Docket No.: 50-354

AUG 3 1984

Mr. R. L. Mittl, General Manager
Nuclear Assurance & Regulation
Public Service Electric & Gas Company
80 Park Plaza, T22A
Newark, New Jersey 07101

Dear Mr. Mittl:

Enclosure 1 to this letter transmit to you Draft SER Sections 17.1 through 17.5. The items in Section 17.5, entitled "Outstanding QA Issues Through FSAR Amendment 5," were originally sent to you by letter dated June 12, 1984 and were discussed at a meeting with your staff on July 18, 1984. We regret any inconvenience not having the text for these sections may have caused.

Enclosure 2 is an updated version of Attachment 2 to your letter dated July 18, 1984. As indicated in the enclosure, a number of sections cited in your letter are general information and summary description sections. These sections will not contain open items. The omission of sections 15.2.3 through 15.2.8 in the Draft SER were caused by a format alteration. Each of the events listed in the Standard Review Plan for these sections was reviewed but only the most limiting event of the listed events was addressed in the Draft SER. The staff does not anticipate any additional open items as a result of this format alteration. The Draft SER input from the Meteorology & Effluent Treatment Branch (METB) will be forwarded to you in the very near future. By letter dated July 24, 1984, the staff transmitted to you concerns associated with the METB review. These concerns correspond to open items in the METB Draft SER text. For the remainder of the Draft SER sections which have not been provided, meetings to identify open items were held between your staff and the NRC staff. The dates of the meetings are referenced in the footnote section of Enclosure 2.

In your July 18, 1984 letter, it is stated:

> Items identified as "complete" are those for which PSE&G has provided responses and no confirmation of status has been received from the staff. We will consider those items closed unless notified otherwise.

Where possible, an effort has been made to provide your staff with feedback on the acceptability of your responses. The formal mechanism of tabulating and detailing open items is the SER. Until, the SER is issued, all open items identified in the Draft SER should be considered "open". We feel that your staff is generally aware of the acceptability of the open item responses submitted to date. Where deficiencies do exist, every effort has been made to inform your staff.

Should you have any questions, please feel free to contact us.

Sincerely,

/s/

A. Schwencer, Chief
icensing Branch No. 2
Division of Licensing

Enclosures:
As stated

cc: See next page

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Hope Creek

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Quality Assurance
Hope Creek SER

17.1 General

The description of the quality assurance (QA) program for the operations phase of the Hope Creek Generating Station is contained in Section 17.2 of the Final Safety Analysis Report (FSAR). Staff evaluation of this QA program through FSAR Amendment 5 is based on a review of this information and discussions with representatives of PSE&G. NRC assessed PSE&G's QA program for the operations phase to determine if it complies with the requirements of 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," the applicable QA related Regulatory Guides listed in Table 17.1, and the Standard Review Plan (SRP), Section 17.2, Rev. 2, "Quality Assurance During the Operations Phase."

17.2 Organization

The structure of the organization responsible for the operation of Hope Creek and for the establishment and execution of the operations phase QA program is shown in Figure 17.1.

The Senior Vice President-Energy Supply and Engineering is responsible in the nuclear area for the Nuclear Assurance and Regulation Department, the Fuel Supply Department, and the Nuclear Department. The Nuclear Assurance and Regulation Department provices PSE&G management with an independent assessment of the effectiveness of the nuclear QA program. The Fuel Supply Department is responsible to supply the Hope Creek fuel to meet the needs of the Nuclear Department. The Nuclear Department is responsible for the operation and maintenance of the Hope Creek Generating Station.

The Vice President-Nuclear, besides having responsibility for the overall direction and control of PSE&G's nuclear program, directs services, technical, and engineering support for Hope Creek. He and the line management above him issue QA policy statements which are mandatory upon those reporting to them. Reporting to the Vice President-Nuclear are the General Managers of Nuclear Services, Nuclear Support, Salem Operations, and Hope Creek Operations and Managers of Nuclear Review Board, Nuclear Public Affairs, Nuclear Methods and Administration, and Nuclear Operations Quality Assurance (NQA).

