

EVALUATION RESEARCH CORPORATION
(ERC)

BRAIDWOOD CONSTRUCTION ASSESSMENT PROGRAM (BCAP)
INDEPENDENT EXPERT OVERVIEW GROUP (IEOG)

Second Interim Report
(October - December 1984)

RE Hansel for

John L. Hansel
Project Manager

2/15/85

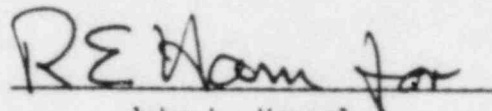
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STATEMENT OF INDEPENDENCE

This Second Interim Report delineates the progress and activities of the Independent Expert Overview Group (IEOG) during the period of October through December 1984 in overseeing the Braidwood Construction Assessment Program (BCAP) being conducted by Commonwealth Edison Company at the Braidwood Station.

As the ERC Project Manager for this overview activity, I certify that the IEOG has continued to maintain independence from other organizations at the Braidwood Station and that the IEOG has not been coerced by any of the parties involved but rather has received complete cooperation from each project participant contacted.

A handwritten signature in black ink, appearing to read "RE Hansel for", written over a horizontal line.

John L. Hansel
Project Manager

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1.0 EXECUTIVE SUMMARY

The activities of the Independent Expert Overview Group (IEOG) are presented herein for the period of October 1984 through December 1984. During this period, the IEOG continued the overview begun previously. However, the character of the IEOG overview changed this period in response to the change in BCAP activity from programmatic emphasis to implementation of the program previously established. Therefore, the effort of the IEOG also has changed to include overview of the BCAP inspections as well as the BCAP checklists and documentation reviews.

In consonance with the changing needs of the program, the IEOG has added three qualified nuclear inspectors. Each is certified Level III in accordance with ANSI/ASME N45.2.6. These certifications are in mechanical, electrical, and structural disciplines.

Although the IEOG continued to review BCAP documentation, only one new program procedure was reviewed -- BCAP-25, "Evaluation of Results". The rest of the documents reviewed consisted of revisions of various program documents, several checklists from CSR, and a number of Quality Assurance Special Instructions.

Based on IEOG audits and surveillance of BCAP QA, the IEOG considers the BCAP QA program adequate, effective and meaningful. Therefore, the IEOG has reduced its auditing of BCAP and has instead continued its auditing to BCAP QA and to surveillance of BCAP QA audits. However, before this decision was reached, three audits had been performed. One of these resulted in issuance of three concerns; the rest resulted in no action items.

The IEOG inspectors performed eighteen surveillances of BCAP inspectors as they performed their inspections. In addition, the IEOG inspectors performed thirty-three overinspections using BCAP inspection packages. These surveillances and inspections will continue throughout the program.

As a result of this surveillance and overinspection, two IEOG observations were issued dealing with problems developing in BCAP inspection. Both observations have been resolved and closed. One of these, BCAP-OBS-003, dealt with an embedded plate not shown on the design drawing in the package. The inspector failed to issue an observation recording this anomaly. The other dealt with similar errors in inspection that indicated inadequate inspector preparation.

At the close of this period, there were three concerns which the IEOG retained open. However, one of these was satisfied and closed two days later. The two remaining concerns are:

1. Resolution of the inspector reinspection portion of RSCAP.

This can be a time consuming process. However, it has not started nor is a decision to start apparent. In the meantime, the BCAP clock is running. If BCAP is to overview this process, it must be started soon.

2. The resolution of the problem of missing and inappropriate signatures for the verification drawings for small bore piping.

In the document review of small bore piping, BCAP observed many missing and inappropriate QC signatures on drawings used for configuration verification. Since there is no sample expansion for document review discrepancies, the IEOG concern is how the rest of the documents will be reviewed.

With the implementation phase of BCAP now underway in all elements of the program, the IEOG emphasis has changed to provide the proper overview function. This change includes continued surveillance of BCAP CSR inspectors, overinspection of a sampling of BCAP inspections, overview of RPSR procedure review, and overview of RSCAP documentation of results. Additionally, the IEOG will be involved in the review of BCAP observations

determined to be invalid and those determined by Sargent and Lundy (S&L) not to be design significant. This is an important function since the consideration of sample expansion is based on the S&L response designating a design significant observation.

2.0 INTRODUCTORY REMARKS

The Evaluation Research Corporation (ERC) released the First Interim Report of the Independent Expert Overview Group (IEOG) on October 12, 1984. The First Interim Report documented the IEOG activities in overviewing the Braidwood Construction Assessment Program (BCAP) from March through September, 1984.

This is the Second Interim Report, which documents IEOG activities for October through December, 1984. This report addresses progress in BCAP during that time frame and is not intended to reiterate the intent or scope of BCAP, except as related to IEOG activities during the specified three month period.

3.0 ACTIVITIES AND PROGRESS

3.1 Staff

3.1.1 Staff Changes

The IEOG has been careful to staff its organization with personnel corresponding to the overview responsibilities for BCAP.

With the initiation of CSR inspections during the time frame covered by this report, the IEOG has added three qualified inspectors to the staff. The inspection personnel added are collectively qualified in Mechanical, HVAC, Welding, Civil/Structural, and Electrical. Each is certified Level III in accordance with the requirements set forth in ANSI/ASME N45.2.6.

Additional ERC personnel were brought in on an as-needed basis to cover specific needs and then returned to their base organization. These needs included:

- 1) Independent internal IEOG audit
- 2) Peak loads in surveillances

All such personnel were specifically selected for their particular expertise in the areas where additional resources were deemed necessary.

At the present time, the IEOG is staffed with ten (10) full-time and three (3) scheduled, part-time personnel. However, the IEOG plans to remain alert to changes within BCAP or the BCAP organization such that proper staffing is maintained.

The present IEOG organizational alignment is depicted in Figure 3.1.

