were not easy to reach were not changed. There is no known record of what bolts were replaced and which were not. The individual is concerned that the bolts used to hold up all electrical raceways, cable trays, conduits, etc. may not have sufficient strength under design stress conditions.

EVALUATION

This allegation is discussed in detail in Section 2.1.13 of this report.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous inspections resolved this issue and no further action is warranted

2.3.231 CONCERN

Unistrut bolts are installed throughout the plant that do not meet the tensile strength required for their design purposes. There are counterfeit bolts installed in all Unistrut applications. The Unistrut bolts that were installed between January 1983 and March 1983 were partially replaced in the fall of 1983. This was done because the bolts were of the wrong material and did not have sufficient tensile strength for the intended use. The only bolts that were changed however were those that were easy to get at. All bolts that were not easy to reach were not changed. They are still inplace in the plant. There is no known record of which bolts were changed and which were not. The individual is concerned that the bolts used to hold up all electrical raceways, cables, conduits, etc., may not have sufficient strength under design stress conditions. The individual is personally aware of this condition because he was a member of the teams that were changing the bolts.

EVALUATION

This allegation is essentially the same as item 2.3.230 above, and the evaluation and conclusion are the same.

2.3.232 CONCERN

There is a 6" electrical conduit in the Waste Process Building on the 03, 04 level. Located near the tunnel between the Reactor Containment Building and the Waste Process Building that is located to close to steam line. The individual does not know if the electrical cables that are in the conduit are safety related or not.

EVALUATION

The allegation is new and does not contain sufficient information to permit verification. The licensee's response to the allegation, dated January 24, 1990, states that there are no 6" diameter conduits at the Seabrook Station. It further states that there are no safety related cables located in the waste process building (WPB) and that no supply power to safety systems is required since the entire building contains nonsafety, nonseismic components (one exception is noted). While the WPB is designed and constructed as a seismic Category I structure, the licensee's response regarding the general nonsafety function of the WPB equipment matches the FSAR description.

Because the statement lacks sufficient information to perform an inspection, the statement is not considered to be material to the licensing process as specified in NRC Manaual Chapter 0517, Section 059.

2.3.233 CONCERN

There is a 6" electrical conduit in the Waste Process Building on the 03 and 04 levels. It is located near the tunnel between the Reactor Containment Building and the Waste Process Building. The conduit is placed too close to the steam lines that run in the area. The individual is aware because he assisted in the installation. The individual does not know if the cables that run through the conduit are safety related.

EVALUATION

This allegation is the same as item 2.3.232 and the evaluation and conclusion are the same.

2.3.234 CONCERN

In the summer/fall of 1983, 20 persons of a 30 man Cadwelding Crew were fired for falsifying Test Cad Weld Splices. These people were using a solid length of rebar and placing a Cadweld Sleeve over it. They would then fire the sleeve and no one could tell they had used a solid bar. The test splice would be tested by pulling it to failure and the bar was the piece that normally failed. However on one occasion the sleeve broke and the testers could see that the bar was all one piece. NHY went to the local scrap yard and retrieved several of the old test splices and cut them up to see how they had been made. As a result several people were fired.

EVALUATION

This allegation is discussed in detail in Section 2.1.9 of this report.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved on the concern. They concluded that the previous resolution was acceptable.

2.3.235 CONCERN

During Cadwelding of the Fuel Handling Building, Shield Wall number 2, the Equipment and personnel hatch areas of Containment. The Cadwelding crews were using expired powder to fire sleeves. Whenever the crews would make a splice that they knew would not pass QC inspection they would remove it with a torch or a sledge hammer and fire a new one over the rebar before QC knew about it. They did not properly prepare the ends of the bars that had been fired over before they fired the new one. After the fact QC could not tell what they had done.

EVALUATION

This is a new allegation. In a telephone conversation with the licensee, which was later confirmed in their January 24, 1990, letter, it was determined that the cadweld powder does not have a shelf life and, if properly stored, will last indefinitely. This information was confirmed with chemical engineers and the Erico sales engineers. The licensee also stated that all cadwelds were subject to pre-fire checks to verify bar end dryness and cleanliness, bar alignment, a gap between the bar ends and centering of the sleeve. The likelihood of removing a fully bonded cadweld with a sledge hammer is very small. The licensee stated that when a cadweld had to be removed it was done with a power saw or cutting torch.

Additionally, in 1980 an approved design change authorized the removal of cadweld sleeves by flame cutting and removal of the filler material by use of a chisel. This was normally only done where space or other field limitations did not allow cutting of the rebar on either side of the rejected cadweld and replacement with new rebar and two new cadweld splices. Procedural requirements existed for notification of QC for inspection of rebar ends, after cutting of the sleeve and removal of the filler material, prior to firing the new cadweld. While it would be possible for cadweld crews to perform this cadweld replacement without the procedurally required QC involvement, this practice would result in unaccounted for cadweld sleeves, filler material and powder. Requisitioning of equipment for cadwelding materials along with daily accountability checks and QA overview of this process make the unauthorized replacement of the splices unlikely. However, if cases of unauthorized replacement did occur, this alone would not infer that unacceptable splices were installed. The fact that the general practice of cadweld replacement was acceptable, along with the requirement for cadweld splices to test out at tensile strengths exceeding 125% of the yield strength of the rebar provides additional assurance of the margin of safety provided by cadweld splicing operations. Also, the refired cadweld would still require final inspection to the visual QC inspection criteria.

Therefore, while this allegation can be neither substantiated, nor refuted, it is unlikely that the alleged activity occurred. Even if it did occur, the safety impact upon the entire structure would be minimal.

Based on the number of NRC inspections of this area, the fact this was a proceduralized practice subject to quality control oversight, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, Section 059.

2.3.236 CONCERN

Cadwelders were putting incorrect location marks on rebar, and then firing the sleeve before QC could verify the location through the hole. This was done when the sleeves would not fit properly over the rebar because of some obstruction or rebar problem. Once fired no one could tell that the sleeve was not properly centered over the ends of the rebar.

EVALUATION

This is a new allegation. Since proper placement of the scribe marker was a required QC inspection point for acceptability of cadwelds after firing, the above allegation implies a conspiracy among the cadwelders and their supervisor to falsify the scribe mark representation of the length from the end of the rebar. While it is possible to postulate that this may have occurred, random inspection by QC and QA personnel prior to firing cadwelds were conducted to verify proper sleeve placement. Also, production splice testing in accordance with USNRC Regulatory Guide 1.10 would provide evidence of failures as an expected result from any widespread use of such unacceptable practices. Based upon the conservative margin of strength provided by cadweld usage in rebar splicing design and also based upon the existence of contractor and licensee QA inspection programs and the acceptable results from the structural integrity test of the containment structure, it is highly unlikely that this allegation has technical merit or any real safety impact.

Based on the number of NRC inspections of this area and the quality control oversight, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, Section 059.

2.3.237 CONCERN

Individual is concerned that the use of Sarabond in the concrete as an admixture will cause rebar deterioration over time.

EVALUATION

This is a new allegation and has no basis. The licensee stated in a telephone conversation, later confirmed in their January 24, 1990, letter, that Sarabond was never used on site as an admixture in concrete. The regional staff called the American Concrete Institute and the Portland Cement Association to determine what the product is used for and was unable to identify its use. The concrete design was reviewed during routine inspections and the quality checked as a part of those inspections. Examples of these inspections can be found in Table 4.

Because the statement appears to have no basis and based on the inspections in this area, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.238 CONCERN

Concerned with welder stacking. Using multiple welders to make a thick weld, also making welds with some thickness removed/ground out and then having a welder repair it and put his full qualified thickness weld over the top, thereby making a weld thicker than he was qualified for.

EVALUATION

This is a new allegation and very similar to items 2.3.115 and 2.3.116. The allegation does not provide any specific details concerning what weld was performed using the conditions described. The evaluation and conclusion for the referenced items are applicable to this concern.

2.3.239 CONCERN

Drug use was a problem.

EVALUATION

This concern is the same or similar to concerns regarding drugs that have been previously addressed in item 2.3.57. The evaluation and conclusion for the referenced item is applicable to this concern.

2.3.240 CONCERN

Concerned about sabotage that occurred April 1985. Some lines in the waste process building going to demineralizers were found to be plugged with grout and had to be cut out and repaired.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. The concern states that the lines were cut out and repaired, thus, this incident was corrected. If other pipes had been obstructed, the preoperational tests would have detected them and repairs effected. The licensee's January 24, 1990, letter states that system acceptance tests confirmed the operability of the system in 1986. They also state that no one can recall any incident of sabotage to demineralizers in 1985. The piping and equipment located in the waste processing building, except for one particular component, are not safety related.

Because the statement is very general, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.241 CONCERN

Some gussetts (sic) in main steam feed restraints, were ont (SIC) QC inspected when job was finished. There were surface cracks still visible when the crews were pulled off the job. Two welds in particular (4001 and 4002), done by Pullman Power in 1981 were still cracked when work was finished.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. It does not specify the supports that are deficient or provide sufficient information to determine the location. The licensee's letter, dated January 24, 1990, indicates that 4000 series main steam feedwater restraints were not completed until 1986. They further state that the fabricator used partial penetration welds that were rejected by field inspectors for lack of fusion.

The NRC examined similar welds in this area in conjunction with an allegation followup regarding pipe whip restraints, see NRC Inspection Report 50-443/86-12. The resident inspector determined that the numbers 4001 and 4002 represents a drawing series and not a specific support. He examined several supports in this series and could not detect any cracks. He did note that certain welds were partial penetration welds which might, to the untrained eye, appear to be cracked.

Because the statement is general and the NRC performed inspections of this specific system and the components , the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.242 CONCERN

Unit #2 hot and cold leg elbows are flawed.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. It is assumed the allegation refers to the reactor coolant pressure boundary piping hot and cold leg elbows. Any flaws in the Unit No. 2 fittings are of no consequence because the facility has been cancelled. There is confidence that the fittings in Unit No. 1 are acceptable based on the ASME Code required fabrication, construction and preservice examinations that were performed. The NRC performed reviews of these programs and specifically reviewed reactor coolant pressure boundary radiographs for Unit No.1. These reviews are discussed in NRC Inspection Reports 50-443/83-19 and 85-19.

Based on previous NRC inspections and the fact that Unit No. 2 was cancelled, the statement is not considered to be material to the licensing process as specified in NRC Manaual Chapter 0517, Section 059.

2.3.243 CONCERN

Many present day procedures are in place with errors in the use of symbols. Such things as incorrect interpretation of the ">" greater than, "<" less than, and "'" foot symbols are in the procedures used by operations, mechanical and electrical maintenance, chemistry and radiological controls. Procedures have been approved and are in place that have missing information and references. The procedures have things such as "See Sheet #__", with the number blank. Two procedures in particular that have the above listed problems are OP-102906, and OP-104702. The concerned individual knows these procedures were issued with the above information missing.

The concern over the use of symbols has been ongoing for sometime. The practice of using symbols instead of typing out the words greater than or less than, has been discontinued for sometime around the industry because of the problems that result from people misinterpreting them.

EVALUATION

NRC Inspection Report 50-443/89-21, paragraph 4, addressed this allegation. The inspection disclosed that the procedure numbers provided by the alleger do not exist at the Seabrook Station. The NRC reviewed procedures that had numbers similar to those with the alleged conditions and was unable to observe the deficiencies stated.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previoulsy involved in the concern. They concluded that the previous resolution was acceptable.

2.3.244 CONCERN

Radiological standards not adhered to. Radium 192 sources were not dealt with properly.

EVALUATION

This is a new allegation or similar to issues that were referrred to the State of New Hampshire. In any case, it does not contain sufficient information to permit verification. The concern appears to relate to radiography. The reference to "Radium 192" is an error, it should be Iridium 192, a common radiographic source. Any issue with site radiography would have been referred to the State of New Hampshire, an agreement state.

The current Seabrook operational radiation safety program was reviewed in NRC Inspection Reports 50-443/89-80 and 89-83 and found to be acceptable.

The allegation is not a nuclear safety concern.

2.3.245 CONCERN

Shortcuts werwe (sic) taken on radiological safety equipment; dosimeter pins and film badges were used improperly.

EVALUATION

This allegation is grouped in a series of related allegations relating to radiography and is assumed to refer to that subject. The evaluation and conclusion for item 2.3.244 is applicable to this issue.

2.3.246 CONCERN

Lack of proper training in the radiological controls area for radiation exposure. In the RT testing areana (sic).

EVALUATION

This is a new allegation and is related to items 2.3.244 and 2.3.245 in that it deals with radiography (e.g. "In the RT testing areana") RT is the abbreviation used for radiographic testing in the nondestructive testing trade. The evaluation and conclusion for item 2.3.244 are applicable to this item.

2.3.247 CONCERN

Pullman-Higgins screwed up on x-rays. Not everything was identified on them, or they weren't taken according to the updated procedure.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. No specific radiographs are named or the condition that was deficient. The NRC independently re-radiographed piping and reviewed the licensee's films. Examples of these inspections can be found in NRC Inspection Report 50-443/83-19 and 85-19. Further, the radiographs were reviewed by the NHY level III and the Authorized Nuclear Inspector.

Because the statement is very general and the subject has been dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.248 CONCERN

Welders were told to weld with whatever they had, even if improper wire was all they had.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. It does not specify the type of welding (e.g.piping, structural, electrical supports), the system involved, the location of the incident or whether the incident involved safety related equipment. It is unlikely the welders would do this on a safety related piece of equipment considering the fact that the weld would require some form of inspection and/or nondestructive testing. Furthermore, the levels of welding supervision, quality control inspection, weld rod issue control and nondestructive testing minimize the liklihood of such an event. Welding wire/rod (electrodes) is manufactured for very specific applications and does not lend itself to just any use without some consequence to the welder. It is conceivable that a welder could use higher strength material that would be compatible such as E-8018 to replace E-7018. However, this material was controlled by the licensee to preclude inadvertant mixing of weld materials. A serious mismatch of materials would result in welding difficulties that would be evident during the welding process and the inspection or nondestructive examination process.

The NRC performed many inspections of the welding process at the Seabrook Station over the construction period of the plant, see Table 2. The welding material control was a routine part of some of these inspections, an example of this can be found in Inspection Report 50-443/82-06, paragraph 6.3.3.

Because the statement is very general and the subject has been adequately dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.249 CONCERN

Some piping was downgraded, even though it should not have been according to inspectors.

EVALUATION

This is a new allegation and does not contain sufficient information to permit verification. It does not specify in what system the piping is located and why it was unacceptable for the piping to be reclassified. This is hearsay information because inspectors do not determine piping classifications, it is an engineering responsibility. All safety related piping that was classified originally as safety grade and submitted in the Final Safety Analysis Report to the NRC would require the licensee to update the report. Unacceptable downgrades in the piping classification would be challanged in the NRC review.

Because the statement is general and subject to NRC review, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, Section 059.

2.3.250 CONCERN

Padavano was not caught by the NRC. P. (sic) had worked at three previous nuclear plants at two he falsified x-ray inspections. He used the same x-ray on many welds. He did that at an Oswego, NY plant. A man who had also worked in Oswego has asked to review P's x-rays in Oswego and found a hairline crack on the x-ray. Oswego management said they couldn't let the NRC know, gave P. a good recommendation and he came to Seabrook. Pullman had such a high trunover (sic), they didn't check his background. One of P's fellow inspectors checked an LP exam of P's, found the weld was no good. The NRC was informed. Their investigfation (sic) found the Oswego incident, found simular (sic) problems with P at a Florida plant which had not been reported to the NRC.

They made an example out of Padavano, bet he was one of 100 who did the same kind of falsification . Many guys wouldn't do the exam, they would just do the paperwork. They treated Padavano well, but blackballed good technicians for doing their jobs properly. You could lose your job for opening your mouth.

EVALUATION

This allegation is addressed in detail in Section 2.1.7 of this report.

In summary, with respect to the above allegations and the ELP assessment of how "The Padovano Case" was handled by both the licensee and the NRC, no new information or facts emerge.