The Manager-NQA is responsible for formulating, defining, coordinating and implementing the QA program. He assures compliance with established requirements for the QA program through document reviews, inspections, monitoring, and audits. In support of the Hope Creek QA program, four engineers and their staffs report to the Manager-NQA. The engineers are shown on Figure 17-1, and their responsibilities are enumerated below.

QA Controls Engineer:

1. Develop and implement the trend analysis program.

2. Coordinate the commitment verification program.

Engineering and Procurement Engineer:

1. Review engineering documents such as design changes, equipment specifications, weld procedures, and qualification test procedures for QA requirements.

2. Review QA requirements of supplier specifications.

3. Review procurement documents for applicable QA requirements.

4. Conduct supplier surveys, audits, and surveillances.

5. Perform supplier QA evaluations.

6. Perform receiving inspection.

Programs and Audit Engineer:

1. Prepare and maintain the QA organization manual, the QA program description in the FSAR, and the QA Program Plan in the Nuclear Department Manual.

2. Review PSE&G and major contractor QA procedures.

3. Develop and implement the QA audit program.

4. Conduct QA program orientation for Nuclear Department personnel, administer the training and certification program for NQA personnel involved in inspection and auditing activities, and maintain the NQA training plan and training records.

5. Review new regulatory requirements for QA program impact.

Station QA Engineer, Hope Creek:

1. Implement the inspection and monitoring program.

2. Perform surveillance of contractor activities at site.

3. Review plant quality-related instructions.

The Manager-NQA and his staff have the authority and organizational freedom to identify quality problems; initiate, recommend, or provide problem solutions through designated channels and verify implementation of satisfactory solutions; and to stop or control further processing, delivery, or installation of nonconforming material.

17.3 Quality Assurance Program

The QA program for the operation of Hope Creek describes the QA policies, goals, objectives, and requirements to be implemented at the station in order to assure that safety-related activities are performed in a

controlled manner and documented to provide objective evidence of compliance with NRC regulations and guidance. The QA program is implemented by the QA Manual that includes the QA policies, procedures, and instructions. These documents present the detailed techniques and methods by which the requirements of Appendix B to 10 CFR Part 50 and the provisions of the NRC regulatory guidance shown in Table 17.1 are satisfied. They are reviewed and concurred in by the Manager-NQA.

The QA program requires that QA documents encompass detailed controls for (1) translating codes, standards, and regulatory requirements into specifications, procedures, and instructions; (2) developing, reviewing, and approving procurement documents, including changes; (3) prescribing all quality-affecting activities by documented instructions, procedures, or drawings; (4) issuing and distributing approved documents; (5) purchasing items and services; (6) identifying materials, parts, and components; (7) performing special processes; (8) inspecting and/or testing material, equipment, processes, or services; (9) calibrating and maintaining measuring and test equipment; (10) handling, storing, and shipping items; (11) identifying the inspection, test, and operating status of items; (12) identifying and dispositioning nonconforming items; (13) correcting conditions adverse to quality; (14) preparing and maintaining QA records; and (15) auditing activities that affect quality.

The QA program requires the establishment and continuous implementation of the QA indoctrination, training, and retraining program to assure that persons involved in safety-related activities are knowledgeable in QA instructions and implementing procedures and demonstrate a high level of competence and skill in the performance of their quality-related activities.

Quality is verified through surveillance, inspection, testing, checking, and auditing of work activities using procedures, instructions, and/or checklists. Inspections are performed by inspectors who have been qualified and certified in accordance with codes, standards, or company training programs.

The Manager-NQA is responsible for the establishment and implementation of the audit program. Audits are performed with written procedures or checklists by qualified personnel not having direct responsibility in the areas being audited. The QA program establishes a comprehensive audit system to ensure that the QA program requirements and related supporting procedures are effective and properly implemented during operations. Audits include an objective evaluation of QA practices, procedures, and instructions; of work areas, activities, processes, and items; of the effectiveness of implementation of the QA program; and of conformance with policy directives.