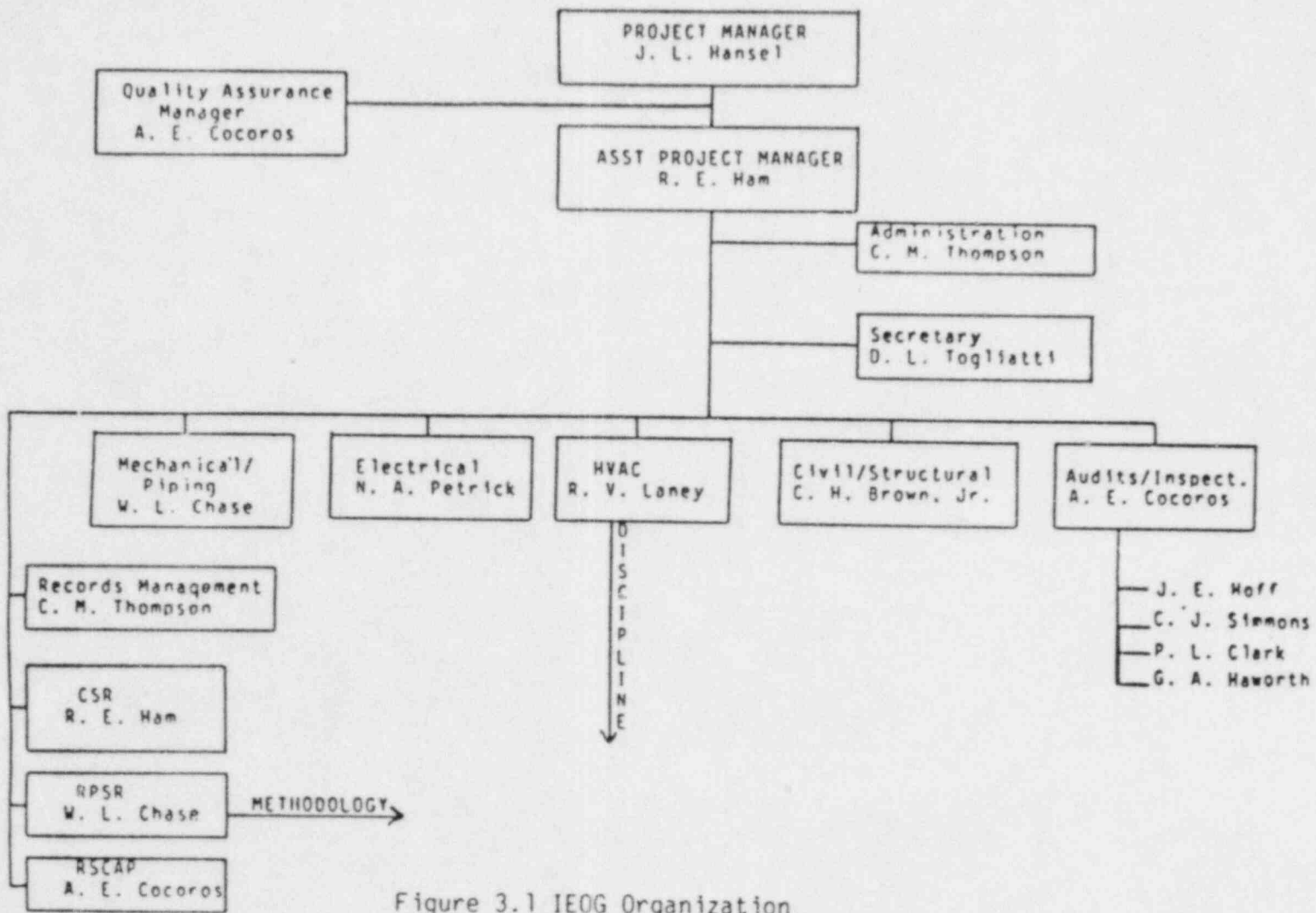


Figure 3.1 IEOG Organization

3.1.2 Training and Certification

Due to the visibility and creditability requirements associated with IEOG responsibilities, the IEOG has been careful to ensure that all personnel engaged in supporting IEOG activities have undergone appropriate training and orientation in accordance with ERC QA procedures, even for short-term assignments. All such training and orientation has been appropriately documented in IEOG files. In addition, verification of the background for all personnel is documented in ERC files.

Included in the on-going training requirements for IEOG personnel, especially for the full-time on-site personnel, is a review of all revisions to BCAP plans, procedures and checklists.

3.2 Overview Activities

3.2.1 General

During this period, the overview activities of the IEOG have increased dramatically and have changed in character. Previous overview activities were directed toward assuring the programmatic implementation. The overview activities this period have been directed heavily toward the BCAP implementation of the program delineated by the plans and procedures previously established.

Many new documents have been issued by BCAP including checklists and instructions for performing reinspection of completed QC accepted work. With one exception, the programmatic BCAP documentation was in place at the beginning of the period. This additional document, BCAP-25, was issued during the period. From the viewpoint of the IEOG, BCAP-25 is important since this document provides the procedures for analyzing the results of CSR inspections. The procedures provide for sample expansion, if needed, and evaluation of the results for programmatic discrepancies.

Also, many revisions to BCAP documents have been issued. The IEOG has reviewed each of these and provided comments where appropriate. Details are included in Section 3.3.

Each element of BCAP, BCAP administration, and BCAP QA have been audited by the IEOG. The results of the last three of these audits are included in Section 3.4; the reports are discussed in Appendix 6.5.

Some of the overview activities have resulted in discrepancies being discovered. These are recorded as observations which are discussed in Section 3.6.

Also, a few of the overview activities have resulted in issues of concern to the IEOG. These are retained in open status until resolved. A discussion of all issues opened during the period together with currently open issues is included in Section 3.7.

3.2.2 Element Overviews

Each element of BCAP has been overviewed by the IEOG discipline engineers and IEOG engineers assigned to overview each element (see Figure 3.1). Additionally, the IEOG has overviewed the BCAP administration and BCAP QA. These overviews have consisted of both formal and informal meetings with individuals within each organization. This overview has provided the IEOG with good background and information on the status and progress within each of these organizations.

CSR is moving ahead with the reinspections and has implemented document reviews. The IEOG inspectors and engineers have been following this work by reviews, surveillances, and overinspections. Generally, this work is going well. Also, the CSR observations and S&L responses as to design significance have been reviewed by IEOG personnel.

RPSR has continued to develop the checklists necessary to review the procedures extant June 30, 1984. Early next period, the actual reviews should begin. The IEOG overview of this work shows it to be complete and comprehensive.

Although RSCAP is moving ahead with both the documentation reviews and the implementation reviews, the implementation of all eleven corrective

action programs are not progressing rapidly. One of the IEOG concerns involves the fact that the Inspector Reinspection Program has not started.

The current IEOG assessment is that BCAP remains technically sound and should provide reasonable assurance of the quality of construction at the Braidwood Station. The IEOG will continue to overview and assess the efficacy of each BCAP element and will provide reports of these assessments in the future.

3.3 Document Reviews

During this period, the IEOG has continued to review the documentation issued by the BCAP organizations. These documents are comprised of initial issues of checklists and BCAP-25, and revisions of existing documents. The documents reviewed during this period are listed by revision in Tables 3.1, 3.2, and 3.3.

In addition, the IEOG has reviewed the observations issued by BCAP and the replies from S&L as to the design significance of each observation.

The few comments provided to BCAP by the IEOG were for clarification and programmatic improvement. Although each comment was considered to be important, none was classified as mandatory.

3.4 Audits

3.4.1 Audits Performed

Implementation of the ERC Program of auditing BCAP continued during this period. Three audits were performed which completed the first round of auditing of the use of BCAP Project Procedures and the use of BCAP Quality Assurance Procedures. The audits were conducted to assess adherence to the program element procedures and to evaluate the involvement

Table 3.1. BCAP Documents Reviewed

Document No.	Title	Revision No.
	Overview Plan	1 and 2
	CSR Plan	1 and 2
	RSCAP Plan	1 and 2
BCAP-01	Program Indoctrination for Employees	2 and 3
BCAP-02	Organization and Responsibility	1 and 2
BCAP-03	Records Management	1 and 2
BCAP-04	BCAP Interface with Contractors and Architect/Engineer	2
BCAP-06	Observation and Discrepancy/Concern Processing	3, 4, 5, and 6
BCAP-07	BCAP Reports	1 and 2
BCAP-20	CSR - Establish Population	2
BCAP-21	CSR - Sample Selection	2, 3, and 4
BCAP-23	CSR - Preparation of Reinspection and Document Review Packages	1
BCAP-24	CSR - Performance of Reinspection and Document Review	1 and 2
BCAP-25	CSR - Evaluation of Results	0
BCAP-41	RPSR - Identification of Specifications and Contractor Procedures	1
BCAP-42	RPSR - Preparation of Checklists	1, 2, and 3
BCAP-43	RPSR - Review of Contractor Procedures	1
BCAP-60	RSCAP - Review Methods	1

Table 3.2. Checklists and Instructions Reviewed

Checklist No. Inspections	Checklist Title	Revisions No.
<u>Reinspection</u>		
CSR-I-M-01	Small Bore Piping Configuration	1
CSR-I-H-01	HVAC Duct	3
CSR-I-H-03	HVAC Hangers and Auxiliary Steel	0 and 2
CSR-I-E-CND	Conduit	1 and 2
CSR-I-E-CBL	Cables	0
CSR-I-E-COH	Conduit Hangers	0
CSR-I-E-CBP	Cable Pans	0
CSR-I-H-02	HVAC Equipment Installation	0
CSR-I-M-04	Large Bore Piping Configuration	0

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Table. 3.3. BCAP Quality Assurance Documents Reviewed

Document Number	Title	Revision Reviewed
	QA Overview Group Plan	1
QASI-02	Control of Quality Assurance Special Instructions	3
QASI-04	Training, Qualification and Certification of QA Personnel	3 & 4
QASI-06	Document Reviews	3
QASI-07	Surveillances	3
QASI-08	Audits	3
QASI-16	Performance of Reinspection and Document Review Overview	2 & 3
QASI-17	Action Item Requests	0

of the BCAP Quality Assurance Department. The following tabulation summarizes the audits conducted:

<u>Audit No.</u>	<u>Date Performed</u>	<u>Procedures Audited</u>	<u>Letter No. & Date</u>
ERC-84-103	10/24/84	BCAP 40-43	BCAP-023, 9/14/84
ERC-84-104	10/5/84	QASI 01-16; SQI 18, 25, 27, 28	BCAP-032, 9/26/84
ERC-84-105	10/19/84	BCAP 20-25	BCAP-039, 10/18/84

The audits were performed in accordance with ERC Procedure BCAP-18.1, "Quality Assurance Audit Program," with personnel meeting the qualifications of ERC Procedure BCAP-18.2, "Qualification of Audit Personnel." Each of the Lead Auditors met the qualification requirements of ANSI/ASME N45.2.23, "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants," and were certified accordingly.

An audit plan and checklists were developed for each audit by the Lead Auditor, approved by the Quality Assurance Manager and implemented during the course of the audit. The checklists were used to document the detailed results of the audit.