The allegation, related backup material and the previous NRC closure were reviewed by NRC personnel not previously involved in the concern. They concluded that the previous resolution was acceptable.

2.3.251 CONCERN

Concerned with welder stacking. Using multiple welders to make a thick weld, also making welds with same thickness removed/ground out and then having a welder repair it and put his full qualified thickness weld over the top, thereby making a weld thicker than he was qualified for.

EVALUATION

This is a new allegation and is the same or similar to item 2.3.116. This is the reverse of the concern presented in item 2.3.115 wherein the concern was that the code should require more than one welder to make a weld joint, in this case they are concerned that they did use multiple welders. The evaluations and conclusions presented in items 2.3.115 and 116 are applicable to this concern. It is important to note that the code permits a welder to weld on a production joint even though he is not qualified if the joint will be radiogaphed. If the radiography is acceptable, it will qualify the welder and the weld. The welder qualification process was used to reject those unable to pass the code qualification tests prior to production welding. The code option to qualify welders on the basis of production weld quality was rarely, if ever, used. The screening of welders to identify those with the skills to acceptably use the site welding procedures was stringent, resulting in over 70% of the applicants failing the qualification test.

The NRC has performed several inspections which examined the welder qualification program indepth. An example of this can be found in NRC Inspection Report 50-443/82-06 with further details in a memorandum from S. Reynolds to J.Durr, dated September 28, 1982.

Because the statement is very general and the subject has been adequately dealt with in previous NRC inspections, the statement is not considered to be material to the licensing process as specified in NRC Manual Chapter 0517, section 059.

2.3.252 CONCERN

Drug use was a problem.

EVALUATION

This is the same or similar to previous allegations that have been addressed in NRC Inspection Report 50-443/86-52, paragraph 13, and other licensee investigations and NRC reveiws. The evaluation for this item is the same as item 2.3.57.

2.3.253 CONCERN

Concerned about sabatoage (sic) that occured (sic) April 1985. Some lines in the waste process building going to demimerlizers (sic) were found to be plugged with grout and had to be cut out and repaired.

EVALUATION

This allegation is identical to item 2.3.240. For the evaluation and conclusion, refer to 2.3.240.

2.3.254 CONCERN

Some gussets in the main steam feed restraints, were not QC inspected when job was finished. There were surface cracks still visible when the crews were pulled off the job. Two welds in particular 4001 and 4002, done by Pullman Power in 1981 were still cracked when work was finished.

EVALUATION

This allegation is identical to item 2.3.241. For the evaluation and conclusion, refer to item 2.3.241.

2.3.255 CONCERN

Unit #2 hot and cold leg elbows are flawed.

EVALUATION

This allegation is identical to item 2.3.242. For the evaluation and conclusion, refer to item 2.3.242.

2.4 SUPPLEMENTAL INFORMATION ON DOCUMENT FALSIFICATION

On January 31, 1990, a letter was sent from Mr. Cushing of ELP to William Russell alleging that, on at least two occasions in 1989, documents at Seabrook were falsified. Mr. Cushing stated in his letter that ELP was unable to provide more details concerning these falsifications because a New Hampshire Yankee Administrative Policy which prevented ELP's source from providing such information. A Region I allegation panel reviewed this matter in detail on February 1, 1990, as well as a previous allegation made to this office by Jane Doughty of the Seacoast Anti-Pollution League on September 25, 1989, regarding two instances of records falsifications at Seabrook in 1989.

As stated to Ms. Doughty in our letter, dated January 11, 1990, two unrelated incidents of records falsifications occurred at Seabrook in 1989. These instances are documented in NRC inspection reports 50-443/89-08, 89-09 and 89-83. As documented in all three of these inspection reports, New Hampshire Yankee informed the NRC of their investigations into these incidents as well as their results and corrective actions. Our inspectors confirmed that Technical Specification surveillance requirements had not been violated as a result of these incidents. Overall, our review concluded that NHY's disciplinary actions in these two instances reflected appropriate treatment of these occurrences as unacceptable behavior and indicated effective corrective actions.

The Region I Allegation Panel which reviewed the allegation regarding records falsification assumed that these two instances were, in fact, the occurrences that Mr. Cushing's source was referring to. However, the NRC was concerned that his source may have been referring to instances of records falsifications distinct from these two occurrences. As a result, the NRC requested that Mr. Cushing's source contact the NRC to confirm that these two incidents are, in fact, the events to which he was referring. The NRC plans no further actions in this matter unless recontacted by Mr. Cushing's source.

TABLE 1

EXAMPLES OF NRC INTERVIEWS
AT SEABROOK POWER STATION

INSPECTION REPORT NO.	DATE	REMARKS
80-03	2/26-28/80	Electrical
84-10	6/26 - 8/24/84	Containment, Reactor Vessel
84-13	8/27 - 10/26/84	Welding
85-01	2/11 - 4/5/85	Piping and Electrical
85-07	3/11-15/85	Heating and Ventilation
85-09	4/8-24/85	Preoperational Testing
85-10	4/15-19/85	Welding
86-15	3/14-19/86	Containment Leak Rate Testing
86-21	3/31 - 4/4/86	Electrical
86-23	4/14-18/86	Training
86-34	6/24 - 7/7/86	Bolting, Health Physics
86-45	8/18-22/86	Electrical
86-46	7/8 - 9/15/86	Startup Testing, Fireproofing

TABLE 2

WELDING AND NDE INSPECTIONS ON
NUCLEAR AND STRUCTURAL WELDING

INSPECTION REPORT	INSPECTION DATE	REMARKS
78-07	4/24 - 4/28/78	Containment Liner Welding and NDE
78-08	5/22 - 5/25/78	Containment Liner Welding and NDE
78-09	6/26 - 6/28/78	Containment Steel, Welding, NDE, Qualifications
80-03	2/26 - 2/28/80	Stainless Steel Welding, Stud Welding - One Violation
80-04	4/14 - 4/17/80	Pipe Welding Controls, Overcheck of Shop Welds
80-11	9/16 - 9/19/80	Three Violations - Resolved
81-08	6/29 - 7/24/81	Pipe and Pipe Supports Including NSSS, RPV Safe Ends
81-12	10/5 - 11/16/81	Pipe Installation, Programmatic QA Inspection
81-13	11/3 - 11/6/81	Machine Welding (GTAW)
81-14	11/17/81 - 1/8/82	Pipe Installation, QC and NDE, Interviews
82-03	3/23 - 5/3/86	Reactor Coolant Pipe Welding, NDE, Pipe Weld Repair Program
82-06	6/21 - 7/2/82	Two Violations Resolved (NRC-NDE Van Insp)
82-10	8/24 - 9/30/82	Pipe and Pipe Support Welding, Interviews, NDE
83-01	1/17 - 1/21/8	End Return Welds (Boxing), Pipe Support Welding
83-06	4/11 - 5/23/83	Pipe, Pipe Support and Electrical Raceway Installation
83-07	5/23 - 5/27/83	Vessel Internals - Violations - Resolved Struct Steel
83-09	5/24 - 7/1/83	Piping and Pipe Supports, QC Inspector Harassment Interviews
83-12	8/8 - 8/12/83	Violation - UT Procedural Problem - Resolved
83-13	7/11 - 8/26/83	RCPB Installation, Instrument Tubing, Pipe Supports
83-17	10/17 - 12/5/83	Containment - Penetrations and Leak Chase, Piping and Supports
83-22	12/6/83 - 1/20/84	Small Bore Piping, NDE Qualifications
84-07	4/23/ - 5/25/84	Hardware and Documentation is per Requirements
84-12	8/13 - 8/31/84	Allegation Inspection - Welding, Piping, Valves, NCR Control
84-17	10/29 - 12/17/84	Interviews of Crafts, RPV, Piping Walkdown
84-16	10/29 - 11/2/84	RPV Nozzle Repair, Pipe and Pipe Support Welding
85-15	6/3 - 6/14/85	Special Construction Inspection, Management, Welding and QA
85-19	7/15-7/26/85	No Violations (NRC-NDE Van Insp)

TABLE 3

ELECTRICAL INSPECTIONS

INSPECTION REPORT NO.	DATE	REMARKS
50-443/79-10	December 11-13, 1979	Installation procedures require safety related cables installed in raceways.
50-443/82-03	March 23 - May 3, 1982	Discusses the qualification and flame retardant characteristics of Class IE cables.
50-443/82-11	September 20-24, 1982	Verified by inspection that safety-related cables are installed in raceways.
50-443/83-03	February 22-25, 1983	Reviewed the cable pulling program (CASP) and verified that safety-related cables were in the specified raceways as required by the CASP. Also verified cable terminations were made per specification requirements.
50-443/83-05	March 2 - April 8, 1983	Verified that Class IE cables were in seismically installed raceways and that cable pulls were per procedures.
50-443/86-36	June 16-20, 1986	Allegation 18 - A review of the HVAC re-work was verified by the inspector and the operational testing of the system reviewed.
50-443/86-37	May 10-17 & June 9-13,86	Preoperational testing of the HVAC system was verified by NRC witnessing.
50-443/86-46	July 8 - September 15,86	As built verification of the enclosure air handling and PAB air handling system.

TABLE 4

EXAMPLES OF NRC
CIVIL/STRUCTURAL INSPECTIONS

INSPECTION REPORT NO.	DATE	REMARKS
76-02	7/14-15/76	QA plan for Construction
76-03	8/2-4/76	Concrete Quality Control, Qualification of Concrete Test Lab.
76-06	12/13-15/76	Interview craft personnel, Cadweld procedure.
77-03	7/6-8/77	Qualification of concrete lab, control of concrete.
77-06	8/26/77	Craft interview, concrete fill, test lab inspection, groundwater control.
77-07	10/3-4/77	Control of concrete, test lab.
77-10	12/5-9/77	QA/QC for concrete, rebar, batch plant, test lab. Sampling of rebar.
78-02	2/14-17/78	Concrete test lab inspection, observation of rebar installation inside containment in reactor cavity. Fill concrete. Qualification of cadweld splicing process - equipment and crews. Qualification of concrete testing and inspection personnel. Waterproofing of containment foundation.
78-05	3/20-24/78	Observation of Unit 1 containment basement placement. (Placement #1-CPS-3A; 4000 psi Mix)
78-07	4/24-28/78	Record review for foundation concrete.
78-08	5/22-25/78	Observation of concrete placements. (placement #1TB-41B; ITB-27B; CN-E7d; ITB-41)
78-10	7/10-14/78	Observation of containment concrete (1300 cy of 4000 psi concrete in reactor pit structure); Installation of Rebars and cadwelds in containment basement. Resolution of concrete lab conformance to ASTM E-329 (78-02-04)

TABLE 4 (Cont)

INSPECTION REPORT NO.	DATE	REMARKS
78-13	9/5-8/78	Concrete aggregate tests, interview craft personnel.
78-15	11/6-9/78	Observation of containment structural concrete - QA/QC, preplacement, placement, post placement inspection and curing of previously placed concrete (placement #1-CM-7A; 4000 psi mix)
79-01	1/15-18/79	Containment Concrete placement observation records. (Placement #1-CI-1)
79-02	1/24-25/79	Investigation of frozen concrete joint.
79-03	2/12-15/79	Training of site personnel. (Professionally produced film)
79-07	8/13-16/79	NOV - Void area in excess of maximum allowed. (79-07-02) NOV - Lack of approved repair procedure for concrete (major repairs). (79-07-03)
79-09	/13-16/79	NOV - Failure to prescribe corrective action for rebar installation before concrete placement. (79-09-01)
80-01	1/22-25/80	(Drug Indictments) Observation of cadweld splicing of rebars in Containment Building exterior walls; Observations of placement preparation circulating water pump house walls; observations of cold weather curing of concrete.
80-04	4/14-17/80	Review of cadweld significant deficiency 50.55(e)
80-06	5/19/80 - 6/27/80	Observation of concrete base mat placement for Unit 2 containment.
80-12	10/13/80 - 11/21/80	Allegation Investigation of Site Concrete Lab for conformance to ASTM and ANSI standards. Concrete Batch Plant inspection.
80-13	11/24/80 - 12/31/80	Containment concrete placement (cutting of 1000 rebars at Elv. +25.0)

TABLE 4 (Cont.)

INSPECTION REPORT NO.	DATE	REMARKS
81-04	3/12/81	SALP - no change in concrete inspection program.
81-12	10/5/81 - 11/16/81	Concrete placement preparation, cadweld splicing, containment liner and concrete interfacing.
82-03	3/23/82 - 5/3/82	Cadwelding of rebars, corrective action on groundwater leakage.
82-04	5/4-14/82 6/1-18/82	Concerns regarding concrete repair (allegation on concrete sand)
82-07	6/14-17/82	Observations of concrete construction of containment review of corrective actions plan for control of groundwater seepage through concrete cracks.
82-09	8/24-27/82	Review of procedures and observation of work in containment concrete preparation, placements, and curing.
83-07	5/23-27/83	Review of documentation of containment dome concrete.
84-07	4/23/84 - 5/4/84 5/14-25/85	Construction Appraisal Team Inspection Concrete Activity (Report Section IV)
84-12	8/13-17/84 8/27-31/84	Team Inspection to resolve allegations. Cracks in concrete wall; interviews with craft personnel.

TABLE 5

EXAMPLES OF NRC AS-BUILT INSPECTIONS

INSPECTION	DATE	REMARKS
85-09	4/8 - 5/24/85	RHR, EFW, Steam Generator
85-15	6/3-14/85	Safety injection, RHR, HVAC
86-43	7/7-11/86	Cable trays and supports
86-46	7/8 - 9/15/86	RHR, CVS, RCS and others

TABLE 6

NRC INSPECTIONS OF TRAINING

INSPECTION REPORT	DATE	REMARKS
79-08	9/4 - 7/79	Quality Assurance
79-09	11/13 - 16/79	Concrete Placement
79-10	12/11 - 13/79	Quality Assurance, Welding
82-06	6/19/82	Nondestructive Examination
83-12	8/8 - 12/83	Instrumentation, Mechanical, Nondestructive Examination
84-07	4/23 - 5/4/84	Electrical, Mechanical
84-16	10/29 - 11/2/84	Mechanical, Welding
85-07	3/11 - 15/85	Mechanical
85-11	4/29 - 5/3/85	Electrical
85-19	7/15-26/85	Nondestructive Examination
86-15	3/4-19/86	Startup Mechanical
86-23	4/14-18/86	Non Licensed - I&C, Electrical, Mechanical

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406

Enclosure 2

Docket No. 50-443
File RI-90-A-0003

FEB 07 1990

Public Service Company of New Hampshire
ATTN: Mr. Edward A. Brown, President
and Chief Executive Officer
New Hampshire Yankee Division
Post Office Box 300
Seabrook, New Hampshire 03874

Gentlemen:

Subject: Allegation Inspection 50-443/90-82

This letter forwards the NRC report of inspection of an allegation that radio transmissions from Seabrook Station Unit 1 (1) require resolution before a full power license is issued and (2) identify conditions which could affect public health and safety. The January 24, 1990 New Hampshire Yankee response to this allegation is a reference appendix to that report.

NRC examination of this allegation was based on (1) a review of 13 concerns submitted by the alleger, (2) analysis of a random sample of the transmission recordings provided by the alleger, and (3) selected confirmatory inspections. That examination identified no unsafe conditions. We concluded that performance, over and above the requirements established by the NRC, might be improved through better communications, specific addressal of root causes of injuries, and improved training in housekeeping and equipment venting considerations. We commend these matters to your attention with the recognition that our inspection did not specifically consider all of the details of your programs addressing them.

Our review identified no safety or security inadequacies and we have high confidence that there is no significant potential for such inadequacies on the remaining tapes. When these tapes are transcribed, we will forward copies of the transcripts to you for review and analysis. This allegation is being held open pending our review of your analysis.

No reply to this letter is required. Thank you for your cooperation.