The QA program requires documentation of audit results and review by management having responsibility in the area audited to determine and take corrective action as required. Reaudits are performed to determine that nonconformances are effectively corrected and that the corrective action precludes repetitive occurrences. Audit findings, which indicate quality trends and the effectiveness of the QA program, are reviewed by the

Manager-NQA and are reported to the Vice President - Nuclear on a regular basis.

17.4 CONCLUSIONS

Based on the review and evaluation of the QA program description contained in Section 17.2 of the FSAR for Hope Creek, the staff concludes, subject to resolution of 11 issues identified in Section 17.5 below, that:

(1) The QA organization of PSE&G provides sufficient independence from cost and schedule (when opposed to safety consideration), authority to effectively carry out the operations QA program, and access to management at a level necessary to perform its QA functions.

(2) The QA program, including the list of safety-related structures, systems, and components to which it applies, describes requirements, procedures, and controls that, when properly implemented, comply with the requirements of Appendix B to 10 CFR Part 50 and with the acceptance criteria contained in SRP Section 17.2, Rev. 2.

Accordingly, the staff concludes, subject to resolution issues identified in Section 17.5 below, that the applicant's description of the QA program is in compliance with applicable NRC regulations and acceptable for the operations phase of the Hope Creek Generating Station.

17.5 OUTSTANDING QA ISSUES THROUGH FSAR AMENDMENT 5

1. The commitment to Regulatory Guides in Section 1.8 and on pages 17.2-6 and 17.2-9 does not address the operations phase (See response to Q 260.15).

2. The first sentence of the third paragraph of Section 17.2.16 needs clarification.

3. "As applicable" on the third line of page 17.2-29 needs to be deleted or defined.

4. "Periodically" in the last paragraph of Section 17.2.18 needs to be defined.

5. Response to Q 260.12 does not yet commit to one year minimum experience in a nuclear QA organization or provide an acceptable alternative.

6. Response to Q 260.15 which applies Regulatory Guides to ASME Code covered items "following receipt at the station" is unacceptable and should be clarified.

7. The sentence of the response to Q 260.32 which states: "The designation of those activities...." should be incorporated into the FSAR text.

8. The response to Q 260.50 needs to be revised to clarify that inspection of operating activities are not performed by personnel within the same group as those performing the activity.

9. The response to Q 260.60 should reference Technical Specification requirements.

10. The response to Q 260.65 should include the commitment incorporated into FSAR Section 17.2.16 that : "For significant conditions adverse to quality not identified by action requests, such as LERs and NRC/INPO/CMAP findings, NQA is involved in the review of such conditions and provides oversight to assure timely follow-up and close out through monitoring, auditing, and commitment verification."

11. The issues below relate to the scope of the operational QA program as described in Tables 3.2-1 and 17.2-1 through 17.2-4.

    a. The staff position is that the following items should have the pertinent QA requirements of 10 CFR 50 Appendix B applied during the operations phase. Such a commitment in FSAR Table 3.2-1 is required.

        (1) feedwater spargers and other reactor internal structures.
        (2) spent fuel pool liner.
        (3) modifications of roof and site drainage systems including such things as drains, parapets, grading, culverts, and channels.
        (4) electro/hydraulic valves of the HPCI and RCIC turbines.
        (5) emergency support facilities display system.

    b. Table 3.2-1 item XVIII.j, "Shore protection at intake structure" should be clarified to show whether or not both the sheetpile retaining wall and the quarrystone revetments adjacent to the service water intake structure are included.

    c. Containment isolation valves that are not part of the principal components shown in Table 3.2-1 but that are required per General Design Criteria 54-56 should be subject to the pertinent provisions of 10 CFR 50 Appendix B. Such a commitment in FSAR Table 3.2-1 is required.