A written report (tabulated below) was transmitted to the responsible manager whose organization was audited. These reports documented the course of each audit and the results of each. Where findings of deviations or concerns were noted, the report required the audited organizations to reply within a specified time agreeable to both parties. The response was to identify the corrective action to be taken and the date for implementation of the action. All corrective actions have been implemented and all audits are considered closed. Appendix 6.5 contains copies of the individual audit reports.

<u>Audit No.</u>	<u>Report No. and Date</u>
ERC-84-103	ERC BCAP-064, 11/2/84
ERC-84-104	ERC BCAP-043, 10/10/84
ERC-84-105	ERC BCAP-058, 10/30/84

3.4.2 Overview of BCAP QA Audits

In addition to the audits conducted, ERC personnel participated as observers during three audits conducted by the BCAP Quality Assurance organization (Audits No. BQAA-IV-05, BQAA-IV-16 and BQAA-IV-07). During these audits, ERC personnel observed the methods used and the effectiveness of the audits. Subsequent to these, a meeting was held between ERC and BCAP Quality Assurance management personnel to discuss the evaluation and critique of these audits by ERC.

Presently, ERC plans to continue to act as observers during the conduct of BCAP Quality Assurance audits of BCAP operations. It is intended to operate in this mode as observers rather than conduct the audits as long as ERC considers the BCAP Quality Assurance audits effective and meaningful. At least one audit is being planned by the IEOG during the next quarter. This will audit BCAP Quality Assurance in its implementation of the BCAP Quality Assurance Program.

3.5 Overinspections

As committed by letter from Mr. J.J. O'Connor, Commonwealth Edison Company, to Mr. James G. Keppler, U.S. Nuclear Regulatory Commission, concerning the Braidwood Construction Assessment Program, NRC Docket Nos. 50-456 and 50-457, dated August 30, 1984, IEOG field inspections and surveillances of BCAP reinspection activities have been performed. Listed in Table 3.4 are verification packages that have been overinspected or surveilled.

Two observations were written as a result of overinspection and surveillance efforts of the IEOG. Both observations have been resolved (see Section 3.6).

3.6 Observations and Requests for Corrective Action

3.6.1 Observations Issued

During this report period, there were two observations issued. Observation BCAP-OBS-003 and Observation BCAP-OBS-004 were issued. Both

Table 3.4. Verification Packages Surveilled or Overviewed by the IEOG

Surveillance	Overinspection
CSR-I-H-01-015	CSR-I-H-03-016
CSR-I-H-03-016	CSR-I-H-03-018
CSR-I-H-03-018	CSR-I-H-01-008
CSR-I-H-03-008	CSR-I-M-01-002
CSR-I-H-01-923	CSR-I-H-03-008
CSR-I-H-03-005	CSR-I-H-03-005
CSR-I-M-01-015	CSR-I-H-03-006
CSR-I-H-01-020	CSR-I-H-01-040
CSR-I-M-01-011	CSR-I-M-01-011
CSR-I-M-01-006	CSR-I-M-01-006
CSR-I-M-01-018	CSR-I-M-01-018
CSR-I-M-01-019	CSR-I-M-01-019
CSR-I-M-01-020	CSR-I-M-01-039
CSR-I-S-01-09	CSR-I-M-01-054
CSR-I-S-01-011	CSR-I-H-01-024
CSR-I-S-01-21	CSR-I-H-01-033
CSR-I-S-01-15	CSR-I-M-01-048
CSR-I-S-01-59	CSR-I-M-01-056
	CSR-I-M-01-055
	CSR-I-E-CND-018
	CSR-I-E-CND-027
	CSR-I-E-CND-028
	CSR-I-E-CND-039
	CSR-I-E-CND-046
	CSR-I-S-01-21
	CSR-I-S-01-18
	CSR-I-S-01-08
	CSR-I-S-01-49
	CSR-I-S-01-32
	CSR-I-S-01-26
	CSR-I-S-01-58
	CSR-I-S-01-42
	CSR-I-S-01-56

Legend

- I = Reinspection
- H = HVAC
- M = Mechanical
- S = Structural
- E = Electrical
- CND = Conduit

observations dealt with BCAP inspections and are explained in detail in Paragraphs 3.6.2, 3.6.3, 3.6.4, and 3.6.5. Copies of both observations are contained in Appendix 6.6.

3.6.2 Observation BCAP-OBS-003

BCAP-OBS-003 was developed from an IEOG surveillance during the re-inspection of Verification Package CSR-I-S-01-09. An embedded plate had been installed which was not identified on Sargent and Lundy (S&L) drawings. Rather than preparing an observation, as required by procedures, the inspector consulted with CSR engineers and was advised to note it in the "Remarks" column.

BCAP-OBS-003 addressed a non-compliance with BCAP procedures when the BCAP inspector did not prepare an observation for the discovery of the embedded plate. A copy of Observation BCAP-OBS-003 is included in Appendix 6.6.

3.6.3 Observation BCAP-OBS-004

BCAP-OBS-004 was developed as a result on on-going monitoring of the reinspection process. The observation dealt with four (4) different anomalies which caused concern that inadequate training and/or adherence to procedures was occurring.

BCAP-OBS-004 addressed an overall IEOG concern with the reinspections, that inadequate training and/or adherence to procedures was suspect because of continuing anomalies during BCAP reinspections. The observation identified four (4) occurrences which are noted on the observation. A copy has been included in Appendix 6.6.

3.6.4 Status of Observations

Both observations were resolved to the satisfaction of the IEOG and appropriate corrective actions have been implemented.

3.7 Issues

As with results discussed in the First Interim Report, many issues have been opened during this period of performance. BCAP personnel have remained very objective and responsive in understanding the basis for IEOG comments and in preparing acceptable resolutions.

3.7.1 Status of Issues from First Interim Report

The First Interim Report discussed three open issues. These were:

1. Revisions of selected documents to incorporate revisions previously committed to the IEOG.
2. Response to Observation BCAP-OBS-002 (CSR Small Bore Piping Configuration Population).
3. Inspector certifications and the certification process.

The documents of concern in the first issue above have been revised to incorporate the IEOG comments. The revised documents are the BCAP Program Document, the BCAP Overview Plan, the RSCAP Plan, the CSR Plan, BCAP QA Plan and BCAP Procedures BCAP-07 and BCAP-60.

BCAP-OBS-002 (Issue 2 above) was cleared by an adequate response from the BCAP Task Force. Additionally, the checklist and instruction for small bore piping configuration has been satisfactorily revised and accepted.

The BCAP Task Force has incorporated the requirements of ANSI/ASME N45.2.6 into its inspector certifications (Issue 3 above) and the certification process. The IEOG overview of this process and the associated record keeping has shown no further anomalies in this area.

As a result of the above actions, all open issues stated in the First Interim Report have been resolved and closed.

3.7.2 Issues Raised This Reporting Period

Several issues have been opened during this reporting period. Although only three of these remained open at the end of the period, all will be discussed in subsequent paragraphs.

3.7.2.1 Delineation of Issues

During this reporting period, the following issues were raised:

1. Response to Observations BCAP-OBS-003 and BCAP-OBS-004. These both dealt with concrete placement.
2. Inspector Certification - Level III Electrical Inspector not certified.
3. Differences in inspection results between BCAP Inspectors and BCAP QA Inspectors.
4. Control points for reinspections. This primarily applied to the structural population.
5. Resolution on "Hold Tags" for areas to be reinspected by BCAP inspectors.
6. Resolution of inspector reinspection. This is an area to be overviewed by RSCAP.
7. Evaluation of CSR discrepancies to the most adverse location within the population.
8. Resolution of documentation problems found during review of documentation for the small bore piping configuration.

3.7.2.2 Significance and Status of Each Issue

The significance and status of each issue listed above is discussed in this section in the numeric order given above.

1. The texts of Observations BCAP-OBS-003 and BCAP-OBS-004 are given in Appendix 6.6. Both dealt with reinspection errors and omissions developing early in the reinspection

of the structural population. It was important to correct reporting errors made during reinspections before they became serious habits. Therefore, the observations were written to provide a vehicle for developing corrective measures.

These observations were closed on November 29, 1984. The corrective actions involved both documentation changes and training of BCAP personnel.

2. At the time the concern on inspector certification was written, the BCAP Level III Electrical Inspector had not been certified. This resulted in a delay in the initiation of electrical reinspections since the Level III Inspector was needed to certify the Level II Inspectors. Essentially, all reinspections are carried out by the Level II Inspectors.

This issue was closed on November 9, 1984, when BCAP certified a Level III Electrical Inspector.