Sincerely,

W T Russell

William T. Russell
Regional Administrator

Enclosure: NRC Region I Inspection Report 50-443/90-82

cc w/encl:
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SEABROOK HEARING SERVICE LIST

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Adjudicatory File
Atomic Safety and Licensing Board
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U.S. Nuclear Regulatory Commission
Washington, DC 20555

U.S. NUCLEAR REGULATORY COMMISSION
REGION I
INSPECTION REPORT 50-443/90-82

Docket: 50-443 License: NPF-67

Public Service Company of New Hampshire
Seabrook Station Unit 1
Seabrook, New Hampshire

Inspection Dates: 1/9/90 - 2/3/90

INSPECTION DESCRIPTION

This inspection consisted of review of 13 concerns submitted by an alleger on January 9 and January 15, 1990, and of tapes obtained on January 30, 1990, following issuance of a subpoena. The concerns were based on the alleger's transcript of a sample of tapes made of Seabrook Control Room radio transmissions since January 1, 1989. Review consisted of analysis and assessment of the 13 submitted concerns and review of a sample of over 1300 messages on the subpoenaed tapes. The review included analysis of the licensee's responses to the alleger's letters, consideration of previous inspection findings, application of inspector knowledge of the facility, and selected follow-up inspection.

INSPECTION FINDINGS

Each submitted concern was found to to be unsupported, not indicative of a safety inadequacy, and unsubstantiated. Review of more than 1300 messages on the subpoenaed tapes identified no safety or security concern. It was concluded that the allegation is not material to licensing.

Inspection Participants:

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Richard S. Barkley, Project Engineer, Projects Branch 3
Arthur DellaRatta, Safeguards Auditor, DRSS (Tape Reviewer)
Noel F. Dudley, Senior Resident Inspector at Seabrook
Roy L. Fuhrmeister, Resident Inspector at Seabrook
Brian Hughes, Operations Engineer, DRS (Tape Reviewer)
William K. Lancaster, Physical Security Inspector, DRSS (Tape Reviewer)
William Oliveria, Reactor Engineer, DRS (Tape Reviewer)
David Silk, Senior Operations Engineer, DRS (Tape Reviewer)

Ebe C. McCabe, Jr., Chief, Projects Section 3B (Team Manager)

Report Approved By:

Jon R Johnson — 2/7/90

Jon R. Johnson, Chief, Reactor Projects Branch 3 (date)

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APPENDICES

EXECUTIVE SUMMARY

This inspection addresses concerns submitted in support of an alleger's beliefs. Those beliefs were stated to be that the concerns need resolution before a full power license is granted and that, if the problem areas are not corrected, the plant will have many unplanned shutdowns which could affect public health and safety. The alleger's initial input was a January 9, 1990 letter and transcript of a sample of the tapes made of Seabrook Control Room radio transmissions since January 1, 1989. A subsequent, January 15, 1990 letter included a page of tape excerpts which the alleger identified as cause for concern about employee attitude and competency, and plant hardware. A third input consisted of copies of the alleger's tapes, provided under subpoena on January 30, 1990.

The alleger's initial input was categorized into 12 concerns based upon the alleger's listing of areas of concern. Concern 13 was added to address the January 15, 1990 alleger submittal.

The tapes were of Seabrook radio transmissions between the Control Room and in-plant personnel. Only the control room transmissions were taped in most cases. (The other half of these two-way radio communications at Seabrook are from lower power walkie-talkies and were seldom received by the alleger.)

The alleger's inputs were evaluated using the criteria of NRC Manual Chapter MC-0517, Management of Allegations, and particularly under the late allegation criteria of MC-0517 Section 059.

In no case did this alleger's as-submitted input state why a concern supported the alleger's belief that there will be an effect on public health and safety. NRC review found that each of the 13 submitted concerns was unsupported, not indicative of a safety inadequacy, not substantiated, and not material to full power licensing.

A random sample of the subpoenaed tapes was reviewed by three two-person teams of reviewers, each team reviewing a separate sample of the subpoenaed tapes. That review was designed to provide a conclusion regarding the content of the remaining tapes based on a sample of about 1000 communications. Actual review of over 1300 taped messages identified no nuclear safety or security inadequacy. It was concluded that there is high confidence that the remainder of the tapes contain little or no indication of a safety or security problem.

REPORT DETAILS

1. Background

On January 9, 1990, shortly before the January 18, 1990 NRC staff briefing of the NRC Commissioners on the readiness of Seabrook Unit 1 for full power operation, an individual sent, by facsimile, a letter to the Region I Administrator. That letter stated that the individual had been monitoring and taping broadcasts by the control room operators at Seabrook Station since January 1, 1989. Included with the letter was a transcript of samples of the tapes. A copy of the letter and transcript are attached as Appendix 1 to this report.

The individual's letter stated the following as beliefs.

> That the samples demonstrate that significant safety concerns still need to be resolved before a full power license is granted.
>
> That, if these problem areas are not corrected, the plant will have many unplanned shutdowns, which could affect public health and safety.

Subsequently, the individual sent, by facsimile, a January 15, 1990 letter (Appendix 2). That letter enclosed a page excerpting other taped transmissions which the individual considered cause for concern about employee attitude and complacency, and plant hardware.

Twelve concerns were identified in the information in Appendix 1. The Appendix 2 submittal was identified as Concern 13. The group of 13 concerns and the subpoenaed tapes were identified as Allegation RI-90-A-0003.

The alleger's concerns also were provided to the licensee for evaluation and response. That response is attached as Appendix 3.

By subpoena, the NRC obtained copies of all tapes made by the alleger. A sample of these tapes (21 tapes containing over 1300 messages) was reviewed to assess the likelihood of there being significant safety or security information on the tapes. (Of the 205 tapes, 202 were provided initially, and the review sample was selected before the remaining tapes were received.)

2. Review Process

Allegation RI-90-A-0003 was reviewed pursuant to NRC Manual Chapter (MC) 0517, Management of Allegations. Section 059 of MC 0517 addresses allegations received late in the licensing process. In such cases, it is first determined whether the allegations, if true, are material to licensing in that they would require license denial, or additional license conditions, or further analysis or investigation.

For material allegations, the staff must then determine whether the information is new in that it raises a matter not previously considered or tends to corroborate prior unresolved allegations. Material and new late allegations require further evaluation.

NRC review considered the licensee's submittal (Appendix 3), NRC inspections, other readily available documentation, facility knowledge on the part of NRC personnel, and selected inspection follow-up. Documented inspection effort encompassed 197 hours.

Submitted concerns which did not meet the "material and new" criterion were further evaluated for whether resolution could be effected based on readily available information. A final disposition was made if available information was sufficient for doing so.

3. Summary of Findings on Submitted Concerns

In no case did this alleger's submitted input specify why a concern supported the alleger's belief that the concerns represent conditions which will affect public health and safety. Further NRC review found none of the 13 submitted concerns to be supported or material. Acceptable information to the contrary was identified. Each concern was found unsubstantiated and all 13 concerns were therefore closed. Individual concerns and findings are summarized in the following.

Concern 1. A communication that an individual had been delayed down by a drinking establishment and would be late for work was submitted as a concern about drinking before work. Review found that the establishment is a landmark that was used both by the individual and the police to identify the location of a verified accident and the road closure which was delaying the individual's arrival for work. The individual had called in to report the delay from a phone at a nearby gas station and was considered fit for duty by the licensee upon arrival for work. No nuclear safety inadequacy was found.

Concern 2. This concern was about leaving a light bulb on plastic. That was developed from a communication about a drop light coming into contact with and melting plastic sheeting. The drop light and sheeting were temporarily in place to support a plant modification, and a fire watch quickly corrected the problem. Also, a light bulb had "exploded" when water from a pump venting evolution sprayed on it. These events had minimal significance. No nuclear safety inadequacy was found.

Concern 3. This concern was for the site accident rate. Review identified two lost time injuries in December: a broken shoulder due to slipping on ice in a parking lot and a contusion from a manhole cover that rolled

off the sawhorse it was leaning against. No significant industrial safety problem was apparent. The licensee's six-shift staffing and surplus of qualified personnel were assessed as adequate to assure nuclear safety. No nuclear safety inadequacy was found.

Concern 4. A messy area in the plant was asked about by the Control Room. Licensee follow-up found that this communication referred to the water treatment area being identified as messy to the Control Room by an auxiliary operator. That area was being cleaned; the cleaners were on a break and some rags and dust were on the floor. The cleanup was completed before shift turnover. NRC review concluded that this communication indicated appropriate plant staff addressal of a minor housekeeping matter. No nuclear safety inadequacy was found.

Concern 5. Operator attitude was questioned based on a communication about getting naked and coming out. The licensee concluded that this referred to a routine removal of clothing because of a low threshold frisker alarm. Radon daughter product deposition on clothing is a common Seabrook problem which poses a negligible health hazard. NRC review found the licensee's explanation consistent with a known radon problem and the specific communication indicative of insistence upon adherence to conservative requirements. No nuclear safety inadequacy was found. Communications improvement was referred to the licensee as a matter for consideration.

Concern 6. Operator attitude was questioned based on a communication stating that an individual was being paid by the hour. The licensee identified this as a response to a query about continuing to monitor the auxiliary boiler instead of returning to a tagging task. NRC review concluded that the Control Room had communicated a decision about an operator's assignment, and that the substance of the query and response were appropriate. No nuclear safety inadequacy was found.

Concern 7. Operator attitude and a valve problem were an alleger concern based on a communication stating that a favorite nitrogen alarm had come in again. The licensee identified this as a communication about a typical low nitrogen pressure alarm due to nitrogen usage, during shutdown, as a result of demands for steam generator wet layup cover blanket nitrogen and primary drain tank draining. Auxiliary operator alignment of another nitrogen bottle was required to clear the alarm. NRC review concluded that this communication referred an alarm to the individual required to align another nitrogen bottle when this alarm is received. No nuclear safety inadequacy was found.

Concern 8. A valve problem was identified as a concern based on a communication about increasing flow to get a "recirc" valve to shut. The licensee identified this as an operator communication about adjusting steam generator wet layup recirculation flow to get the wet layup pump discharge recirculation flow valve to shut, as designed, when a specified flow is established. NRC review concluded that the communication indicated appropriate action to establish desired conditions. No nuclear safety inadequacy was found.

Concern 9. Concern that a valve problem existed was based on a communication about having a bad feeling about certain valves. The licensee identified this communication as referring to aligning nitrogen to the steam generators during wet layup. The valves were identified as isolation valves which are shut during operation. Because the valve stem is separate from the valve disc and bellows, the valve stem can be in the open position with the disc held in the shut position by backpressure. No nuclear safety inadequacy was found.

Concern 10. A concern was expressed about a brand new valve being installed by Design Coordination Report (DCR). The licensee's follow-up identified a properly completed venting evolution and identification of design change information in documents provided to the Control Room. NRC review noted that a DCR is an authorized change mechanism and that the communication indicated identification of the change in question by the Control Room. No nuclear safety inadequacy was found.

Concern 11. A concern was expressed based on a communication about a fan leaking oil in the fuel storage building. The licensee found that communication involved a unit heater glycol leak which made a spot about the size of a 25-cent coin on the floor. No nuclear safety inadequacy was found.

Concern 12. A concern about inability to hear maintenance personnel was based on requests for information to be repeated. The licensee noted that radio communication is difficult or cannot occur at some locations and that the radio communication system is a convenience. NRC review noted that there are four communications systems, including intraplant telephone, paging, and sound-powered telephone systems. No nuclear safety inadequacy was found.

Concern 13. A concern about attitude, competence, and hardware was based upon excerpts referring to items such as not being so zealous and reviewing 200 pages of schematics. NRC review found that these items preceded low power testing, were quotes without context, and did not provide a sufficient basis to suspect a nuclear safety problem. No nuclear safety inadequacy was indicated.

4. Areas For Improvement

If no condition material to licensing and no failure to meet NRC requirements were indicated but a potential for improving performance over and above NRC requirements was indicated, that potential was noted for licensee consideration. Those items follow.

Training in housekeeping and equipment venting (Concern 2).

Addressing root causes of personnel injuries (Concern 3).

Training in communication formality (Concerns 5, 6, 7, 13).

5. Individual Concern Reviews

5.1 Concern 1 - Maintenance Personnel Drinking Before Work on 11/30/89

5.1.1 Concern 1 Basis

Tape transcript by alleger stating that, at 10:15 p.m., 11/30/89, an individual was late and had been delayed down by a named drinking establishment.

5.1.2 Licensee Input on Concern 1

The individual had called in at 10:06 p.m. and 10:47 p.m. from a public telephone booth at a gas station near the named establishment. Telephone credit invoices show that the individual placed the telephone calls from this telephone. The individual had telephoned to report that he would be late for the 11:00 p.m. shift. A traffic accident and icy road conditions had blocked all northbound traffic on a divided state highway and the road was officially closed by the Massachusetts Department of Transportation at 9:37 p.m. A State Police report documents the accident and road closure. The specified establishment is a well known landmark which was a logical way to quickly convey the location of the road closure.

When the delayed individual arrived, he reported to his supervisor to inform him of his presence and to obtain his work assignment. Based on the cause for the delay being reported, the responsibility of supervisors under the fitness-for-duty program, and the normal conversation that a supervisor has with a late arrival, there was no question about the individual's competence to perform his assigned duties. The late arrival of this auxiliary operator did not impair the shift complement required for operating the plant. Interviews with the individual's supervisor confirmed that the individual was competent to perform his assigned duties when he arrived on site.

5.1.3 NRC Review of Concern 1

For this concern that an individual was drinking before work to be potentially material to licensing, there would have to be reasonable cause for one to suspect that: (1) the individual had been drinking an intoxicating beverage; and (2) the licensee's response to such a potential was inadequate.

The named drinking establishment was identified as a well known place which serves alcoholic beverages. The alleger's basis for the concern about drinking before work was the indicated proximity of the auxiliary operator to that establishment. Drinking was not indicated by the tape transcript. The licensee verified the proximity and provided a reasonable explanation of appropriate reporting of and supervisory checking on a delay in getting to work. The licensee's normal shift complement meets the requirements of the Technical Specifications for the plant shutdown conditions in existence without the presence of this individual, an auxiliary operator. Further, it is licensee practice to hold over watchstanders whose reliefs are late, and this communication reflected implementation of that practice.

NRC interviews of the delayed individual and his supervision corroborated the licensee's input. The licensee's fitness-for-duty program requires supervisors to monitor and assess individual reliability. Chronic tardiness is a specific related consideration. The delayed individual is considered by his supervision to be reliable. Lateness in reporting to work on his part is considered rare, and absenteeism has not been a problem.

Inspector review of associated police logs corroborated the licensee's input and noted that the police log of the accident and road closure used the phrase "in front of the (named drinking establishment)" to mark the position of the accident.

This concern is not a new consideration. Drug and alcohol abuse concerns about Seabrook have been specifically evaluated by the NRC staff in 1989 in response to a congressional inquiry. That review found an acceptable fitness for duty program.

5.1.4 NRC Conclusions

Credible information exists to refute this concern. An auxiliary operator reported to his employer that he would be late for work because of road closure due to an accident near a drinking establishment. That drinking establishment is a local landmark. No consumption of an intoxicating beverage was found or indicated. No improper employee or licensee behavior was shown or is reasonably inferred. Follow-up on this concern indicates responsible employee and employer addressal of a late arrival for work. Concern 1 is not material; it is unsubstantiated and closed.

5.2 Concern 2 - Leaving Light Bulb on Plastic on 12/1/89

5.2.1 Concern 2 Basis

Alleger's transcript stating, after a time entry of 12:45 a.m., the following:

"You said you had a light bulb explode" and

"(name deleted) we found out what the problem was. There was a drop light on some plastic and the plastic was starting to melt. Ah the fire watch has taken care of it."