Table 17.1 Regulatory Guides Applicable to QA Program

1. Regulatory Guide 1.8, Rev. 1-R, "Personnel Selection and Training" (5/77).

2. Regulatory Guide 1.26, Rev. 3, "Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants" (2/76).

3. Regulatory Guide 1.29, Rev. 3, "Seismic Design Classification" (9/78).

4. Regulatory Guide 1.30, "Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment" (8/72).

5. Regulatory Guide 1.33, Rev. 2, "Quality Assurance Program Requirements (Operation)" (2/78).

6. Regulatory Guide 1.37, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants" (3/73).

7. Regulatory Guide 1.38, Rev. 2, "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants" (5/77).

8. Regulatory Guide 1.39, Rev. 2, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants" (9/77).

9. Regulatory Guide 1.58, Rev. 1, "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel" (9/80).

10. Regulatory Guide 1.64, Rev. 2, "Quality Assurance Requirements for the Design of Nuclear Power Plants" (6/76).

11. Regulatory Guide 1.74, "Quality Assurance Terms and Definitions" (2/74).

12. Regulatory Guide 1.88, Rev. 2, "Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records" (10/76).

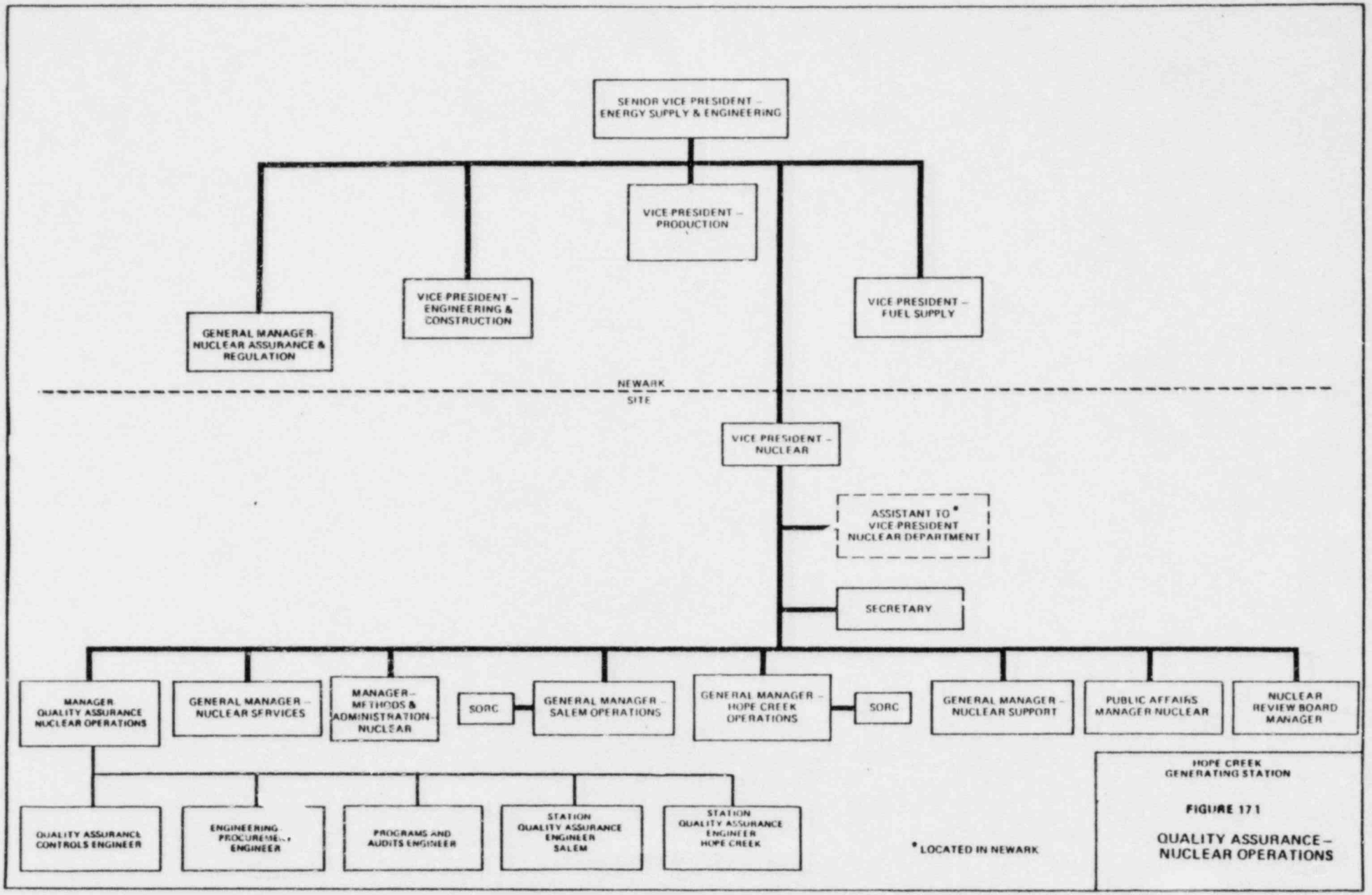
13. Regulatory Guide 1.94, Rev. 1, "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants" (4/76).