3. Although there may be minor differences between inspectors inspecting the same work, major differences are undesirable. For this reason, the IEOG was concerned when the results of reinspections by the BCAP inspectors and the BCAP QA inspectors were quite different.

The differences in inspection results were identified as part of the problem of program startup. This problem was settled by a series of meetings, reviews, and corrective actions within BCAP and BCAP QA over the period. Therefore, this issue is considered closed.

4. During the visual reinspections of concrete walls, certain discrete measurements were required. With many marks on the walls, the inspectors could not be sure

which marks to use as the official survey marks to control their measurements. This was a concern to the IEOG because erroneous results could ensue from the use of the wrong control points.

This issue was still open at the close of this reporting period.

5. To preclude additional work on, in, or around samples selected for reinspection by BCAP, the BCAP Task Force decided to use "Hold Tags" installed in the sample area. Although the decision to install the "Hold Tags" had been made, the procedural mechanism for installing the tags was not in place. The IEOG issue was that without the "Hold Tags" in place, additional work or repair could proceed on the selected sample.

The issue was resolved by issuance of Project Procedure PCP-15 on December 11, 1984. This procedure specifies fully the requirements for and the limitations inherent in placement of the hold tags.

6. One of the elements of RSCAP is the overview of the inspector reinspection in the plant. The IEOG issue is that the inspector reinspection has not been initiated nor is the decision made as to how to proceed. The BCAP clock continues to run, so if RSCAP is to overview this element, an early decision and implementation must be made.

The inspector reinspection issue is still open.

7. There was a concern that CSR samples may not cover the most severely loaded items in the population. For this reason, the IEOG was concerned that observations should be evaluated against some of the more critically loaded

items in the population. However, since BCAP is based on a statistical sampling, statistically, some of the more heavily loaded items should be in the initial sample of the population. Also, the BCAP Task Force intends to select a sizable portion of the engineering judgment samples from those items that have been identified by S&L to be highly stressed or critically loaded. For these reasons, this item was closed.

8. During the review of documentation supporting the population, Small Bore Piping Configuration, several red-lined drawings were found which had not been signed or initialed by a certified QC inspector. Others were found which were signed by a QC inspector whose certification post-dated the drawing issue date. This violates the procedures which require the signature/initials of currently qualified, certified, QC inspectors.

This item is still open. Also, there is no indication what steps are to be taken to assure the integrity of the remaining small bore piping drawings since BCAP does not expand the sample for document review.

3.7.3 Open Issues at the End of the Period

Based on the discussions in the sections above, there were three issues open at the end of this reporting period. These are:

1. Control points for reinspection.

Although this was open at the end of this reporting period, it was closed January 2, 1985, with the establishment of specific control (or survey) points within the plant suitable as benchmarks for the use of inspectors making measurements. Additionally, the inspectors were trained to recognize these marks.

2. Resolution of the inspector-reinspection element of RSCAP.

To settle this issue requires the making of a project decision as to how the inspector reinspection problem is to be handled and the specifying of a starting date for initiating the designated program.

3. The problem of missing and inappropriate signatures on the verification drawings for small bore piping and how the integrity of the remaining small bore piping verification drawings are to be assured.

To settle this requires a project decision as to how the integrity of the small bore piping verification drawings is to be assured since BCAP does not expand the sample for document review discrepancies.

4.0 PROJECTED NEAR-TERM ACTIVITIES

During this period of performance, the IEOG has shifted overview activities to be responsive to progress in BCAP. In consonance with this shift, the following highlights are noteworthy:

1. A transition from the IEOG performing regularly scheduled audits of BCAP to on-going surveillances of BCAP QA. This transition was accompanied by the IEOG passing results of its surveillances on to BCAP QA, so their audits would cover the areas of concern by the IEOG. This change appears to have been satisfactory.
2. Initiation of surveillances for BCAP reinspections and review of completed reinspection packages. This activity has resulted in two observations as discussed earlier.
3. Reviews of the BCAP observations determined to be non-design significant by Sargent and Lundy (S&L). This review has resulted in considerable discussion with BCAP and S&L personnel regarding the structure and content of review conclusions.

The next period of BCAP performance and, hence, IEOG activities are expected to undergo additional changes. As a result, IEOG activities are expected to be highlighted by the following:

1. With planned increases in the BCAP inspection resources, the IEOG will be alert for the need to increase inspection overview resources.
2. Even though the IEOG has performed a few overinspections, an increase in the number of IEOG overinspections is expected.

3. With front-end activities nearing completion for RPSR and RSCAP elements, increased surveillance on reviews and evaluations in those elements is expected.
4. A significant increase in the review of observation evaluations determined to be non-design significant by Sargent and Lundy.
5. Review of observations determined to be non-valid by CSR resources.
6. Continued overviews by IEOG technical experts in all elements to ensure the technical accuracy of BCAP performance.
7. Continued overviews to observe interactions among BCAP elements to ensure that problems surfaced in one element, which may affect another element, are evaluated/incorporated as appropriate.
8. Performance of regularly scheduled audits of BCAP QA.
9. Performing surveillances of BCAP QA audits.
10. Review of the recertifications of the BCAP Quality Assurance inspectors.

5.0 IEOG ASSESSMENT OF BCAP TO DATE

As stated in the First Interim Report, the IEOG remains positive as to the design of BCAP and performance of BCAP personnel.

The Program appears to have settled down to a production mode for the CSR element and should achieve the review/conclusions mode for RPSR and RSCAP elements during the next reporting period.

The IEOG continues to view the BCAP and the BCAP team members as a positive approach for assessing the quality of construction of the Braidwood Plant. Issues brought up by the IEOG have received positive attention by BCAP personnel and it is expected that these will continue to be dealt with positively by BCAP personnel.

6.0 APPENDICES

6.1 Resumes of Added Personnel

CHRIS J. SIMMONS

Mr. Simmons has 14 years experience in construction with the last seven being in the Nuclear Power Plant Field. Experience includes: Level III Group Supervisor, developing/implementing training, certification and maintenance of certifications for inspection personnel. Technical and Quality Assurance activities associated with Mechanical, Civil and HVAC disciplines, including overseeing contractor QA/QC activities.

EXPERIENCE:

- 1984 - Present Evaluation Research Corporation, Oak Ridge, TN. Quality Assurance Engineer. Evaluation of quality assurance and quality control procedures for compliance with applicable codes, standards, specifications, and program requirements. Develop surveillance checklists and perform surveillances of quality assurance activities. Evaluate inspection documentation for adherence to approved inspection procedures. Certified Level III Inspector in accordance with ANSI N45.2.6 and Qualified Auditor in accordance with ANSI N45.2.12.
- 1982 - 1984 Consumers Power Company, Midland Energy Center Project, Midland, MI. HVAC Training Support Group Supervisor, Midland Power QA Division, Level III per ANSI N45.2.6. Responsibilities were to provide supervision and technical direction to HVAC Training Support Group. Developed and implemented the HVAC training program for the certification of inspection personnel in accordance with ANSI N45.2.6. Supervised the HVAC training program which includes the orientation process, programmatic, initial and continuing training and the certification of inspection personnel in accordance with departmental procedures. Prepared and implemented a tracking system for the maintenance of certifications. Approved lesson plans and examinations developed for the certification of inspection personnel. Selected and approved instructors to perform HVAC training. Reviewed Project Inspection Plans for conformance to the quality assurance program prior to issuance.
- 1980 - 1982 Public Service of Indiana, New Washington, IN. QA Surveillance Specialist Mech/Civil Level III per ANSI N45.2.6, Marble Hill Nuclear Division. Performed surveillance of site contractor activities to assure compliance with approved procedures, drawings, specifications, and applicable codes for Category I and II nuclear construction. Performed surveillance on the on-site testing organization for site construction activities to verify compliance with procedures, specifications, and applicable codes, and ascertained and/or identified and obtained corrective action for

nonconforming hardware. Identified and reported conditions, materials, equipment, and activities that were in noncompliance with codes, standards, specifications, or procedures. Had "Stop Further Processing" authority when nonconforming conditions were identified. Reviewed quality verification documentation to assure compliance with approved procedures.

1977 - 1979

Louisiana Power and Light, Hahnville, LA. Quality Control Welding Inspector Mech, certified Level II per ANSI N45.2.6, Waterford III Nuclear Division, Tompkins-Beckwith, Inc. Monitored and approved all aspects of welding procedures and welders qualifications. Inspected fabrication and welding of safety and non-safety related piping systems. Hydrostatic testing of safety and non-safety piping. Verified weld identification and associated piping subassemblies and/or components as per erection drawings. Surveillance of welding parameters, i.e., amperage voltage, gasflow, etc. Inspected welds on pipe supporting assemblies. Reviewed documentation when work was complete and assured inspection points were satisfied. Inspection to: ASME III Subsection, NA, NB, NC, ND, and NE, AWS D1.1, ANSI B31.1, ASME Section IX.