5.2.2 Licensee Input on Concern 2

The Auxiliary Operator noted that a temporary drop light bulb had exploded. That was attributed to inadvertent, momentary spraying of the bulb with liquid while venting the steam generator wet layup pump. The temporary light's purpose was to facilitate installing modification DCR 86-420. There was no electrical hazard to personnel because the wire guard on the light prevented direct contact. Power to the light was from a local wall outlet powered from a 115 VAC power panel equipped with a 15 ampere circuit breaker. Such power is easily removed. This incident did not threaten personnel safety and was resolved using existing programs and practices.

Upon investigating a report of an unusual odor near the West Pipe Chase, the on-duty fire fighters found that a construction drop light had come in contact with temporary plastic sheeting and caused the plastic to melt. Housekeeping and industrial safety practices normally prevent plastic sheeting from coming into contact with temporary lighting. The roving fire watch removed the light from the plastic covering. This temporary lighting and plastic sheeting was being used to support the installation of plant modification DCR 86-420. The plastic sheeting is self-extinguishing and will not support combustion. At worst, this scenario would have produced smoke due to heating of the plastic. This and surrounding work areas are equipped with fire detection equipment that would eventually have caused control room and local area alarms. Routine rounds by roving fire watches and auxiliary operators provide a backup to installed fire detection and suppression equipment. On duty fire fighters would have responded to any fire or smoke alarm. There was no impact on public health and safety.

5.2.3 NRC Review of Concern 2

For these occurrences to be material to licensing, reasonable cause to suspect that associated conditions could significantly impede the ability to safely operate the facility would have to be evident. The alleger did not identify such a linkage.

It is a good practice to direct the effluent from venting evolutions away from electrical equipment. That was not done in this case. The potential problem was mitigated by the lighting guard preventing direct contact with current carrying components of the temporary lighting. It is not, however, clear that the 15 ampere circuit breaker would have prevented an electrical shock to the individual in the worst case.

Temporary lighting should be clear of plastic sheeting and other materials. The licensee's normal practice accomplishes this, based on the licensee's input and general observations by NRC inspectors. Use of self-extinguishing sheeting is a mitigating factor. In this case a fire watch found and corrected the problem, as is indicated in the alleger's transcript and the licensee's input. Other related protective measures include auxiliary operator tours and the fire detection and fire fighting provisions included in the plant design and staffing.

5.2.4 NRC Conclusions

In these instances, protection against a hazard was lessened, but the defense-in-depth provisions of the facility design and staffing, including the way associated activities were performed, resulted in there being no personnel injury and no significant equipment damage. Industrial and nuclear safety were thereby adequately safeguarded. Concern 2 is not material; it is unsubstantiated and closed.

Whether training should be provided in the housekeeping and equipment venting considerations which appear to be root causes of these minor occurrences was noted for licensee consideration.

5.3 Concern 3 - 12/20/89 Accident Rate (Several Others in December)

5.3.1 Concern 3 Basis

Alleger's transcript for 1:30 p.m. and 1:45 p.m., 12/20/89, identifying needing the Seabrook ambulance at the Termination Yard and transporting a patient by ambulance to the hospital. (Other such events in December 1989 were not found in the as-received transcript.)

5.3.2 Licensee Input on Concern 3

The transcript refers to an event involving a laborer shoveling snow away from a sawhorse. A manhole cover leaning against the sawhorse rolled off and struck that laborer on the leg. First aid was administered and he was taken to the hospital for examination by a physician. Due to his contusion, he remained out of work for the next two days, when he was laid off as scheduled. Also, a security guard experienced shortness of breath on 12/20/89 and was taken to the hospital by ambulance.

On 12/7/89, three persons were taken by ambulance to the hospital, two due to injuries and one due to illness. One of these injuries occurred when the wind blew a temporary shelter into an individual. This was not a lost time accident. The other 12/7/89 injury was due to a person slipping on ice while walking in a parking lot. This individual broke his shoulder, lost six days of work, and remains on restricted duty.

The licensee considers their lost time accident rate to be good, improving, and better than the general industry and government average.

5.3.3 NRC Review of Concern 3

For this concern to be material to licensing, there would have to be reasonable cause to suspect that the ability of the licensee to operate the plant safely might be adversely impacted by unsafe personnel conditions. The alleger provided no frame of reference for the contention that the accident rate could affect public health and safety.

Routine NRC resident inspection regularly checks upon the adequacy of manning of the site. The licensee has consistently manned plant operating stations with more than the minimum staff required by the technical specifications. Also, the number of qualified licensed and non-licensed operators exceeds the numbers required to man six operating shifts. Inspection references include the following reports: 89-83, Detail 4.2; and 89-05, Detail 4; 89-09, Detail 3.2; 89-12, Detail 10; and 89-15, Detail 5.f. In addition, although the NRC is not responsible for regulating industrial safety, we would notify the Department of Labor (OSHA) if we became aware of a significant concern. No such notification has been necessary.

The NRC assesses, and requires licensees to promptly report, events which significantly hamper performance of duties which assure safe nuclear power plant operation, events requiring offsite transportation of radioactively contaminated persons and, if a news release or notification of other government agencies is involved, events related to personnel safety. We also require licensees to report any event that threatened nuclear power plant safety or significantly hampered site personnel performance of duties necessary for safe operation. In this case, no such instances were identified.

One injury from slipping on ice does not show an inadequate personnel safety program. Nor does an injury to a laborer from a rolling manhole cover. NRC requirements for plant staffing specify multiple operators and licenses, and thereby provide the ability to take steps to assure continued safe operation in case of injury.

The licensee's written response did not specifically address the root causes of the parking lot injury or the manhole cover accident.

5.3.4 NRC Conclusions

No inability to man required stations was indicated. Based upon the licensee's submittal, the ability to man required stations, and the surplus of qualified licensee personnel, credible contrary information is evident. Concern 3 is not material; it is unsubstantiated and closed.

Whether personnel safety program improvements could prevent the occurrence of similar accidents is a potential performance improvement item for licensee consideration.

5.4 Concern 4 - Water Treatment or Boiler Room Messy on 12/29/89

5.4.1 Concern 4 Basis

Alleger's transcript stating: Is that the water treatment or boilder (boiler) room that was so messy?

5.4.2 Licensee Input on Concern 4

Contracted labor was cleaning the water treatment area; the boiler room had already been cleaned. When the auxiliary operator (AO) arrived, the labor force was on break and there were some rags and dust on the floor. The AO reported this to the control room. The area was cleaned prior to shift turnover. The conversation was about supervision of in-process housekeeping. No safety system challenges or threats to public health and safety were involved.

5.4.3 NRC Review of Concern 4

For this concern to be potentially material to licensing, an unsafe plant condition would have to be shown or reasonable inferred, or licensee housekeeping would have to be reasonably suspected of being inadequate to assure safety. The alleger did not provide a reason for considering the "messy" space to constitute a concern for public health and safety.

The licensee's input is consistent with the alleger's transcript; both indicate active licensee identification of the messy condition.

Examples of NRC reviews of Seabrook housekeeping are documented in Inspection Reports 89-83, Detail 4.2.4, and 89-13, Detail 3.2. Minor problems with housekeeping have been found. One of these has been housekeeping adequacy while an activity is in progress. The ability to perform safety functions has not been found to have been significantly impeded due to housekeeping. Housekeeping will continue to be routinely inspected and assessed by the NRC.

5.4.4 NRC Conclusions

Based upon NRC findings that housekeeping items which do not significantly affect safety occur, the timely addressal of this specific case indicated in the transcript and the licensee's input, the lack of indication that this condition caused a significant problem at Seabrook, and repeated findings of acceptable housekeeping, housekeeping at Seabrook has not been a safety problem. Good licensee performance by timely addressal of a minor housekeeping condition is indicated in this case. This concern is not material; it is unsubstantiated and closed.

5.5 Concern 5 - Control Room Operator Attitude on 12/3/89

5.5.1 Concern 5 Basis

Alleger's transcript stating, after the 12/6/89 (later corrected by alleger to 12/3/89), 6:30 a.m. time entry: Hey, what's the worst that can happen. You have to get naked and come on out.

5.5.2 Licensee Input on Concern 5

Seabrook's whole body frisking booths alarm due to the daughter products of radon being deposited on clothing. That deposition is related to both radon level and clothing type. Extensive investigation has shown that radon levels at Seabrook pose a negligible health hazard. Delays are caused by the additional monitoring needed to determine if the alarm is due to the radon problem or to contamination. Those who experience radon daughter deposition may remain in the radiological control area until the daughter products decay in about two hours, or they may surrender the clothing involved and wear cloth or paper coveralls to continue working until the daughter products decay. A personnel contamination report must be completed before such persons are released from the radiation checkpoint. In this case, the transcript refers to an individual who would have to surrender his clothing after extended work on establishing the inerting cover gas for the steam generators.

5.5.3 NRC Review of Concern 5

For this concern to be material to Seabrook licensability, there would have to be sound reason to suspect that the licensee had inadequately addressed safety. The alleger did not specify a basis for concluding that this communication shows a condition affecting public health and safety.

Natural radon (not radiation produced by the nuclear reactor) and sensitive detectors produce the current radon situation at Seabrook. The radioactive decay of radon produces radioactive "daughter" products which can adhere to clothing. At Seabrook, no significant health hazard has been identified from this condition, but it does cause delay. In this case, the licensee's response is consistent with the experience of NRC personnel onsite. The alleger's transcript is consistent with an acceptable, if not tactful, control room reply to a complaint about such a delay.

5.5.4 NRC Conclusions

In this case, no basis was shown for concluding that Control Room communications indicate inadequate addressal of safety. Credible contrary information considered is evident in the licensee's input and the experience of NRC personnel. This communication was an informal insistence upon adherence to requirements. Concern 5 is not material; it is unsubstantiated and closed.

Whether additional training in formality of communications is appropriate was identified as a matter for licensee consideration.

5.6 Concern 6 - Control Room Operator Attitude on 12/29/89

5.6.1 Concern 6 Basis

Alleger's transcript stating, after the 12/29/89, 1:00 p.m. time entry: No there's every reason. You're being paid by the hour.

5.6.2 Licensee Input on Concern 6

This communication refers to auxiliary boiler monitoring while testing an auxiliary steam pressure reducing valve and to the preceding control room statement transcribed as: Ah (name deleted) do you have problems with the boiler? Is that why you're asking? The Auxiliary Operator had asked about being assigned to monitor the boiler, was questioned as to whether there were any problems with the boiler, had stated that there were no such problems and he would like to return to his tagging assignment, and had been told that he was being paid by the hour in response. Licensee evaluation concluded that the comment was made in jest by a person who meant that all jobs are important and it shouldn't matter what the assignment is as long as it is performed conscientiously. This was a normal communication. No threats to the public health and safety were involved.

5.6.3 NRC Review of Concern 6

For this concern to be material, it would have to be reasonable to suspect that equipment might not fulfill its safety functions, or that operator addressal of safety was inadequate. The alleger did not specify why this communication represents a condition which could affect public health and safety.

The auxiliary boiler system is not needed to assure safe operation.

The licensee's input is reasonable. It is proper for an individual to ask about the priority of tasks and for the controlling station to make a decision and communicate it to the questioner.

5.6.4 NRC Conclusions

No basis was shown for concluding that this communication reflects inadequate public health and safety. Credible contrary information is provided by NRC review of the transcript and the licensee's response. There is no indication that any activity affecting safety was inadequately performed. This communication shows control room insistence upon performance of a task. Concern 6 is not material; it is unsubstantiated and closed.

Whether performance could be improved by further communications training is a matter for licensee consideration.

5.7 Concern 7 - Control Room Operator Attitude and Valve Problem on 1/6/90

5.7.1 Concern 7 Basis

Alleger's transcript stating after the 1/6/90, 2:45 a.m. entry: Yeah (name deleted) your favorite nitrogen alarm has just come in again.

5.7.2 Licensee Input on Concern 7

The steam generators were in wet layup with a cover gas of nitrogen. That and the nitrogen demand for draining the primary drain tank typically results in frequent nitrogen system low pressure alarms. An Auxiliary Operator must then manually align a new nitrogen bottle to the system to clear the alarm. That is the alarm referred to in the transcript and the action that followed. This is an expected condition and does not create a safety problem.

5.7.3 NRC Review of Concern 7

For this concern to be material to licensing, operator attitude toward safety, or inadequacy in equipment ability to perform safety functions, would have to be reasonably suspect. The alleger did not specify why this communication indicated improper operator attitude and equipment inadequacy which could affect the public health and safety.

The steam generator nitrogen blanket has safety importance in that it excludes oxygen and thereby inhibits corrosion and increases the assurance of steam generator integrity. In-service inspection separately assures that steam generator integrity is maintained, as do periodic leak rate checks and steam generator radiochemistry checks.

Routine alarms, by design, initially identify potential problems so as to permit preventing actual ones. In this case, a routine alarm was communicated, informally, to the person who had to take action on it. There is no indication of untimely addressal of this condition.

5.7.4 NRC Conclusions

No basis was shown for concluding that public health and safety was affected. A credible contrary conclusion was provided. The communication adequately identified a routine alarm. No improper action on that alarm was indicated. Concern 7 is not material; it is unsubstantiated and closed.

The value of additional training in communications formality was noted as a matter for licensee consideration.

5.8 Concern 8 - Valve Problem on 12/1/89

5.8.1 Concern 8 Basis

Alleger's transcript stating, after the 12/1/89, 1:45 a.m. entry: So I'm going to increase flow to see if we can get the recirc valve to go closed.

5.8.2 Licensee's Input on Concern 8

This is a communication between the Control Room and Auxiliary Operator about locally adjusting the steam generator wet layup system. That system is not safety-related and is used to recirculate the liquid contents of the steam generators. Recirculation mixes the steam generator contents for sampling. The system has a pump discharge recirculation flow control valve that automatically closes after the pump develops a specified flow rate. There is no safety significance involved in discharge recirculation valve operation.

5.8.3 NRC Review of Concern 8

For this concern to be material, inadequate assurance of safety would have to be reasonably indicated. The alleger identified no reason why this communication supports a contention of impact on public health and safety.

Recirculation of the steam generator contents during wet layup has a safety implication insofar as it maintains a more uniform mixture in the steam generator and thereby better prevents corrosion. In-service inspections of steam generators during refueling outages also assure steam generator adequacy, as do periodic leak rate checks and steam generator radiochemistry checks.

Adjustment of flow to get the wet layup recirculation valve to shut does not connote improper personnel or equipment performance. NRC inspection verified that control room operator adjustment of the Emergency Feedwater throttling valves is accomplished to change the wet layup flow.

5.8.4 NRC Conclusions

No basis for a safety concern was identified by follow-up of this communication. A credible contrary conclusion was identified by review of the transcript and the licensee's input. Increasing flow to shut the wet layup recirculation valve indicates appropriate action to establish desired conditions. Concern 8 is not material; it is unsubstantiated and closed.

5.9 Concern 9 - Valve Problems on 12/3/89

5.9.1 Concern 9 Basis

Alleger's transcript stating, after the 12/6/89 (later corrected by the alleger to 12/3/89), 6:15 a.m. entry: Copy (name deleted). I've got a bad feeling about those valves.

5.9.2 Licensee Input on Concern 9

The comment refers to nitrogen gas valve alignment and the nitrogen header pressure needed for a nitrogen gas blanket on the steam generators. Alignment is only performed in Mode 5 and has no impact on plant safety. The bad feeling comment refers to the characteristics of the nitrogen isolation valves on the steam generator main steam lines. These are bellows diaphragm valves and the valve disc and bellows are not directly connected to the valve stem. Back pressure could shut these valves with the stem in the open position. Nitrogen pressure must overcome the bellows and disc and main steam pressure in order to initiate nitrogen flow to the steam generators. During normal plant operation, the valves are shut and nitrogen is isolated from the steam generators. Improving the operational characteristics of these valves is being evaluated. Station Operating Procedure OS1027.02 identifies the system alignment requirements and describes increasing the nitrogen supply pressure to overcome a water loop seal which exists during extended Mode 5 operation. The evolution involved has no impact on plant safety.