14. Regulatory Guide 1.116, Rev. 0-R, "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems" (6/76).

15. Regulatory Guide 1.123, Rev. 1, "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants" (7/77).

16. Regulatory Guide 1.144, Rev. 1, "Auditing of Quality Assurance Programs for Nuclear Power Plants" (9/80).

17. Regulatory Guide 1.146, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants" (8/80).


SENIOR VICE PRESIDENT – ENERGY SUPPLY & ENGINEERING
VICE PRESIDENT – PRODUCTION
VICE PRESIDENT – ENGINEERING & CONSTRUCTION
VICE PRESIDENT – FUEL SUPPLY
GENERAL MANAGER – NUCLEAR ASSURANCE & REGULATION
NEWARK
SITE
VICE PRESIDENT – NUCLEAR
ASSISTANT TO * VICE PRESIDENT NUCLEAR DEPARTMENT
SECRETARY
MANAGER QUALITY ASSURANCE NUCLEAR OPERATIONS
GENERAL MANAGER – NUCLEAR SERVICES
MANAGER – METHODS & ADMINISTRATION – NUCLEAR
SORC
GENERAL MANAGER – SALEM OPERATIONS
GENERAL MANAGER – HOPE CREEK OPERATIONS
SORC
GENERAL MANAGER – NUCLEAR SUPPORT
PUBLIC AFFAIRS MANAGER NUCLEAR
NUCLEAR REVIEW BOARD MANAGER
QUALITY ASSURANCE CONTROLS ENGINEER
ENGINEERING PROCUREMENT ENGINEER
PROGRAMS AND AUDITS ENGINEER
STATION QUALITY ASSURANCE ENGINEER SALEM
STATION QUALITY ASSURANCE ENGINEER HOPE CREEK
* LOCATED IN NEWARK
HOPE CREEK GENERATING STATION
FIGURE 17.1
QUALITY ASSURANCE – NUCLEAR OPERATIONS

Enclosure 2

Draft SER Outstanding Sections

Section	Branch*	Date to be provided **
3.1	PM	general information - SER
3.2	MEB	SER
5.1	PM	summary description - SER
5.2.1	MEB	SER
6.5.1	METB	to be provided by 8/10/84 (d)
Chapter 8	PSB	SER (a)
9.5.2-8	PSB	SER (b)
Chapter 10	PSB	SER (b)
Chapter 11	METB	to be provided by 8/10/84 (d)
Chapter 13	LQB	SER (c)
15.2.3-8	RSB	SER (e)
15.7.3	METB	to be provided by 8/10/84 (d)
Chapter 17	QAB	enclosed with this letter

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* Branch acronyms are as follows:

LQB	Licensee Qualifications Branch
MEB	Mechanical Engineering Branch
METB	Meteorology and Effluents Treatment Branch
PM	Project Manager
PSB	Power Systems Branch
QAB	Quality Assurance Branch
RSB	Reactor Systems Branch

** **Footnotes: (all dates are in 1984)**

(a) A meeting was held in Bethesda, MD on June 6 with the Electrical Section of PSB to identify the open items.

(b) A meeting was held in Bethesda, MD on April 17 and 18 with the Mechanical Section of PSB to identify the open items.

(c) A meeting was held at the Hope Creek site on May 2 to discuss open items in Section 13.2. The remaining sections were reviewed during an onsite audit performed on July 23, 24 and 25.

(d) Open items are listed in letter dated July 24, 1984 (Schwencer to Mittl).

(e) These sections do not appear as a result of a format error.