1973 - 1977

Metallurgical Engineers of Atlanta, Atlanta, GA.
Supervisor Quality Control Level II ASNT.

Nondestructive Evaluation - Certified ASNT Level II to SNT-TC-1A in all phases of PT, MT, RT, UT (thickness and flaw detection).

Welding - Development of welding procedures, certification of welders and procedures, shop and field inspection of weldments. Inspected and worked to: ASME Section II - A, B, C, III Class 1, 2, 3, and MC Components, Sections V and IX, AWS D1.1 ASTM, ANSI.

Mechanical Testing - Stress - strain analysis, yield-point, ultimate strength, elongation, Brinell and Rockwell hardness, Charpy impact.

Metallurgical Analysis - Failure analysis, photomicrographs and photomacrographs, grain size, orientation, fusion, defects, thermal effects.

1969 - 1972

U.S. Army - Special Forces. Attached to N/75th Airborne Rangers. Related job experience is as follows: Intermediate and Permanent Construction and/or Demolition of bridges, dams, buildings, runways, and roads. Honorable Discharge: Awarded Bronze Star and other various medals.

CHRIS J. SIMMONS - 3

1969 Southwest Rolling Mills, Los Angeles, CA. Quality Control Welding and Material Inspector Certified ASNT Level I SNT-TC-1A Dye Penetrant and Magnetic Particle Inspection. Verified welding and fabrication of vessels and assemblies as per erection drawings. Hydrostatic testing of vessels. Identification of welds and material as per specifications. Dye Penetrant and Magnetic Particle inspection steel erection as per erection drawings.

EDUCATION:

1967 - 1968 Stevens Institute of Technology, Hoboken, New Jersey - Mechanical Engineering

1971 Austin Peay State University, Clarksville, TN - Engineering

SPECIAL TRAINING: Lockheed, Marietta, GA - Blue Print Interpretation Master Tooling

Armed Forces - Fort Bragg, NC, Intermediate Construction and Demolition of Bridges, Dams, Runways and Buildings

Convair School of X-Ray, Gamma Ray, Industrial Interpretation, Chamblee, GA

Kraut Kramer - Branson, Stanford, CT, Advance Weld Inspection

Special courses in all phases of NDE, Radiography, Ultrasonics, Magnetic Partical, Dye Penetrant

CERTIFICATIONS

AND

AFFILIATIONS:

Certified Level III per ANSI N45.2.6

American Welding Society - Certified Weld Inspector
80116991

American Welding Society - Member

Aircraft Owner's & Pilot Association

PAUL LEONARD CLARK
10516 Walter Thompson Drive
Vienna, Virginia 22180
703-938-0997

Education

1958 - B.S.M.E. - North Carolina State University
Raleigh, North Carolina
Average: 2.88/4.00

Registration

E.I.T., Virginia
P.E., Virginia

Professional Membership

ASME, NSPE

Specific Areas of Experience

(Stress and Vibration Analysis
Machine Design
Heat Transfer Analysis
Mass Properties and Weights Analysis
Air Compressor System
Environmental Control System
Mechanical Design Associated with Optical Systems
Pressure and Vacuum Vessel Design
Material Flow Studies
Environmental Test Coordinator
Design Associated with Infrared Airborne Telescope
Reliability and Failure Modes and Effect Analysis (FMEA)
Ship Board Material Handling Equipment Systems
Environmental Analyzers for Air Contamination
Computer Programs for Stress and Mass Properties Analysis
Liaison Engineering - Shop, Field and Vendor
Management of Engineering Technical Personnel
Quality Control and Maintainability
Mechanical Design Associated with Re-Entry Vehicles
Missile Ground Support Equipment
Structure Analysis
Specification and Proposal Writing
Electrical Connectors and Cable
Electronic Packaging
Conveyor Systems
Design of Air and Fluids System
Nuclear Power Plants-System Engineering (piping) and writing Pre-Operational and Surveillance Test Procedures
-Instrumentation and Control Systems
-NUREG 0578 (TMI Short-Term Lessons Learned) 0660 & 0737
-Equipment Qualification to the requirements of IEEE-323-1974, NUREG-0588, and I&E Bulletin 79-01B
Property Management

Resume Update of Paul Leonard Clark

April 1984 to present

Vermont Yankee Nuclear Power Station
Vernon, Vermont
Assigned to Construction Department

Responsible for the electrical installation and test procedures for engineering design changes, and the implementation and testing of these design changes during the 1984 refueling outage.

August 1983 to August 1984

Shoreham Nuclear Power Station
Wading River, New York
Assigned to Technical Support Dept.

Responsible for the review of surveillance test results and procedures to ensure compliance with station technical specifications and procedures, ANSI/IEEE Std-338-1977, Reg. Guide 1.33 and ANSI/ANS-3.2-1982. Resolved problems with procedures and/or test results by means of meetings with plant staff and/or recommended revisions of procedures. Certified to perform QA level 3 function per ANSI N45.26-78.

November 1982 to August 1983

Contract Engineer Assigned to
New York Power Authority

Assigned to TMI project at the James Fitzpatrick Nuclear Power Station. Responsible for the design review and implementation of plant modifications required to satisfy NUREG 0578, 0600, and 0737. Tasks: Preparation of work tracking forms, field revision notices, production orders, pre-operational test procedures, specifications for Class 1E equipment, field verification of plant modification, conduct pre-operational tests and supervision of crafts.

Paul Leonard Clark

February 1980 to present

Senior Engineer assigned to
Boston Edison Company
Boston, MA

Assigned to the T.M.I. Task Force Team: responsible for the modification and design of safety related control systems for Pilgrim Nuclear Station No. 1, BWR, to satisfy NUREG 0578 (T.M.I. Short-Term Lessons Learned), 0660 and 0737. Tasks: Preparation of schematics and wiring diagrams, plant design change requests, field revision notices, production orders, specification for Class IE equipment, and pre-operational test reports, control panel design (layout), vendor and field liaison. Assigned to Pilgrim Station for the implementation of T.M.I. modifications. Equipment qualification to the requirements of IEEE-323-1974, NUREG-0588 and I&E Bulletin 79-01B.

January 1976 to February 1980

Senior Engineer assigned to
Bechtel Power Corporation
San Francisco, California

Assigned to Grand Gulf Unit 1 and 2, 1100 MW BWR's. Responsible for specifications for control valves, containment leak rate test, electrical and pneumatic control actuators, seismic instruments and containment post loca gas monitoring equipment; and all documentation, manuals, and drawing requirements for the above specifications; vendor and field liaison.

Previously assigned to Millstone Unit 2, 830 MW PWR. Responsible for specifications for control valves, balance of plant pneumatic and electronic instruments, HVAC logic diagrams, all documentation, manual and drawing requirements for the above specifications, vendor and field liaison.

April 1973 to January 1976

Senior Mechanical Engineer/Supervisor
assigned to Baltimore Gas and Electric
Company
Baltimore, Maryland

Assigned to Calvert Cliffs Nuclear Power Site. Responsible for writing and conducting pre-operational and surveillance test procedures for electronic systems-reactor regulating system, reactor protective system, nuclear instrumentation, diesel generators, pressurizer level and pressure control system, and pressure, level and temperature instrument loops; review of test procedures to ensure that plant technical specifications are not violated; presentation of test procedures to POSRC for approval; supervision of engineers and technicians; and system engineering-ensuring that start-up systems are installed accordingly to P&ID, piping drawings and specifications.

October 1972 to April 1973

Mechanical Design Engineer assigned
to Fairchild Industries
Germantown, Maryland

Design of a parcel sorting system (Matrix Sorter) for the USPS.
Tasks: Design of the induction station, buffer and feed conveyor system.
Testing of methods used in the induction of parcels.

Paul Leonard Clark

June 1972 to October 1972

Senior Mechanical Engineer, assigned to Aerojet-General, Frederick, Maryland

Design associated with an automatic sorting system for roll carpet; design and testing of the induction station and the supporting structure for the induction area and the conveyor system.

April 1972 to June 1972

Mechanical Design Engineer, assigned to Ocean system, Reston, Virginia

Design associated with an oil recovery system.

January 1972 to April 1972

Senior Mechanical Engineer, assigned to EMR, College Park, Maryland

Design of a spacecraft system for the U.S. Air Force. Packaging configuration, structure analysis and mass properties report.