5.9.3 NRC Review of Concern 9

For this concern to be potentially material, there would have to be reason to suspect an inadequacy in the valves involved, and that the possible inadequacy could have a significant adverse impact on safe operation. The alleger did not state why this concern supports a belief that there will be an impact on public health and safety.

Valves which may be in a position different than is indicated by the valve stem are likely to be viewed with distrust. In this case, the possible erroneous indication has been identified by the licensee as applicable only to plant shutdown conditions. The safety implications involved during shutdown are the same as those already discussed under Concern 7. NRC inspection confirmed the licensee's response and concluded that the valves adequately perform their stop-check function of preventing nitrogen system contamination.

5.9.4 NRC Conclusions

No basis has been shown for the alleger's contention that this condition represents a possible impact on public health and safety. A credible contrary conclusion was provided by reasonable licensee input. NRC review found a lack of operational safety significance. Concern 9 is not material; it is unsubstantiated and closed.

5.10 Concern 10 - Brand New Valve Installed by DCR

5.10.1 Concern 10 Basis

Alleger's transcript statement, after 12/28/89, 9:30 p.m. time entry, that: It looks like it's a brand new valve installed by DCR. (Other transcript entries near this time show a successful attempt to establish flow.)

5.10.2 Licensee Input on Concern 10

The licensee treated this as an allegation that valves were sticking, and concluded that the operators adequately performed the venting evolution involved. Licensee input also stated that the control room retains copies of all approved design modifications, that modifications are incorporated into requalification training upon completion of field work and that, through these and other mechanisms, operations personnel have ready access to current information on design modifications.

5.10.3 NRC Review of Concern 10

NRC review focused on the alleger's stated concern about there being a brand new valve installed by DCR. A DCR is a Design Coordination Report, which is an authorized means of making plant changes. The alleger's input does not provide a frame of reference for the concern about installing brand new valves, and the alleger's transcript does not indicate that the valves are inadequate in any way. Control Room statements such as "It looks like its a brand new valve installed by DCR" indicate consideration of the modification data available to the Control Room.

Installing brand new valves as called for during performance of a DCR is proper. In this specific case, the transcript indicates that the operators identified the valves appropriately and established the desired flow.

5.10.4 NRC Conclusions

No basis has been shown for the alleger's contention that this condition represents a possible impact on public health and safety. A credible contrary conclusion was provided based on NRC review, which found a lack of operational safety significance. Concern 9 is not material; it is unsubstantiated and closed.

5.11 Concern 11 - Fan Leaking Oil in Fuel Storage Building on 12/29/89

5.11.1 Concern 11 Basis

Alleger's transcript stating, after the 12/29/89, 2:30 a.m. time entry, the following:

> We just got a report from the roving fire watch. 21 elevation in the fuel storage building just when you go inside the door. Apparently there's a fan there that's leaking some oil. Would you get me some information on that please?

5.11.2 Licensee Input on Concern 11

A roving fire watch noticed what he thought was an oil leak in the Fuel Storage Building and reported it to the Control Room. An Auxiliary Operator (AO) was dispatched. The AO reported a very small glycol leak coming from a union connection to a unit heater. That leak made a spot of about the size of a 25-cent coin on the floor. Work Request 90W000004 was initiated to correct the leak. This is not a safety system. There was no personnel or equipment hazard. Glycol is not a fire hazard. This was a priority 3 work request scheduled for completion on January 25, 1990.

5.11.3 NRC Review of Concern 11

For this communication to be material, there would have to sound reason to suspect that the leak presented a significant hazard or that licensee action to correct spillage problems is inadequate to assure safety. The alleger did not state why this matter might affect public health and safety. The transcript and the licensee response indicate appropriate identification of and response to a concern identified by a fire watch.

5.11.4 NRC Conclusions

Review of the alleger's transcript and the licensee's response found no basis for suspecting a safety inadequacy. Credible contrary information refutes this concern. The identified leak is a minor housekeeping item. As noted in the review of Concern 4, housekeeping at Seabrook has been found adequate to prevent a significant safety hazard from developing. This communication and the licensee's response identify appropriate addressal of a small problem. Concern 11 is not material; it is unsubstantiated and closed.

5.12 Concern 12 - Repeated Problems Hearing Maintenance Personnel (e.g., on 1/6/90)

5.12.1 Concern 12 Basis

The alleger's transcript for 1/6/90 includes several requests for information to be repeated.

5.12.2 Licensee Input on Concern 12

This radio communications system is a convenience for operators who frequently traverse the plant. From some locations, such communications are difficult or cannot occur. A series of corrective measures is planned to be completed in 1991. Reliable communications are assured by the FSAR Section 9.5.2 described Seabrook communications system.

5.12.3 NRC Review of Concern 12

For this concern to be material, inability to communicate would have to be reasonably suspect. If the radio system were to fail, the alternate communications means available to the licensee include the plant paging system, the internal telephone system (with various stations throughout the plant), and a sound-powered phone system (requires carrying phones - jacks are installed throughout the plant). There is sufficient redundancy and diversity in the four systems, and the four-part plant communications system is described in Facility Safety Analysis Report Section 9.5.2.

5.12.4 NRC Conclusions

Credible contrary information refutes this concern. Adequate intraplant communication can be accomplished without radio communications. Concern 12 is not material; it is unsubstantiated and closed.

5.13 Concern 13 - Additional Concerns About Employee Attitude and Competence, and Plant Hardware

5.13.1 Concern 13 Basis

Alleger's documentation of site transmissions as follows.

For 5/4/89 at 12:45 a.m.: (name deleted) -- Let's not be so zealous in the future.

For 5/4/89 at 9:51 p.m.: I enjoyed reviewing those 200 pages of schematics. But I know a lot more now.

5.13.2 Licensee Review of Concern 13

The licensee found the alleger-provided statements about equipment to refer to normal operation or routine testing, and did not find a basis for a safety concern about employee attitude.

5.13.3 NRC Review of Concern 13

There were entries other than those documented in Detail 5.13.1 above on the alleger's submittal, but review of those entries indicated no potential safety significance. The alleger did not specify why these comments support a contention of impact on public health and safety.

The two above noted items could be material if either zeal or review of schematics were reasonably suspect of producing safety inadequacies. A communication about not being so zealous could infer dissatisfaction with the way something was done, but it does not show that anything was done wrong. As provided, it is a quote without context. Also, a possible interpretation of a comment about not being zealous is that it refers to not fulfilling requirements. However, this communication preceded a major licensee program for assuring strict adherence to requirements. That program has produced acceptable results. The communication about reviewing schematics indicates a gain in knowledge and does not connote any safety inadequacy.

The appropriateness of these and some other transmissions is questionable from the viewpoint of appropriate formality. No inadequate addressal of safety considerations has thereby been identified.

5.13.4 NRC Conclusions

No basis for a safety concern was identified. Credible contrary information was provided by NRC review. No safety inadequacy was shown. Concern 13 is not material; it is unsubstantiated and closed.

Training in appropriate formality of communications was identified as a matter for licensee consideration.

6. Subpoenaed Tape Review

The NRC reviewed a randomly selected sample of 21 of the 202 tapes (containing over 1300 messages) provided by the alleger on January 30, 1990 (3 additional tapes were subsequently received on February 5, 1990). That review, by Region I security and reactor safety inspectors, identified no adverse impact on public health and safety or plant security, and acceptable operator attitude. The reviewers found the control room communications to be generally good.

To assure a statistically valid sample, it was concluded that about 1000 individual messages would be reviewed, and that a sample of 21 tapes would provide a sufficient data base. This statistical sample was based upon the consideration that a 2% problem rate in 1000 messages would provide 95% confidence that the problem rate in all the tapes is between 1% and 3% (if the tapes provided by the alleger on January 30, 1990 were also representative of the tapes which were not provided then). Selection of which ninety-minute tapes to review was made based on a table of random digits, and the 21 tapes were split up among three two-person reviewing teams.

The NRC tape reviewers were provided guidance on tape review (Appendix 4) and identified a total of seven messages as potentially significant. These are evaluated in the following:

2/23/89, 2:45 p.m.: "...index says you should have a key...I'll run one down to you..." This communication reflects provision of a key to someone who should have one. It thereby indicates control over key distribution. The transmission does not identify the key usage, and there are multiple possibilities. Locked equipment control is routinely reviewed during inspection tours, and there are no outstanding concerns on this matter. This item is not material to licensing. Further specific review is not needed because of routine inspection coverage.

5/22/89, 9:00 a.m.: "...offloading chlorine...trouble alarm...' (What are they doing with chlorine)." The question about chlorine use by the tape reviewer indicates a concern for the personnel hazard from chlorine. At Seabrook, the service water and circulating water system receive chlorine treatment (sodium hypochlorite) for anti-fouling purposes. Sodium hypochlorite is the active ingredient in household bleach; its use does not present the potential hazard that use of liquid chlorine does. There is a separate building in the protected area for the sodium hypochlorite treatment. This communication does not indicate a condition material to licensing; further follow-up is not needed.

12/4/89, 2:15 a.m.: "...it is a known problem. Everybody knows about it. Nobody wrote a work request..." NRC interview of the shift superintendent and the unit shift supervisor for the shift in question identified no recollection of this transmission. Routine incorporation of items into the maintenance work request system by this shift has been noted by the senior resident inspector, with a specific example noted as being in progress when the interview was begun on February 2, 1990, while the crew was on

shift. Further, senior resident inspector onsite inspection experience has repeatedly noted careful licensee attention to incorporation of problems in the maintenance work request system. There are five work request priorities, with Category 1 the most significant (see Inspection Report 50-443/89-83, Detail 5). Another example of a specific case is the assignment of a Category 3 priority to the maintenance work request to correct the 25-cent coin size glycol leak from a heater as described in the review of Concern 11 in this report. These factors enable classification of this transmission, which reflects widespread knowledge of a problem, as being unlikely to reflect the failure to incorporate a significant matter into the work request system. Therefore, this item was assessed as not material to licensing and not a new issue. Credible information that significant problems are incorporated into the work request system is readily available. Further review of this item is not necessary; routine inspection coverage adequately addresses the underlying concern.

12/10/89, 6:45 a.m.: "...let something from last shift...with regards to the Bravo air compressor." The air compressors are not safety-related, and safety functions are assured by backup nitrogen supplies. Maintenance has been ongoing on the air compressors. No inability to assure performance of safety functions is indicated by this transmission or plant conditions. This communication is not material to licensing; further review is not needed.

12/28/89, 2:15 p.m.: "...in containment...near Alpha RCP...ankle high." This appears to be a communication identifying the location of a component. There were no flooding incidents in containment during December 1989 and there are some low valves in the area identified (Reactor Coolant Pump "A"). This item is not material to licensing. Further review is not needed.

1/7/90, 9:00 a.m." "Can not close a breaker on a MCC (Breaker 622)." This communication, if stated by the control room, reflects a control over breaker positioning. If it was one of the seldom received transmissions from the plant, it reflects a potential breaker problem. It does not reflect an inadequacy in addressing such a problem, however, and NRC experience has been that such problems are properly resolved. NRC inspection on February 2, 1990 found Breaker 622 racked in to the bus, open, and with control power available. The breaker supplies a Motor Control Center (MCC) that supplies motor-operated valves which are positioned in their accident position, and tagged in that position with power removed. Operation of one of those valves for maintenance requires closure of Breaker 622, which supplies the MCC, and closure of the breaker for the valve involved. This transmission was assessed as not material to licensing, and not requiring further follow-up.

1/7/90, 12:00 noon: "Leak on 'A' DG air compressor." This communication indicates identification of a problem. It does not indicate inadequate problem handling. Subsequently, on January 14-15, 1990, this diesel generator successfully passed periodic surveillance consisting of a fast start and a 24-hour load test. Diesel adequacy was thereby demonstrated. NRC

inspection of the "A" diesel generator on February 2, 1990 identified no air compressor leak. Discussion with the licensee's system engineer identified no awareness of a leak, and knowledge of potential misinterpretation of normal actuation of the compressor unloading valve to drain intercooler/aftercooler moisture as a leak. This item is not material to licensing; further review is not needed.

Based on review of this sample of tapes with no substantive safety or security findings, no additional tapes were reviewed. Statistically, the review results were assessed as providing a 99% confidence level that there is a 0.0% to 0.4% population of inadequacies on the remaining tapes. It was concluded that there is little or no likelihood that any safety or security inadequacies are identified on the rest of the tapes. Pending transcription of the other tapes, licensee analysis of the transcription, and NRC review of the licensee's analysis, this matter is being left open for tracking (UNR 90-82-01).

APPENDIX 1

Fax to: 1-215-337-5241 (Copy also sent via Federal Express)
Page 1 of 17 January 9, 1990

William Russell
Regional Administrator
U.S. NUCLEAR REGULATORY COMMISSION
475 Allendale Road
King of Prussia PA 19406

Dear Mr. Russell:

Since January 1, 1989 I have been monitoring and taping broadcasts by the control room operators at Seabrook Station. I understand that the NRC staff will be meeting with NH Yankee personnel this Friday (12th) in Seabrook to review open items prior to a recommendation to the full commission regarding full power licensing for Seabrook Station.

I have recently only had time and resources to review a few of the tapes I have made, but I believe these few samples demonstrate that significant safety concerns still need to be resolved before a full power license is granted. You will remember that the plant was shut down during its low power test. If these problem areas are not corrected, I believe that the plant will have many un-planned shutdowns, which could affect public safety.

The areas for concern involve both plant personnel and hardware. The next page outlines specific concerns about Maintenance personnel competence and Control Room Operator attitude; as well as problems with a variety of valves, leaks, and the control room to maintenance personnel communications system (the one I have monitored). The pages that follow provide my own transcript, made today, of these examples.

I would be willing to provide you with copies of any of these tapes so that you might make your own transcripts. As I noted, I have listened to just a few sections of tape in order raise the many areas of concern noted below. I believe the other tapes might disclose other problem areas.

I look forward to hearing from you regarding this information.

SEABROOK CONTROL ROOM TRANSMISSIONS

AREAS OF CONCERN

Personnel:

Maintenance Personnel Competence
- Drinking prior to work -- 11/30/89
- Leaving light bulb on plastic -- 12/1/89
- Accident rate -- 12/20/89 (Several others in December)
- Water treatment or boiler room that was messy -- 12/29/89

Control Room Operator Attitude
- "Hey, what's the worst that can happen. You have to get naked and come on out" -- 12/6/89
- "You're being paid by the hour" -- 12/29/89
- "Your favorite Nitrogen alarm has just come in again" -- 1/6/90

Hardware:

Valve Problems
- "See if we can get the recirc valve to go closed" -- 12/1/89
- "I've got a bad feeling about these valves" -- 12/6/89
- "Brand new valve installed by DCR" -- 12/28/89
- "Favorite nitrogen alarm has just come in" -- 1/6/90

Leaks
- Fan leaking oil in fuel storage building -- 12/29/89

Communications
- Repeated problems hearing maintenance personnel
- See 1/6/90 for one example

Seabrook Control Room

Maintenance Personnel Competence

November 30, 1989 (Thursday)

10PM

Go ahead

326 and 328 Unlocked and shut both valves

[redacted] control

[redacted]. How come we unlocked and closed those two RC valves please?

Restoring a partial. What's the tag order number please?

1976 copy

[redacted] control room

Yeah [redacted] give me a call if you get a minute would you please

[redacted] control room

10:15PM

[redacted] I believe [redacted] is your relief tonight. You know he might be more than a little late

"I just looked on their shift rotation and it shows that [redacted] is the ah late man tonight. We'll get a spare out to you as soon as we can. He's ah been delayed down by the [redacted]."

[redacted] control

Seabrook Control Room

Maintenance Personnel Competence
Fire Hazards
Recirc Valve Problems
Nitrogen Valve Problems

December 1, 1989 (Friday)

12:45 AM

Go ahead [redacted]

Understand [redacted]

Control Room. Go ahead [redacted]

Go for it.

Go ahead [redacted]

I like the sound of that [redacted]

[redacted] was looking for you but I pretty much took care of it.

Control room. Go ahead [redacted]

**** You said you had a light bulb explode? ****

Understand. I'll see if I can get him to come out there. You're at the recirc and wet layup pump?

OK [redacted]

Go ahead [redacted]

Understand [redacted]

We have. Everything looks good from up here

Control room. Go ahead [redacted]

OK have at it

[redacted] Control Room

Hi [redacted] I just got a call from [redacted]. He was wondering if you could possibly meet him down in the Admin Building cafeteria?

OK thanks [redacted]

Control room. Go ahead [redacted]

Hey [redacted] could you go to a phone and give me a call please

Bring something along to write on and with when you go to the phone also

Control room go ahead [redacted]

Understand excellent. After you crack it open let it go like that for a couple of minutes.

[redacted] Control Room

[redacted] Control Room

"[redacted] we found out what the problem was. There was a drop light on some plastic and the plastic was starting to melt. Ah the fire watch has taken care of it."

Control Room go head [redacted]

Understand I'm going to be very slowly initiating flow to the A generator

[redacted] Control

Yeah [redacted] this is ah [redacted] I've got to go down the ah vaults so I'll check them out for you and ah check the running RHR pump and stuff to see if everything is OK so you don't have to go down there this set

[redacted] Control Room

[redacted]

Where you at [redacted] I'm sorry I didn't hear you

Nevermind

[redacted] Control Room

[redacted] is going to check that valve in the EFW pump house
We'll give you a yell if there was any problems

[redacted] Control Room

[redacted] you doing anything with the Demin water system?

OK the standby pump may have just started. We got a low system pressure alarm in momentarily

OK [redacted] I'm up to 55 GPM flow

OK [redacted] I'll let you know when I get to 100.

Let me know when the recirc valve goes closed

1:45AM

[redacted] Control Room

How's it looking down there [redacted] I show 105 up here

Understand

"So I'm going to increase flow to see if we can get the recirc valve to go closed"

Control Room. Go ahead [redacted]

What were you trying to say about the limit switch [redacted] as far as the valve knowing whether or not it should open?

Understand. [redacted] doesn't think that matters.

The follower connected for the positioner?

Nevermind [redacted] that's not that type of valve that would have a follower

OK [redacted] I'm continuing to go up on flow. I'm at 130

[redacted] Control Room. What do you show for suction pressure?

And the recirc valve is still open?

OK [redacted] I'm at 155 GPM right now. I'm going back down to 100

Understand. Let's go ahead and get Nitrogen on the Generators. You can isolate the two Nitrogen valves to the RCDT and the PRT please

Yes we are. Thank you very much for your persitence [redacted]

2AM

OK great

Duty Chemist control room

[redacted] control room

[redacted] says fuel storage building temperature 72

Understand

Go ahead[redacted]

Understand so all four valves are open on the generators?

(SEE DECEMBER 6TH -- 6:15 AM)

Thank you very much

[redacted] control room

Yeah where are you at?

On your way back in head over towards the Nitrogen regulator station and give us a call when you get there

Seabrook Station Control Room

Nitrogen Valve Problems
Control Room Operator Attitude

December 6, 1989 (Sunday)

6:15 AM

No, were trying to blow the loop seal to the generator

B is isolated. Copy

"Copy [redacted] I've got a bad feeling about these valves"

Copy. [redacted] did you copy that?

Yeah [redacted] Why don't you open up 42 and leave all four of them open

Yeah you're right [redacted]

[redacted] open 42 and we'll see what we've got there and then we'll open the Alpha one

Copy

Yeah. Bravo Charlie and Delta Right. We're going to try that X.

Actually [redacted] I don't think it'll matter. Do you have it boosted up out there to 35 or 40 pounds?

Going too fast. OK I've got you

[redacted] go ahead and shut 39 please

OK [redacted] Why don't you go ahead and boost it up. NGB 39 is closed and when you get it up to 45 let us know and then [redacted] try to do your thing.

Copy [redacted] You seeing a change in pressure?

You said you got it [redacted]

6:30 AM

[redacted] I want to open up ah 39 now so we've got all four of them open. [redacted] will pressurize all four of them up until ah we get each of them to three or four pounds and then we'll put it back on the regulator

Four open right now [redacted] Copy. 39 to 42.

[redacted] I am definetly seeing a rise in A, B and C. D started out negative so it's a little hard to tell but I think that it's come up

OK as soon as I get a couple of pounds on the lowest one we'll put it on the regulator

And [redacted] the answer to your question is D is definetly coming up now

I'm at 0.1

[redacted] I'm looking at a half a pound positive now on the Delta generator if you want to slowly go closed on those bypasses and see if the regulator will take it the rest of the way I think you're in good shape

"Let me know when they're closed and I'll watch it more closely"

[redacted] air dryer A trouble

[redacted]
The logs are more priority

[redacted] the dryer trouble has reset

On the regulator, copy [redacted]

Yes we are [redacted]

OK A is dropping down toward the others and it looks like it's going to be fine

No thank you [redacted] Good job

"Hey, what's the worst that can happen. You have to get naked and come on out. "

6:45AM

You're clear for a round trip

Go ahead [redacted]

Ah not really. Hold on a minute and let me ask [redacted]

[redacted] needs a Chalkman fix

Whatever looks good
7AM

Seabrook Control Room

Maintenance Personnel -- Recent High Accident Rate?

December 20, 1989 (Wednesday)

1:30 PM

Go ahead [redacted]

Rack in and close the battery breaker for Bus 11 Bravo

Control Bravo

Thank you [redacted]

[redacted] control room

[redacted] control room

Radio check

Sounds good [redacted] thank you

X with parking lot Delta

(High pitched tone)

[redacted] should be on her way

Understand. You are going to need the Seabrook ambulance at the Termination Yard

This is [redacted] in the Control Room. You are going to need the ambulance to go off site
right. Is the victim conscious and breathing?

OK [redacted] I'm calling Seabrook ambulance right now to meet you at the Termination Yard

1:45 PM

[redacted] control

The Seabrook ambulance has been requested. Security has been informed

[redacted] control room. When possible could I please have somebody call me with the name of the injured person please?

Seabrook ambulance on the scene. Copy

[redacted] go ahead this is [redacted] No but I didn't copy his name please.

[redacted] copy

Find out if you can from him whether he wants anybody notified such as friend or family

Negative copy

Go ahead [redacted]

The ambulance has the patient and they are transporting to Exeter Hospital [redacted] copy

Go ahead [redacted]

Yes I do but thanks for the call. I'm going to lower my flow. I'll see you when you get up here [redacted]

Yes

Please do so

Thank you [redacted]

2 PM

Seabrook Control Room

New Valves Sticking?

December 28, 1989 (Thursday)

9:30 PM

Allright. That's supposedly a locked open valve. Is that true?

Allright. It looks like its a brand new valve installed by DCR.
There's a vent downstream of 471 labeled 472. Is that closed?

Go head [redacted]

Copy. Go head and open valve 471

[redacted] Control. I'm going to go ahead an reopen the vent and we should flow at this time

9:45 PM

[redacted] control

We definetly look like we're moving water now so ah we're happy. Thanks

Seabrook Control Room

Fire Hazards

December 29, 1989 (Friday)

2:30 AM

[redacted] control room

We just got a report from the roving fire watch. 21 Elevation in the fuel storage building just when you go inside the door. Apparently there's a fan there that's leaking some oil. Would you get me some information on that please?

[redacted] control

[redacted] would you give me a phone call please?

2:45 AM

Seabrook Control Room

Control Room Operator Attitude

December 29, 1989 (Friday)

1PM

He's still playing with it

Ah [redacted] do you have problems with the boiler? Is that why you're asking?

No there's every reason. You're being paid by the hour

Control room. Go ahead [redacted] OK. Thank you much

1:15 PM

Seabrook Control Room

Lack of Cleanliness

December 29, 1989 (Friday)

3:15 PM

[redacted] control

Is that the water treatment or the boilder room that was so messy?

Understand. Thank you

3:30PM

Seabrook Control Room

Control Room Operator Attitude

December 29, 1989 (Friday)

1PM

He's still playing with it

Ah [redacted] do you have problems with the boiler? Is that why you're asking?

No there's every reason. You're being paid by the hour

Control room. Go ahead [redacted] OK. Thank you much

1:15 PM

Seabrook Control Room

Communications Problems
Control Room Operator Attitude
Nitrogen Problem

January 6, 1990

12:45 AM

[redacted] Control

You got it. Thanks

1 AM

One more time [redacted] I didn't get that

76

[redacted] control room

[redacted] control room

1:15 AM

1:30 AM

Go ahead [redacted]

Please repeat

That's 6-0?

6-8?

Copy finally

[redacted] control room

Yeah [redacted] could you please give me a phone call?

1:45 AM

2 AM

[redacted] control room

[redacted] control room

[redacted] could you give me a phone call please?

2:15 AM

[redacted] control room go ahead. And security wants me to call them back for you to come back in

Go ahead
Go ahead [redacted]

(Swings) will do that for us

2:30 AM

2:45 AM

[redacted] Control room

[redacted] Control room

"Yeah [redacted] your favorite nitrogen alarm has just come in again"

Thank you

3 AM

Go ahead [redacted]

Yes [redacted] the alarm has reset

3:15 AM

Full open Nitrogen is reset

Yeah I'm going to do the B feedwater isolation valve

Copy

X and Nitrogen

Full open [redacted] but I still got my Nitrogen in

I'll do the A one again

Copy

3:30 AM

APPENDIX 2

FAX TRANSMITTAL SHEET

TO: William Russell, Regional Administrator, US NRC
FAX: 1-215-337-5241

FROM: [redacted]
FAX: [redacted]

This is the only page [ ] or Number of Pages to follow [1]

DATE: January 15, 1990

SUBJECT: Seabrook Control Room Transmissions

MESSAGE:

1) I have enclosed another page made from some notes I found in my files, indicating other conversations which I think are cause for concern, regarding employee attitude and competency, and plant hardware. To especially May 4, 1989 at 00:25 – "[redacted] let's not be so zealous in the future."

2) In my letter/fax to you on the 9th I made a mistake identifying the date of one of the transmissions. It should have been Sunday December 3rd not the 6th. I have changed my summary and the transcript for that conversation to reflect the correction.

3) I understand from your comments on Friday that you may not have made a final determination that these conversations are "not material to plant licensing" as Ebe McCabe told me on the 10th. I await a letter from you, and as I said I would be happy to help in any investigation you might undertake.

SEABROOK CONTROL ROOM BROADCASTS

OTHER ITEMS FOR INVESTIGATION #1

5/3/89	09:15	No [redacted] We're not going to vent there again. At least we don't anticipate it anyway.
5/4/89	00:25	[redacted] -- Let's not be so zealous in the future.
5/4/89	09:14	Turbine building alarm
5/4/89	21:30	Might have to do throttling of valves if temperatures get high
5/4/89	21:51	I enjoyed reviewing those 200 pages of schematics. But I know a lot more now.
5/14/89	00:30	3 Feet 7 Inches. What did [redacted] say it was yesterday? It's come up a foot and that's a lot of water.
5/14/89	02:30	[redacted] Could you check the lube oil and see if it's running OK. Just got an alarm in and out.
5/23/89	14:43	Check EHB Reservoir. Check it to make sure we're not spilling it.

[redacted]

SEABROOK CONTROL ROOM TRANSMISSIONS

AREAS OF CONCERN

Personnel:

Maintenance Personnel Competence

Drinking prior to work -- 11/30/89
Leaving light bulb on plastic -- 12/1/89
Accident rate -- 12/20/89 (Several others in December)
Water treatment or boiler room that was messy -- 12/29/89

Control Room Operator Attitude

"Hey, what's the worst that can happen. You have to get naked and come on out" -- 12/3/89
"You're being paid by the hour" -- 12/29/89
"Your favorite Nitrogen alarm has just come in again" -- 1/6/90

Hardware:

Valve Problems

"See if we can get the recirc valve to go closed" -- 12/1/89
"I've got a bad feeling about these valves" -- 12/3/89
"Brand new valve installed by DCR" -- 12/28/89
"Favorite nitrogen alarm has just come in" -- 1/6/90

Leaks

Fan leaking oil in fuel storage building -- 12/29/89

Communications

Repeated problems hearing maintenance personnel
See 1/6/90 for one example

Seabrook Station Control Room

Nitrogen Valve Problems
Control Room Operator Attitude

December 3, 1989 (Sunday)

6:15 AM

No, were trying to blow the loop seal to the generator

B is isolated. Copy

"Copy [redacted] I've got a bad feeling about these valves"

Copy. [redacted] did you copy that?

Yeah [redacted] Why don't you open up 42 and leave all four of them open

Yeah you're right [redacted]

[redacted] open 42 and we'll see what we've got there and then we'll open the Alpha one

Copy

Yeah. Bravo Charlie and Delta Right. We're going to try that X.

Actually [redacted] I don't think it'll matter. Do you have it boosted up out there to 35 or 40 pounds?

Going too fast. OK I've got you

[redacted] go ahead and shut 39 please

OK [redacted] Why don't you go ahead and boost it up. NGB 39 is closed and when you get it up to 45 let us know and then [redacted] try to do your thing.

Copy [redacted] You seeing a change in pressure?

You said you got it [redacted]

6:30 AM

[redacted] I want to open up ah 39 now so we've got all four of them open. [redacted] will pressurize all four of them up until ah we get each of them to three or four pounds and then we'll put it back on the regulator

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[redacted] I am definetly seeing a rise in A, B and C. D started out negative so it's a little hard to tell but I think that it's come up

OK as soon as I get a couple of pounds on the lowest one we'll put it on the regulator

And [redacted] the answer to your question is D is definetly coming up now

I'm at 0.1

[redacted] I'm looking at a half a pound positive now on the Delta generator if you want to slowly go closed on those bypasses and see if the regulator will take it the rest of the way I think you're in good shape

"Let me know when they're closed and I'll watch it more closely"

[redacted] air dryer A trouble

[redacted]

The logs are more priority

[redacted] the dryer trouble has reset

On the regulator, copy [redacted]

Yes we are [redacted]

OK A is dropping down toward the others and it looks like it's going to be fine

No thank you [redacted] Good job

"Hey, what's the worst that can happen. You have to get naked and come on out."

6:45AM

You're clear for a round trip

Go ahead [redacted]

Ah not really. Hold on a minute and let me ask [redacted]

[redacted] needs a Chalkman fix

Whatever looks good
7AM

APPENDIX 3

New Hampshire
Yankee

Ted C. Feigenbaum
Senior Vice President and
Chief Operating Officer

NYN-90020

January 24, 1990

United States Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

References: (a) Facility Operating License NPF-67, Docket No. 50-443

(b) Letter dated January 9, 1990, F. Anderson, Jr., to W. T. Russell, USNRC

(c) Letter dated January 15, 1990, "Seabrook Control Room Transmissions", F. Anderson, Jr. to W. T. Russell, USNRC

(d) United States House of Representatives letter dated January 8, 1990, N. Mavroules, et al to K. M. Carr, USNRC

Subject: Response to Allegations

Gentlemen:

New Hampshire Yankee (NHY) has investigated the allegations forwarded by References (b) - (d), utilizing the NHY Employee Allegation Resolution (EAR) Program and the NHY Independent Review Team. The results of these evaluations are provided as enclosures to this letter. As detailed in the enclosures, NHY has determined that these allegations do not represent any unresolved safety significant issues.

Enclosure 1 provides the results of the NHY evaluation of the allegations raised via reference (b). Additional allegations raised by Mr. Anderson in Reference (c) are addressed in Enclosure 2. Enclosure 3 provides the results of the NHY evaluation of each allegation raised by the Employees Legal Project in Reference (d).