June 1971 to January 1972

Mechanical Design Engineer, assigned to ARC, Alexandria, Virginia

Design of small missile components, test fixtures, and selection of materials.

January 1971 to June 1971

Senior Mechanical Engineer, assigned to Bunn Research, Inc. Silver Springs, Maryland

Design of a small sorting machine for the U.S.P.S. Design of the induction station, structures and conveyors; stress calculations and human engineering.

November 1970 to January 1971

Senior Mechanical Engineer, assigned to Litton College Park, Maryland

Electronic packaging of airborne equipment for E2c Navy aircraft. Productivity study of electronic packages and design and analytical calculations associated with packaging.

October 1969 to January 1971

Senior Mechanical Engineer, assigned to Owens-Illinois, Fecker Systems Division, Pittsburgh, Pennsylvania

Design associated with a 36" Airborne Infrared Telescope to be installed in a C141 Aircraft for NASA, Ames, California. Tasks: Stress, vibration, mass properties and heat transfer analysis. Design of a vacuum and pressure vessel, super flexible wire harness, environmental control system for the telescope cavity, air supply to support telescope air bearing and related pneumatic systems, automatic telescope balancing system, telescope caging and centering systems.

Paul Leonard Clark

May 1969 to October 1969

Reliability Engineer, assigned to
Ling, Temco-Vought, Inc.
Dallas, Texas

Performing Reliability and Failure Modes and Effect Analysis (FMEA) on NASA Lunar Landing Simulator at Langley Research Center. Stress analysis of the supporting structure and drive systems for the Simulator.

March 1968 to May 1969

Senior Mechanical Engineer, assigned
to General Electric Company, Inc.,
Utica, New York

Assigned to the Missile Guidance Engineering Section. Responsible for Failure Analysis associated with the Seeker Assembly of the Chaparral Missile System. Conducted studies and tests in order to recommend changes in Assembly and Test Procedures so as to increase productivity. Writing test specifications, placed on task forces in order to isolate and solve the rash of prominent failures. Maintained records of failures which included types, numbers, and the corrective action taken. Stress and vibration analysis, mass properties calculations.

January 1968 to March 1968

Senior Mechanical Engineer, assigned
to Scope, Inc., Falls Church, VA

Electronic packaging of a Shipborne Radar Receiver. Tasks: Design reviews, stress and vibration analysis.

August 1967 to January 1968

Senior Mechanical Engineer, assigned
to Latex Corporation
Dover, Delaware

Research and development of automation equipment (Equipment Process Produced Fabric used in women's wear) and in automation of manual sewing operations. Tasks: Design concepts, design of machine elements, stress and vibration analysis, supervision of engineers, assembly and testing of the above equipment.

June 1967 to August 1967

Senior Mechanical Engineer, assigned
to Control Data Corporation
Rockville, Maryland

Design tasks associated with the development of an automatic letter sorting and storage system for the United States Post Office Department. Tasks: Design of Machine Elements, Stress and Structure Analysis.

Paul Leonard Clark

December 1966 to June 1967

Senior Mechanical Engineer, assigned to International Business Machine Corporation, Electronics Systems Centers, Oswego, New York
Department: Environment Design

Responsible for mass properties reports on the following systems: EA6B, Mark II and MOL. Supervisor of Contract Personnel, cost and weight reduction studies, material research, coordination of area of redesign, mass properties and stress calculations using computer programs, vibration analysis of electronic systems for aircraft.

October 1966 to December 1966

Senior Mechanical Engineer, assigned to AVCO, Incorporated, Wilmington, Massachusetts

Program manager for the Ground Support Equipment for Re-Entry Vehicles and the associated support equipment. Tasks: Packaging configuration, stress analysis, mass properties, vibrations, fluid and gas test sets, and test procedures.

MAY 1966 TO October 1966

Senior Mechanical Engineer, assigned to the United States Post Office Department, Washington, D. C.

Design of automation equipment for handling bulk mail. Tasks: Conveyor systems, pneumatic systems, design of machine elements, material flow study, structures, stress and vibration analysis.

February 1966 to May 1966

Senior Mechanical Engineer, assigned to Aerojet-General Frederick, Maryland

Engineering evaluation and redesign of an automatic warehouse system for the storage and shipment of bulk oil barrels. Tasks: Material flow study, structures, design of machine elements, conveyor systems, and stress analysis.

November 1965 to February 1966

Senior Mechanical Engineer, assigned to NASA, GSFC Code 623 Greenbelt, Maryland

Mechanical packaging of scientific experiments which go aboard satellites and sounding rockets. Tasks: Packaging, analytical studies, stress and vibration analysis, environmental test.

Paul Leonard Clark

September 1964 to November 1965

Assigned to contract work the
Navy Department and NASA, GSFC,
Washington, D. C.

Program manager on the structural system used in the Polaris Missile training schools which supports the simulated interior of the submarine. Tasks: Manufacture of structural systems, customer, and subcontract vendor liaison. Design of pneumatic power overhead hoist system for shipborne. Missile ground support equipment, aerospace payloads. Tasks: Electronic packaging, proposal and specifications, packaging of optical systems, weight reduction studies, stress and vibration analysis.

February 1962 to September 1964

Assigned to Melpar, Inc.
Falls Church, Virginia

Mechanical design of an environmental gas analyzer. Gas sampling system, electron capture detector, scan cell, hydrogen gas storage system and regulator system, optical test system.

April 1960 to February 1962

Assigned to Western Electric
Burlington, North Carolina

Manufacturing responsible for Nike Zeus Missile Subsystem. Target, missile and discrimination radar units. Tasks: Liaison between Western Electric and Bell Laboratories, special tools and fixtures.

January 1960 to April 1960

Assigned to Pratt & Whitney
Aircraft
West Palm Beach, Florida

Design of components for jet engines, fuel systems and bearing test structures.

June 1958 to January 1960

Mechanical Engineer
Melpar, Inc.
Falls Church, Virginia

Mechanical design associated with an electronic aircraft monitoring subassembly. Tasks: Electronic packaging, design of a condenser microphone, collapsible windscreen, commutator and start-stop mechanism for an electronic timer, investigation of epoxy adhesives, environmental testing, vibrations and stress analysis, heat transfer analysis, and pressure vessel design.

GERALD A. HAWORTH

Twenty five years military and civilian experience in nuclear power research and development, operations, maintenance, and construction. Project Quality Assurance Engineer for radioactive waste reduction and disposal, and alternate energy research programs. Developed and supervised Construction Quality Assurance Program at the Idaho National Engineering Laboratory.

EMPLOYMENT:

1984 - Present

Evaluation Research Corporation, Arlington, VA.

Senior Quality Assurance Engineer. Provide technical assistance for development and implementation of Quality Assurance Programs in industrial and construction environments.

1981 - 1984

EG&G Intertech.

Engineer IV. Saudi Naval Expansion Program. Provided technical support to U.S. Navy Program Manager and Senior Royal Saudi Naval Forces Representative, Washington, D.C. for:

- o Audit and evaluation of SNEP contractors.
- o Technical reports and presentations.
- o Automated model for analysis of preventive maintenance manpower requirements.
- o Computer software program tests.
- o Maintenance Management and QA Programs.
- o Configuration Management.
- o Ship Weight and Moment Control.

1973 - 1981

Idaho National Engineer Laboratory (AeroJet Nuclear Co./EG&G Idaho Inc.).

Project QA Engineer.

- o Examination and test of the TMI-11 Nuclear Plant failure.
- o Nuclear waste reduction and storage research projects.
- o Small scale alcohol plant construction.
- o Solar research projects.
- o Geothermal/Isobutane Power Plant Prototype.

Participated in a special project with the U.S. DOE to evaluate the capability and productivity of a proposed National Fuel Alcohol Program.

Scientific and Engineering Supervisor: Supervised the development, implementation, and operation of the Quality Assurance Program for Construction at the Idaho National Engineering Laboratory.

- o Civil works.
- o Modification of test reactors and chemical processing plants.
- o Two QA engineers and 18 highly specialized technicians.
- o On-site Nondestructive Testing.
- o Soils and Materials Testing Laboratory.

Reduced inspection costs through modernization of materials testing lab, improved audit procedures, and intensive specification/design review.

Senior Quality Engineer. Quality Engineering in support of experimental nuclear reactor operation, modification, and repair.

- o Design review.
- o Procurement support.
- o Inspection planning.