The documentation and information referenced in the Enclosures are available at Seabrook Station for your review

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

Enclosures

cc: Mr. William T. Russell
Regional Administrator
United States Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Mr. Victor Nerses, Project Manager
Project Directorate I-3
United States Nuclear Regulatory Commission
Division of Reactor Projects
Washington, DC 20555

Mr. Noel Dudley
NRC Senior Resident Inspector
P.O. Box 1149
Seabrook, NH 03874

New Hampshire Yankee
January 24, 1990

ENCLOSURE 1 TO NYN-90020

RESPONSE TO ALLEGATIONS

New Hampshire
Yankee

MEMORANDUM

Subject Control Room Radio Communications Allegations

From W. J. Gagnon Date January 24, 1990

To N. A. Pillsbury Reference

The attached report provides the results of an Employee Allegation Resolution (EAR) evaluation of allegations raised by Mr. Fred Anderson, Jr. in a January 9, 1990 letter to the NRC Region 1 Administrator, Mr. William Russell. The basis for these allegations are select Control Room radio communications which Mr. Anderson monitored, taped and subsequently transcribed. Based upon these communications, Mr. Anderson requested that the NRC review the events described for their safety significance and impact on recommending a full power license for Seabrook.

The EAR review of the radio communications transcripts indicates that they represent only that portion of the conversations which originated from the Control Room. These conversations are the Control Room's (Shift Superintendent, Unit Shift Supervisor, Supervisory Control Room Operator and Control Room Operator) normal communications with Auxiliary Operators performing assigned responsibilities in the plant. The Auxiliary Operator's portion of the conversation, which would provide a more complete understanding of the activities in progress, are not included in the transcript. The reasons for these omissions are discussed in the body of the enclosed report under the heading of Control Room Radio Communications System (Section 12.0).

The EAR review of the allegations raised by Mr. Anderson concluded that NHY's existing programs, and conduct of operations, design and maintenance are appropriate and reflect a commitment to excellence. There are no areas of concern which pose safety significance to the public, plant personnel or operation and maintenance of the plant. For each of the dates cited in the transcript the plant was in Mode 5, cold shutdown.

W. J. Gagnon

WJG/EWD:bes

CONTROL ROOM RADIO COMMUNICATIONS

ALLEGATIONS

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1.0 FITNESS FOR DUTY

The Employee Allegation Resolution Program (EAR) reviewed the allegation of a potential 'Fitness For Duty' concern regarding a radio communication on November 30, 1989. In addition EAR also reviewed one other transcript portion (December 6, 1989) because of the potential inference on 'Fitness For Duty' even though Mr. Anderson made no specific allegation or citation. In support of this review, the EAR Program interviewed the following individuals to obtain their perspective and recollection of events which Mr. Anderson lists as November 30, 1989 (2215) and December 6, 1989 (0645):

-- Shift Superintendent
-- Unit Shift Supervisor
-- Auxiliary Operator
-- Auxiliary Operator
-- Auxiliary Operator
-- Auxiliary Operator
-- Auxiliary Operator
-- Firefighter Technician
-- Firefighter Technician

From the transcript of November 30, 1989 (2215), Mr. Anderson infers impaired Maintenance personnel competence as a result of drinking prior to work. This inference appears to be based on the landmark referenced in radio communications concerning an individual (an Auxiliary Operator) who would be reporting late for his assigned shift (shift started at 2300). This individual had telephoned the Control Room, while enroute from his residence to Seabrook Station, to advise his supervisor that he was being delayed and indicated his approximate location by referencing a nearby well-known establishment as a landmark. As a result of this delay, the individual placed two telephone calls from a gas station pay phone -- the initial call at 2206 and a subsequent call at 2247.

The individual was delayed because of a traffic accident, due to icy road conditions, which had blocked all northbound traffic on a divided state highway. In fact, the Commonwealth of Massachusetts had officially closed the road at 2137. The traffic accident and road closure have also been documented in a State Police report. The traffic accident and road closure prevented all northbound traffic on U.S. Route 1 from proceeding further on

Route 1 or onto Interstate 95. Using the well known landmark was a logical means to quickly and accurately convey the location of the road closure. A telephone credit card invoice substantiates that this individual did place the telephone calls from a public telephone at a gas station in the proximity of the referenced landmark.

Upon arriving at Seabrook Station the delayed individual reported to his supervisor to inform him of his presence on site and to obtain his work assignment. Site personnel had been trained and followed a Fitness For Duty (FFD) Policy and Program implemented in April 1986. NHY has subsequently implemented an enhanced FFD Program on December 7, 1989. Under the FFD Program, each NHY supervisor retains the implicit responsibility, at all times, to determine the competence of assigned individuals to discharge their duties. Based upon the normal conversation that a supervisor has with an employee that is a late arrival, the known cause for his delay and the [redacted] implicit FFD supervisory responsibility, there was no question that the individual was competent to perform his assigned duties.

The late arrival of this individual (Auxiliary Operator) did not impair the shift complement required for operating the plant. Therefore the allegation regarding the impaired ability to perform assigned responsibilities is inaccurate and unsubstantiated by the facts and did not impact the safe operation of the plant.

The communication on December 6, 1989 (0645) regarding a 'Chalkman fix' was not an area of concern raised by Mr. Anderson. Based upon the EAR Program interviews, this transcription should be 'chocolate' and refers to consuming a chocolate donut with morning coffee. Based upon the interviews with the personnel involved there is no basis to assume or infer impaired performance or ability to perform assigned responsibilities. Therefore, the EAR concludes that the activities described in the December 6, 1989 portion of the transcript did not impact the safe operation of the plant.

Sections 2.0 through 12.0 of this report contain the review, analysis and evaluation of communications that concern the conduct of plant operations and the adequacy of design and maintenance activities. The Independent Review Team (IRT) coordinated these assessments under the auspices of the EAR Program. The IRT assessments included interviews with appropriate plant

personnel and verification of the events and activities described. The IRT has reviewed documentation which supports the description of each event and provides the basis for the conclusions for each area of concern.

2.0 DECEMBER 1, 1989 -- LIGHTBULBS

Reference:

On December 1, 1989, at approximately 0045 EST, the transcript indicates that a light bulb exploded.

Response:

During the process of venting the steam generator wet layup recirculation system, the Auxiliary Operator (AO) conducting this activity noted that a temporary construction drop light bulb exploded. The light bulb failure is attributed to the lightbulb being momentarily sprayed with pump venting effluent (steam generator liquid) while venting the steam generator wet layup pump. Temporary lighting was in the area of the steam generator wet layup pump to facilitate the installation of plant design modification DCR 86-420.

Safety Significance:

The steam generator wet layup pump recirculates steam generator fluid to maintain water chemistry within specified parameters. This fluid is non-radioactive and its release did not constitute a radiation or personnel safety hazard.

The explosion/implosion of the temporary construction lightbulb was the result of momentary contact with a subcooled liquid, the steam generator wet layup pump vent effluent, while venting entrapped air from the pump. The bulb filament then vaporized upon contact with the oxygen in the surrounding air. The remaining electrical portions of the lightbulb remained energized until the temporary lighting power cord was removed from the local wall

outlet. The temporary construction lights are equipped with metal wire guards that prevent direct bulb contact and provide personnel protection against electrical shock. The wall circuits are powered from 120 VAC power panels equipped with 15 Amp circuit breakers. There were no special design features associated with these convenience wall outlets. However, temporary power that is used for equipment, such as drills, pumps, or other active equipment that has the potential to result in electrical shock to the operator, is equipped with electrical ground fault interrupter circuit breakers.

Temporary lighting is powered from local wall outlets so that the power to the lighting string may be easily removed and therefore does not constitute a personnel electrical hazard. The on-shift duty electrician responded to [redacted] replace the lightbulb. This incident did not constitute a threat to personnel safety and was appropriately resolved using existing NMY program[redacted] and work practices.

Reference:

That a drop light was found on plastic and caused the plastic to melt.

Response:

On December 1, 1989, at approximately 0045 EST, a verbal report was made to the Control Room Fire Fighters that an unusual odor was noticed in the area of the West Pipe Chase. The on-duty Fire Fighters investigated the report. The investigation determined that a construction drop light had come in contact with temporary plastic sheeting and had caused the plastic to melt. The condition was corrected by the roving fire watch by removing the temporary construction drop light from the plastic covering. The temporary lighting and plastic sheeting was being used to support the installation of plant modification DCR 86-420.

Safety Significance:

The use of temporary lighting and plastic sheeting during plant design modifications is a routine practice to provide enhanced local lighting and to prevent the spread of welding and grinding debris. The plastic sheeting provided to all activities within the plant is self-extinguishing, and will not support combustion. The temporary lighting was supported from existing physical supports.

NMY recognizes the importance of good housekeeping and industrial safety practices and normally, plant housekeeping requirements for construction activities would have prevented the plastic sheeting from coming in contact with the temporary lighting. Inadvertently, however, the temporary lighting and/or the plastic sheeting moved close enough together to cause the plastic to melt. If the temporary light and plastic sheeting had remained undetected in this condition, the worst case scenario would have resulted in the generation of smoke due to the reduction of plastic by heating. The extent of plastic reduction and smoke would be limited to the small localized area that could be affected by the direct radiant heat emitted from the lightbulb. This work area and the surrounding areas are equipped with fire detection equipment that would have eventually caused Control Room and local area alarms. In addition, the routine rounds by roving fire watches and auxiliary operators provide a manual backup to installed detection and suppression equipment. On duty fire fighter personnel would have responded to any fire or smoke detection alarm. There was no impact on the public health and safety as a result of this event.

3.0 DECEMBER 1, 1989 -- RECIRCULATION VALVE

Reference:

Communications between two Auxiliary Operators regarding the vaults and the running RHR pump.

Response:

The referenced communication, on December 1, 1989, at approximately 0045 EST, between two Auxiliary Operators concerns a routine periodic visual inspection of operating equipment within the Equipment Vaults which includes the operating RHR pump. The Auxiliary Operator at the time of the discussion, was in the West Pipe Chase assigned to establishing the steam generator wet layup recirculation (see previous Section 1.0 description), and was unable to perform this routine tour. Another Auxiliary Operator informed the first Auxiliary Operator that he would be able to perform the Equipment Vault routine inspection for him, and that he would check out the equipment vault and RHR pump. The reference made to 'this set' refers to 'a set of rounds' or periodic [redacted] inspections performed during routine Operations personnel plant tours.

Safety Significance:

The communications between the two Auxiliary Operators regarding the Equipment Vault inspection and checking the running RHR pump is a normal operations practice and is of no safety significance. All Auxiliary Operators are trained and qualified to the same standards and are therefore capable of providing a 100% backup response.

Reference:

On December 1, 1989, at 0145 EST, the transcript listed the verbal report, 'So I'm going to increase flow to see if we can get the recirc valve to go closed.'

Response:

This discussion deals with instructions between the Control Room and an Auxiliary Operator while locally adjusting the Steam Generator Wet Layup System. The Steam Generator Wet Layup System is used to recirculate the liquid contents of the Steam Generators. The system design incorporates a

pump discharge recirculation flow control valve that automatically closes after the pump develops a specified flow rate. At this time the Auxiliary Operator was manually adjusting valves in the system flow path to increase pump developed flow. This increased downstream system flow would be sufficient to allow the recirculation valve to close automatically.

Safety Significance:

The Steam Generator Wet Layup System is a non-safety class system and the purpose of the system is to mix the steam generator contents for maintaining secondary side chemistry when the plant is in a shutdown configuration. The position of the Steam Generator Wet Layup System pump discharge recirculation valve has no safety significance and there is no safety significance to the steam generator wet layup system pump discharge flow rate adjustment. The discussion concerning the manual adjustment of the system flow path and the automatic operation of the Steam Generator Wet Layup pump recirculation valve is consistent with the design of that system.

4.0 DECEMBER 6, 1989 -- RADON

Reference:

Basis of statement cited in transcript, 'Hey, what's the worst that can happen. You have to get naked and come on out.'

Response:

New Hampshire Yankee has a documented history of the Nuclear Enterprises IPM-7 whole body frisking booths alarming due to the daughter products from naturally existing background radon being deposited on clothing. NHY can make this report available to NRC Region 1 personnel. Radon daughter product deposition is related to both the concentration of radon and to the type of clothing worn.

New Hampshire Yankee has performed an extensive investigation of this naturally occurring condition and has determined that there is a negligible radiological health hazard posed by the radon levels involved. There are, however, delays imposed on personnel who alarm the IPM-7, in order to provide additional monitoring which determines if the alarm is due to radon daughter deposition or to contamination. The several options available for personnel that have experienced radon daughter deposition include: remaining in the Radiological Control Area until the daughter deposition has decayed (about two hours); surrendering the article(s) of clothing; and completion of a personnel contamination report which documents the results of the radon daughter deposition analysis. The transcript refers to an individual that would have to surrender his clothing after having worked in containment for an extended period of time establishing the inerting cover gas to the Steam Generators. In this circumstance the individual would have the option of wearing cloth coveralls or paper coveralls to continue with the balance of assigned work activities until radon daughter deposits had decayed.

Safety Significance:

The NHY Health Physics Department has documented the analysis of radon concerns which indicate that no health hazards are involved. The existing radiation protection practices for controlling the expected levels of radiation during plant operation have been in place for more than one year. The sensitivity of the equipment used has been sufficient to detect these levels of radon daughter deposits. There is no safety significance associated with this event.

5.0 DECEMBER 6, 1989 -- NITROGEN VALVES

Reference:

On December 6, 1989, at approximately 0615 EST, the transcript lists the verbal report which states, 'Copy ----, I've got a bad feeling about these valves'.

Response:

This discussion refers to inerting the Steam Generator secondary side. Station Operating Procedure OS1027.02, Section 6.3, identifies the system alignment requirements for inerting the Steam Generators with a nitrogen gas blanket via the EFW header. Section 6.3.1.6 of this procedure describes how to increase the nitrogen gas supply pressure to overcome a water loop seal which exists in the Main Steam header during extended Mode 5 operation. Establishing the nitrogen inerting blanket requires increased nitrogen header pressure to bubble the nitrogen through the water loop seal. The 'bad feeling about these valves' comment refers to the operational characteristics of the nitrogen gas Y-type diaphragm isolation valves on each of the steam generator Main Steam lines. These isolation valves are [redacted] bellows diaphragm valves with the valve stem at an angle to the direction of fluid flow. The valve design is such that the valve disc and bellows assembly are not directly connected to the valve stem. Therefore, in the presence of a back pressure, the valve may actually be closed even though the valve stem has been operated in the open direction. The current valve orientation is such that the Nitrogen system header pressure must overcome the bellows and disc and Main Steam system pressure in order to initiate the nitrogen gas flow to the Steam Generators. This operation is similar to that of a stop check valve. These valves function to isolate the Nitrogen Gas System from the Main Steam System when operated in closed direction and under normal plant operations the Nitrogen system is isolated from the Main Steam system by two valves.

NHY Technical Support is evaluating the Nitrogen isolation valves to improve their current operational characteristics. The remainder of the transcript describes the process of increasing Nitrogen header pressure to 40 PSIG to the open valves and the subsequent restoration of the Nitrogen header pressure supply through the Nitrogen regulator after establishing a 3 psig Nitrogen inerting blanket on each of the Steam Generators.

Safety Significance:

The alignment of Nitrogen Gas System Valves to provide an inert cover gas on the Steam Generators is only performed during MODE 5, shutdown conditions, and has no impact on plant safety. No safety system challenges or threats to the public health and safety occurred as a result of this event.

6.0 DECEMBER 20, 1989 -- ACCIDENT RATE

Reference:

Maintenance personnel -- recent high accident rate.

Response:

The accident on December 20, 1989 cited in the transcript involved a laborer who was shovelling snow away from a wooden sawhorse. A manhole cover that was leaning on the sawhorse rolled off and struck the laborer on the lower portion of his left leg. New Hampshire Yankee medical personnel reported to the scene and administered first aid. The laborer was then transported to the Exeter Hospital Emergency Room so that the injury could be examined by a physician. The total time elapsed from the time the injury was reported until the time the ambulance arrived was approximately 12 minutes. This accident was investigated in accordance with the NHY procedure for accidents - work related injury and illness.