Developed Quality Assurance and Inspection Plan for major modification of a nuclear test reactor and two chemical processing plant modifications. Implementation of these plans improved the design analysis process resulting in significant cost reduction and construction time. Developed a technician qualification program which reduced process failures in one area from approximately 95% to virtually zero.

Quality Engineer.

- o Plans and procedures for inspection of procured nuclear reactor components and materials.
- o Supplier survey.
- o Supplier performance data collection and failure trend analysis.
- o Source inspection of critical reactor components.
- o Chairman Material Review Board for procured materials.
- o Developed catalog of critical materials and specifications.

Senior Inspector.

- o Source and receiving inspection of major nuclear reactor components.
- o Nondestructive testing of weldments and composite materials.
- o Dimensional inspection.
- o Materials testing.

1951 - 1973

U.S. Navy.

- o Repair Officer
- o Damage Control Officer
- o Safety Officer
- o Ship Superintendent
- o Instructor, U.S. Navy Nuclear Power School
- o Nuclear Power Plant Operator
- o Welder
- o Machinist
- o Salvage Diver

EDUCATION:

1976 - 1981 University of Idaho, Quality Assurance Subjects
1978 American Management Association, Project Management
1972 Laverne College, Management Organization and Theory
1958 U.S. Navy, Nuclear Power
1951 Kempsville High School, Kempsville, VA

PROFESSIONAL
AFFILIATIONS:

American Society for Quality Control

- o Chairman Eastern Idaho Section - 1980/81
- o 1980 Regional Conference Chairman
- o Membership Chairman Northern Virginia Section 1983/84

CERTIFICATIONS:

(all certifications were by examination)

- o Certified Quality Technician (Mechanical) - 1976
- o Certified Quality Engineer - 1978/81/84

Coordinating Agency for Supplier Evaluation

- o Lead Auditor - 1978

Idaho National Engineering Laboratory

- o Penetrant Inspector Level II - 1974
- o Ultrasonic Examiner Level II - 1974
- o Radiographer Level II - 1975

PUBLICATIONS/PAPERS:

*The Feasibility of Water Storage, Natural Head Irrigation, and Power Production in the Big Lost River Basin," G.A. Haworth, 1978.

This paper was prepared to assist the Custer County Development Corporation in what was ultimately a successful attempt to obtain federal economic assistance funds. The scheme for water storage involving recharge of dry aluvial fans is in operation; the natural head irrigation involved civil work which was at the time uneconomical; the power production involving a series of low head bulb turbines is presently under development by the local REA Cooperative.

6.2 Training Records of Personnel

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. H. Brown, Jr. S.S. NO: 019-03-5869
 (QA & Audits) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/14/84	C.H. Brown Jr
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/19/84	C.H. Brown Jr
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/19/84	C.H. Brown Jr
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	10/12/84	CH Brown Jr
QAP-2.1	1	Daily Log	10/8/84	C.H. Brown Jr.
QAP-10.1	1	QA Audit Program	10/8/84	C.H. Brown Jr.
DP & P-101	0	QA Policy	10/19/84	C.H. Brown Jr
DP & P-102	0	QA Programs	10/19/84	C.H. Brown Jr.

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: [Signature] Date: 10/19/84
 QA Manager

EVALUATION RESEARCH CORPORATION

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. H. Brown, Jr. S.S. NO: 019-03-5859
 (Sr. Civil Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	0 1 1	CSR Plan RPSR Plan RSCAP Plan	10/18/84	C.H. Brown
BCAP-20	1	CSR Establish Populations	10/16/84	C.H. Brown
BCAP-21	1	CSR Sample Selections	10/16/84	C.H. Brown
BCAP-22	1	CSR Preparation of Instructions & Checklists	10/16/84	C.H. Brown
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	9/25/84	C.H. Brown
BCAP-24	0	CSR Performance of Inspection & Document Reviews	9/25/84	C.H. Brown
*BCAP-25	-	CSR Evaluation of Results	9/26/84	
BCAP-41	0	RPSR Identification of Specifications and Contractor Procedures	9/25/84	C.H. Brown
BCAP-42	1	RPSR Preparation of Checklists	10/16/84	C.H. Brown
BCAP-43	0	RPSR Review of Contract Procedures	9/25/84	C.H. Brown
BCAP-60	0	RSCAP Review Methods	10/18/84	C.H. Brown
QAP 4.1	0	Procurement Document Control	10/18/84	C.H. Brown

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When Issued

Reviewed By: [Signature] Date: 10/19/84
 QA Manager 44

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: W. L. Chase S.S. NO: Fed. I.D. #25-1416577
 (Sr. Mechanical Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	0	BCAP CSR Plan	10/16/84	W. L. Chase
-----	1	BCAP RPSR Plan	10/16/84	W. L. Chase
BCAP-20	1	CSR Establish Populations	10/16/84	W. L. Chase
BCAP-21	1	CSR Sample Selections	10/16/84	W. L. Chase
BCAP-22	1	CSR Preparation of Instructions & Checklists	10/16/84	W. L. Chase
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	10/16/84	W. L. Chase
BCAP-24	0	CSR Performance of Inspection & Document Reviews	10/16/84	W. L. Chase
**BCAP-25	-	CSR Evaluation of Results		
BCAP-60	0	RSCAP Review Methods	10/16/84	W. L. Chase

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When Issued

Reviewed By: W. L. Chase for A. F. Cisneros Date: 10/24/84
 QA Manager 45

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: W. L. Chase S.S. NO: Fed. I.D. #25-1416577
 (QA & Audits) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/16/84	Wayne L. Chase
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/17/84	Wayne L. Chase
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/19/84	Wayne L. Chase
-----	Aug 30, 1984	CECo Letter to the NRC-BCAP	10/16/84	Wayne L. Chase
QAP-2.1	1	Daily Log	10/16/84	Wayne L. Chase
^{17.1} QAP- 11.1	1	QA Audit Program	10/16/84	Wayne L. Chase
DP & P-101	0	QA Policy	10/16/84	Wayne L. Chase
DP & P-102	0	QA Programs	10/16/84	Wayne L. Chase

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: W. L. Chase Date: 10/24/84
 QA Manager 46

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: W. L. Chase S.S. NO: Fed. I.D. #25-1416577
 (Sr. RPSR Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1	BCAP RPSR Plan	10/16/84	Wayne L. Chase
BCAP-01	0	Program Indoctrination for Employees	10/16/84	Wayne L. Chase
BCAP-02	1	Organization and Responsibility	10/16/84	Wayne L. Chase
BCAP-03	0	Records Management	10/16/84	Wayne L. Chase
BCAP-04	1	BCAP Interface with Contractors and A/E	10/16/84	Wayne L. Chase
**BCAP-05	-			
BCAP-06	2	Observation and Discrepancy/Concern Processing	10/16/84	Wayne L. Chase
BCAP-07	1	BCAP Reports	10/16/84	Wayne L. Chase
BCAP-08	0	Qualification and Certification of Reinspection Personnel	10/16/84	Wayne L. Chase
BCAP-41	0	RPSR Identification of Required Documents	10/16/84	Wayne L. Chase
BCAP-42	1	RPSR Preparation of Checklists	10/16/84	Wayne L. Chase
BCAP-43	0	RPSR Review of Contract Procedures	10/16/84	Wayne L. Chase

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When issued

Reviewed By: W. L. Chase Date: 10/24/84
 QA Manager 47

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: W. L. Chase
(Sr. RPSR Lead)

S.S. NO: Fed. I.D. #25-1416577

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-4.1	0-	Procurement Document Control	10/16/84	<i>W. L. Chase</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 10/24/84
QA Manager

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: Paul H. Clark S.S. NO: 239-44-0220
 (QA & Audits) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1	BCAP Overview Plan	11-29-84	<i>Paul H. Clark</i>
ANSI N45.26	1978	Qualifications of Inspection, Examination & Testing Personnel	11-29-84	<i>Paul H. Clark</i>
ANSI N45.223	1978	Qualification of QA Program Audit Personnel	11-29-84	<i>Paul H. Clark</i>
DP & P-101	0	QA Policy	11-29-84	<i>Paul H. Clark</i>
DP & P-102	0	QA Programs	11-29-84	<i>Paul H. Clark</i>
----	Aug. 30, 1984	CECo Letter to the NRC-BCAP	11-29-84	<i>Paul H. Clark</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *A.E. Cocoros* Date: 12/17/84
 QA Manager 49