Although not cited in Mr. Anderson's transcript, NHY also reviewed requests for all ambulance services in the month of December, the overall trend for first aid and lost time accidents and the method for documenting and investigating accidents to prevent recurrence.

There was an additional ambulance call on December 20th. A security guard experienced shortness of breath at about 1530. New Hampshire Yankee's EMTs responded and determined the guard should be examined by a physician. The

Seabrook ambulance was requested. It responded and transported the security guard to Exeter Hospital.

There were multiple ambulance calls on one other day in December. On December 7, 1989 these personnel were transported to Exeter Hospital by the site ambulance. Two of these individuals had sustained injuries and the other suffered an illness. Of the two injured personnel, one was hurt when a wind gust blew a temporary shelter into him and the other slipped while walking in a parking lot.

All accidents involving New Hampshire Yankee employees and all accidents involving contractor personnel which result in lost work time and/or medical expense are investigated per NHY Procedure 18620 (Accident - Work Related Personal Injury and Illness). Investigations are initiated by the Safety Supervisor, and are performed by the injured individual's supervisor, [redacted] manager, or a committee assigned by the manager/supervisor. The person(s) performing the investigation interviews the injured individual, his supervisor, and any witnesses. The investigation is documented along with recommendations to prevent recurrence. Recommendations are reviewed and approved by management and tracked on ICTS.

The accidents which occurred on December 7 and 20, 1989 were investigated per NHY Procedure 18620. One of the accidents on December 7 resulted in a lost time accident (employee slipping on ice in a parking lot). This individual suffered a broken shoulder, lost six (6) days of work, and remains on restricted duty.

The individual injured on December 20, 1989 by a falling manhole cover was scheduled to be laid off on December 22, 1989. He remained out of work through December 22 due to his contusion. Since he was laid off, no further data on his condition is available.

The December 7th accident (shelter blowing into a worker) involved a paving contractor and did not result in lost time.

In terms of overall personnel accident statistics, there were fewer lost time accidents in the last six months of 1989 and fewer injuries requiring first aid for NHY and GMSS personnel than any prior semi-annual period

since the completion of construction in 1986. Comparing 1989 with 1988, the lost time incident rate for 1989 continued to reflect good performance as well as consistent improvement for all NHY, UE&C, and GMSS personnel.

Safety Significance:

The trend in first aid and lost time accidents over several years indicates the implementation of highly challenging industrial safety performance goals and consistent improvement in safety. NHY's safety performance also reflects a better than average record in comparison with general industry and government. The inferred problem of maintenance personnel competence is not supported by the facts.

[redacted]

7.0 DECEMBER 28, 1989 -- VALVE TESTING

Reference:

On December 28, 1989, at 0930 EST, the allegation is that 'new valves are sticking'.

Response:

From the transcript there is nothing that implies or infers that valves were sticking. The communication does involve the Control Room and an Auxiliary Operator discussing the alignment of the Reactor Vessel Head Vent to the Primary Relief Tank to remove non-condensable gasses. This process vents the Reactor Vessel head region to the Primary Relief Tank which can be at nearly the same pressure since the Reactor Coolant System had been vented for the past four months under Mode 5 conditions. The vent path includes valves recently installed by DCR 86-116, RC-V471 and RC-V472, which are manual rising stem globe valves and RC-FV2881 which is a pilot operated solenoid valve. A pilot operated solenoid valve requires sufficient differential pressure to operate the valve main disc. The vent path collection point is the Primary Relief Tank and in Mode 5 is typically pressurized by nitrogen

gas to a pressure of approximately 10 PSIG. When the Reactor Coolant System is vented via the Pressurizer vent the only pressure differential available would be the static column of water in the pressurizer. A pressurizer level of greater than 24 feet of water column would be required to provide sufficient pressure necessary to flow to the Primary Relief Tank. Given that pressurizer level is normally maintained at 35% (approx. 26') the differential pressure available may be insufficient to open the main disc of RC-FV2881 without opening a downstream vent such as RC-V-472. By observing normal operator indications, e.g. Reactor Vessel Water Level Indicating System (RVLIS), the control room operators can determine when the Reactor Vessel head has been purged of gas, thereby detecting the evidence of flow through the valves identified above.

Safety Significance: [redacted]

There is no safety significance to the allegation. The last portion of the transcript does indicate that the Control Room observed that the intended vent flow path had been established. Valves RC-V471, and RC-V472 are isolated from the Reactor Coolant System during normal plant operations, and therefore do not impact the plant safety. During normal plant operations the Reactor Coolant System has sufficient pressure to operate RC-FV2881.

The Control Room retains copies of all approved design modifications. Upon completion of field work the licensed Training Center incorporates these modifications into requalification training. Through these and other mechanisms Operations personnel have ready access to current information on design modifications.

8.0 DECEMBER 29, 1989 -- POST-MODIFICATION TESTING

Reference:

He's still playing with it.

Ah ---- do you have problems with the boiler? Is that why you're asking? No there is every reason 'You're being paid by the hour'.

Control Room - Go ahead ----. OK. Thank you much.

Response:

This conversation refers to the retest being performed on PAB Auxiliary Steam Pressure Reducing Valve PCV-9254. The retest was required by Technical Support as part of WR #89W006331.

The Auxiliary Operator (AO) was directed to monitor the auxiliary boiler during the performance of the retest because large load swings caused by the test could have tripped the boiler and required a subsequent restart.

The AO asked the Control Room if the retest was complete. The Control Room assumed that this inquiry was predicated on possible problems with the boiler and questioned if the AO had problems with maintaining its operation. The AO responded that there was no problem with the boiler but that he would like to return to his tagging assignment. The related comment 'You're being paid by the hour' was in jest. The person making the comment meant that all jobs are important and it shouldn't matter what the assignment is as long as it is performed conscientiously.

Safety Significance:

Post modification testing is a normal part of ensuring equipment performance before returning it to full operational service. The post maintenance testing of steam reducing valve has no impact on safety. The exchange between the AO and the Control Room is normal in the conduct of operations. No safety system challenges or threats to the public health and safety occurred as a result of this event.

9.0 DECEMBER 29, 1989 -- HOUSEKEEPING

Reference:

Is that the water treatment or the boiler room that was so messy? Understand. Thank You.

Response:

This is the Control Room clarifying which area required cleaning. The water treatment area was in the process of being routinely cleaned by the contracted labor force and the boiler room had already been cleaned. The typical method for cleaning is start at the highest elevation within a room and to work towards the lowest elevation. When the Auxiliary Operator (AO) arrived on the scene the labor force was on break and there were some rags and dust on the floor. The AO reported this to the Control Room. The area in question was cleaned prior to shift turnover.

Safety Significance:

Housekeeping is a key indicator of attention to detail and conduct of plant operations and maintenance. The conversation refers to the normal supervision of in-process housekeeping activities. No safety system challenges or threats to the public health and safety occurred as a result of this event.

10.0 DECEMBER 29, 1989 -- FAN REPAIR

Response:

We just got a report from the roving firewatch 21 elevation in the Fuel Storage Building just when you go inside the door. Apparently there's a fan there that's leaking some oil. Would you get me some information on that please?

Response:

A UE&C construction worker was performing the duties of a roving fire watch when he noticed what he thought was an oil leak in the Fuel Storage Building and reported it to the Control Room. The Control Room dispatched an Auxiliary Operator (AO), as noted in the transcript, to verify the situation. The AO reported a very small glycol leak coming from a union connection to a unit heater. The leak resulted in a spot on the floor of about the size of a quarter (coin). Work Request #90W000004 was initiated to correct the leak. This Work Request has been assigned a Priority 3 and is scheduled for work on January 25, 1990. The probable method of repair will be to clean the union sealing surface and threads of the connection and to tighten as necessary. If this repair is inadequate, the connection will be replaced.

Safety Significance:

The hot water system is not a safety system and there was no personnel safety or plant equipment in jeopardy. Glycol is not a fire hazard.

11.0 JANUARY 6, 1990 -- NITROGEN ALARM

Reference:

On January 6, 1990 at 0245 EST, 'Yeah your favorite nitrogen alarm has just come in again'.

Response:

The steam generators were in wet layup condition which requires a continuous nitrogen cover gas. This cold shutdown plant condition coupled with the concurrent draining of the Primary Drain Tank places an increased demand on

the Nitrogen Gas System which typically results in frequent nitrogen system low pressure alarm actuation. These low pressure alarms would require an Auxiliary Operator to manually align a new nitrogen gas bottle onto the system to clear the low nitrogen header pressure alarm. The transcript provides the Control Room notification to the AO indicating that the Nitrogen System low pressure alarm had alarmed. This required the AO to align a new bottle of nitrogen which would increase header pressure and clear the alarm per normal Operations procedures.

Safety Significance:

Nitrogen System low pressure alarms do not create a safety significant problem. During normal plant operations the nitrogen gas pressure will become low enough to actuate this alarm and require the Auxiliary Operator [redacted] to align new bottles to clear the low pressure condition. This is an expected plant condition for Mode 5 operation.

12.0 CONTROL ROOM RADIO COMMUNICATION SYSTEM

The radio segment of the Control Room Communication system is described as part of the overall Communications System in FSAR Section 9.5.2.2.a.4. The intent of this system is to provide a portable communications means for plant personnel, primarily auxiliary operators and firefighter technicians, to communicate directly with the Control Room regardless of their location within the Protected Area. The field personnel utilize handheld radios which transmit at 0.25 watts. The power of these hand-held radios is adequate for on-site communications. The radio from the Control Room transmits at 12 watts and is subsequently repeated at 75 watts, which provides sufficient power to be heard offsite. This is the basis for the one-sided (Control Room only) communications noted on the transcripts.

The design of the Control Room radio communications system includes the capability to transmit 'in the clear' or 'in the encoded' mode. The main repeater originally provided the encoding function for the entire Control Room communications system. When normally powered, the entire radio system

communication was encoded. However, with a loss in power, the 12W transceiver defaults to transmitting communications in the clear. The transceiver must then be manually reset to resume encoded transmissions. The transceiver was reset to the encoded mode on January 11, 1990.

A subsequent design modification to the radio system added two repeater units within the Main Control Board to accommodate additional Control Room radio communications handsets. These repeaters also retain the dual function clear and encoded capability. Since initial installation, these repeaters have been set in the 'clear' transmission mode. On January 12, 1990, the repeaters were reset in the encoded mode. These repeaters do not require resetting upon a loss of power.

NHY has conducted radio communication field tests which identified specific locations within the plant and on site where one-way or two-way radio communications are difficult or cannot occur. As a result of these tests NHY prioritized a series of corrective measures in five categories. The physical modifications for the highest priority items have been completed and the Engineering and implementation for the remaining items have been scheduled for 1991. These radio system enhancements are, however, improvements to a communications system which provides a convenience to Operations personnel that frequently traverse the plant. The portable radios carried by the Auxiliary Operators, for the most part, allow constant two-way communication with the Control Room. FSAR Section 9.5.2 describ the Seabrook Communications System which meets the design basis for providing a dependable communications system that will ensure reliable communications during normal plant operation and emergency situations. The NHY Independent Review Team is currently evaluating the radio communications system to provide recommendations which will enhance company policy and the design and operating characteristics of the system.

New Hampshire
Yankee

MEMORANDUM

Subject Control Room Radio Communications; Additional Allegations

From W. J. Gagnon Date January 24, 1990

To N. A. Pillsbury Reference

The following provides the results of an Employee Allegation Resolution (EAR) evaluation of the second set of allegations raised by Mr. Fred Anderson, Jr. in a January 15, 1990 letter to the NRC Region 1 Administrator, Mr. William Russell. The basis for these allegations, as with the first set of allegations, is select Control Room radio communications which Mr. Anderson monitored, taped and subsequently transcribed. Based upon these communications, Mr. Anderson [redacted] requested that the NRC review the events described for their safety significance and impact on recommending a full power license for Seabrook.

The EAR review of the radio communications transcripts as with the first set of Anderson allegations, indicates that they represent only that portion of the conversations which originated from the Control Room. These conversations are the Control Room's (Shift Superintendent, Unit Shift Supervisor, Supervisory Control Room Operator and Control Room Operator) normal communications with Auxiliary Operators performing assigned responsibilities in the plant. The Auxiliary Operator's portion of the conversation, which would provide a more complete understanding of the activities in progress, is not included in the transcript. The reasons for these omissions are discussed in the body of the previous report regarding the first set of Anderson's allegations, under the heading of Control Room Radio Communications System.

The EAR review of the allegations, raised by Mr. Anderson concluded that NHY's conduct of operations and maintenance are appropriate. There are no areas of concern which pose safety significance to the public, plant personnel or operation and maintenance of the plant.

From eight statements on four days between May 3 and May 23, 1989, Mr. Anderson raises concerns regarding employee attitude and competency and plant hardware. From the equipment and plant locations cited, all of the communications except the first do not involve safety related equipment. The first statement, regarding venting, refers to the routine post maintenance hydrostatic test of RH-FCV-619. The remaining statements involving plant equipment are communications involving normal plant operation. Inferred allegations regarding plant hardware from this transcript have no factual basis, are not safety related and are not material to the issuance of the full power operating license.

The second concern, regarding Operator competency, also has no basis in fact from the transcript. The transcript reflects statements initiated by Operations personnel in the Control Room. The competency of these personnel has been demonstrated by completing the NHY Licensed Operator Training Program, passing the NRC Licensed Operator exams and through operator requalification training every six weeks. NHY Operations personnel have repeatedly demonstrated their proficiency for safely operating Seabrook Station.

The remaining concern, regarding employee attitude, is based upon a single sentence i the transcript. This portion of the transcript is suspect in that the individual referenced (first name only) cannot be substantiated with the personnel actually on watch for the date and time specified. To compensate for this discrepancy the EAR reviewed, in detail, Operations Logs for the shifts preceding and succeeding the communications cited in the transcript. This review did not reveal any personnel in the field with this first name and only one Supervisory Control Room Operator with the same first name cited in the transcript. This SCRO would have been located in the Control Room and therefore not receive radio communications directed from the same location. Assuming, that this statement did in fact occur, there is no basis in fact to impugn employee attitude or to substantiate a concern having safety significance.

For the entire period cited in the transcript, the plant was in a Mode 5 cold shutdown condition. During this time frame the activities in progress consisted of routine maintenance, operations surveillance testing and preliminary activities for low power testing.

W. J. Gagnon

WJG/EWD:bes

APPENDIX 4

GUIDANCE ON REVIEWING RI-90-A-0003 TAPES

1. Basically, the review is for safety or security inadequacies which could affect the issuance of a full power license, including associated violations of NRC requirements. The following are of particular interest.

   1.1 Intentional Wrongdoing.

   1.2 Fitness for Duty Inadequacies (including those prior to issuance of 10 CFR 26).

   1.3 Unauthorized transmission of safeguards information.

2. Weaknesses which do not violate NRC requirements or indicate unsafe conditions, if significant, should be identified but are not an element of whether a license should be issued.

3. A security inadequacy exists if transmitted information reveals exploitable elements of the security plan or equipment.

4. The June 22, 1989 Natural Circulation Test event should be considered. That event resulted in a major licensee program for assuring strict procedural compliance. Preceding occurrences, and subsequent ones, need to be considered in light of their relationship to implementation of the corrective actions in order to assess potential impact on licensing. For reference, the basic NRC concerns associated with this event related to the following:

   4.1 Not manually tripping the plant per procedure.

   4.2 Not resolving human error considerations before proceeding with startup planning.

5. Items which have already been identified and which do not need further documentation (unless serious instances are identified) follow:

   5.1 Extraneous transmissions not related to operation and not interfering with operational information.

   5.2 Speaking in jest about conditions, unless there is also an indication that safety is not being adequately addressed.

   5.3 Communication informality, unless there is reason to suspect that safety has not been adequately addressed.

   5.4 Minor housekeeping problems.

   5.5 Industrial safety precautions.

   5.6 Personnel injuries.