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: PAUL L CLARK

S.S. NO: 239-44-0220

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed 1984	*Signature
✓ ---	2 ^{cm}	ERC QA Plan for BCAP	11-28-84	<u>Paul L Clark</u>
F.62 ✓ ---	6/84	BCAP Policy Document	11-28-84	<u>Paul L Clark</u>
rlv ---	7/16/84 10/30/84 ^{cm}	BCAP Site QA Over- view Group Plan	11-28-84	<u>Paul L Clark</u>
+ ✓ QAP-1.1	1 ^{cm} 11/27	Personnel Qualifications	11-28-84	<u>Paul L Clark</u>
✓ QAP-1.2	0	Indoctrination and Train- ing of Personnel	11-28-84	<u>Paul L Clark</u>
✓ QAP-2.1	1 ^{cm}	Daily Log	11-28-84	<u>Paul L Clark</u>
✓ QAP-10.1	1 ^{cm} 11/27/84	Quality Review and Sur- veillance	11-28-84	<u>Paul L Clark</u>
✓ QAP-10.2	1 ^{cm} 11/27/84	Qualification of In- spection Personnel	11-28-84	<u>Paul L Clark</u>
✓ QAP-15.1	0	Documentation and Dis- position of Observations and Discrepancies	11-28-84	<u>Paul L Clark</u>
QAP-16.1	0	Corrective Action	11-28-84	<u>Paul L Clark</u>
QAP-18.1	2 ^{cm}	Quality Assurance Audit Program	11-28-84	<u>Paul L Clark</u>
QAP-18.2	1 ^{cm}	Qualification of Audit Personnel	11-28-84	<u>Paul L Clark</u>
ANSI/ASME- N45.2.12	1977	Requirements for Auditing of QA Programs for Nu- clear Power Plants	11-28-84	<u>Paul L Clark</u>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: A. E. COCORDS [Signature] DATE: 12/17/84
QA Manager

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: A. E. Cochran S.S. NO: 212-18-2609
 (Sr. QA & Audits Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	11/7/84	Allen
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	11/7/84	Allen
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	11/7/84	Allen
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	11/7/84	Allen
QAP-2.1	1	Daily Log	11/7/84	Allen
^{CA} _{10/5/84} QAP- 2.1 ^{15.1}	1	QA Audit Program	11/7/84	Allen
DP & P-101	0	QA Policy	11/7/84	Allen
DP & P-102	0	QA Programs	11/7/84	Allen

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: J. L. Hamel Date: 11/7/84
 QA Manager 51

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: A. E. Cocoros S.S. NO: 212-18-2609
 (QA Manager)
 (Sr. KSCAP Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
----	0	BCAP CSR Plan	11/7/84	<i>Allen</i>
	1	BCAP RPSR Plan		
	1	BCAP RSCAP Plan		
BCAP-01	0	Program Indoctrination for Employees	11/7/84	<i>Allen</i>
BCAP-02	1	Organization and Responsibility	11/7/84	<i>Allen</i>
BCAP-03	0	Records Management	11/7/84	<i>Allen</i>
BCAP-04	1	BCAP Interface with Contractors and A/E	11/7/84	<i>Allen</i>
**BCAP-05	-			<i>[Signature]</i>
BCAP-06	2	Observation and Discrepancy/Concern Processing	11/7/84	<i>Allen</i>
BCAP-07	1	BCAP Reports	11/7/84	<i>Allen</i>
BCAP-08	0	Qualification and Certification of Reinspection Personnel	11/7/84	<i>Allen</i>
BCAP-20	1	CSR Establish Populations	11/7/84	<i>Allen</i>
BCAP-21	1	CSR Sample Selections	11/7/84	<i>Allen</i>
BCAP-22	1	CSR Preparation of Instructions & Checklists	11/7/84	<i>Allen</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When issued

Reviewed By: *J. L. Havel* Date: 11/7/84
 QA Manager 52

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: A. E. Cocorios S.S. NO: 212-18-2600
 (QA Manager)
 (Sr. RSCAP Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	11/7/84	<i>Allen</i>
BCAP-24	0	CSR Performance of Inspection & Document Reviews	11/7/84	<i>Allen</i>
**BCAP-25	-	CSR Evaluation of Results		
BCAP-41	0	RPSR Identification of Required Documents	11/7/84	<i>Allen</i>
BCAP-42	1	RPSR Preparation of Checklists	11/7/84	<i>Allen</i>
BCAP-43	0	RPSR Review of Contract Procedures	11/7/84	<i>Allen</i>
BCAP-50	0	RSCAP Review Methods	11/7/84	<i>Allen</i>
QASI-01	2	Control of QASI's	11/7/84	<i>Allen</i>
QASI-02	2	Corrective Action Requests	11/7/84	<i>Allen</i>
QASI-04	3	Training, Qualification & Certification of QA Personnel	11/7/84	<i>Allen</i>
QASI-05	2	Correspondence Control	11/7/84	<i>Allen</i>
QASI-06	2	Document Reviews	11/7/84	<i>Allen</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *J. H. Hines* Date: 11/7/84
 QA Manager 53

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: A. E. Cocoros S.S. NO: 212-18-2609
 (QA Manager)
 (Sr. RSCAP Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
QASE BCAP-07	2	Surveillances	11/7/84	Allen
QASE BCAP-08	2	Audits	11/7/84	Allen
QASE BCAP-09	2	Documentation/Records	11/7/84	Allen
QASE BCAP-10	2	Interface With BCAP Task Force	11/7/84	Allen
QASE BCAP-11	2	Monthly Status Report	11/7/84	Allen
QASE BCAP-12	2	Final Overview Report	11/7/84	Allen
QASE BCAP-13	1	Stop Work Order	11/7/84	Allen
QASE BCAP-14	1	Trend Analysis	11/7/84	Allen
QASE BCAP-15	1	Sample Selection	11/7/84	Allen
QASE BCAP-16	1	Performance of Reinspection and Document Review Overview	11/7/84	Allen
ANSI N45.2.9	1974	Requirements for Collection, Storage, and Maintenance of QA Records	11/7/84	Allen
ANSI N45.2.10	1973	QA Terms and Definitions	11/7/84	Allen

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: J. H. Hamel Date: 11/7/84
 QA Manager

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967
 EMP. NO: H-0967

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/12/84 RSH 6/11/84	RE Ham
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/12/84 RSH 4/2/84	RE Ham
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/12/84 RSH 4/2/84	RE Ham
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	10/12/84 RSH 8/30/84	RE Ham
QAP-2.1	1	Daily Log	10/15/84	RE Ham
^{18.1} 9/15/84 QAP-11.1	1	QA Audit Program	10/15/84	RE Ham
DP & P-101	0	QA Policy	10/12/84 RSH 8/30/84	RE Ham
DP & P-102	0	QA Programs	10/12/84 RSH 8/30/84	RE Ham

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By J.E. Young For A.E. Cochrane Date: 10/24/84
 QA Manager 55

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967
 (Assistant Project Manager) EMP. NO: _____
 (Sr. CSR Lead)

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	0 1 1	BCAP CSR Plan BCAP RPSR Plan BCAP RSCAP Plan	10/12/84	REHam
BCAP-01	0	Program Indoctrination for Employees	10/12/84	REHam
BCAP-02	1	Organization and Responsibility	10/12/84	REHam
BCAP-03	0	Records Management	10/12/84	REHam
BCAP-04	1	BCAP Interface with Contractors and A/E	10/12/84	REHam
**BCAP-05	-			
BCAP-06	2	Observation and Discrepancy/Concern Processing	10/12/84	REHam
BCAP-07	1	BCAP Reports	10/12/84	REHam
BCAP-08	0	Qualification and Certification of Reinspection Personnel	10/12/84	REHam
BCAP-20	1	CSR Establish Populations	10/12/84	REHam
BCAP-21	1	CSR Sample Selections	10/12/84	REHam
BCAP-22	1	CSR Preparation of Instructions & Checklists	10/12/84	REHam

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When Issued

Reviewed By: REHam for A/E Date: 10/24/84
 QA Manager 56

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967
 (Assistant Project Manager)
 (Sr. CSR Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	10/12/84	R E Ham
BCAP-24	0	CSR Performance of Inspection & Document Reviews	10/12/84	R E Ham
**BCAP-25	-	CSR Evaluation of Results		
BCAP-41	0	RPSR Identification of Required Documents	10/12/84	R E Ham
BCAP-42	1	RPSR Preparation of Checklists	10/12/84	R E Ham
BCAP-43	0	RPSR Review of Contract Procedures	10/12/84	R E Ham
QAP-4.1	0	Procurement Document Control	10/12/84	R E Ham
QAP-5.1	0	Prep., Review & Approval of Q. A. Procedures	10/12/84	R E Ham
QAP-6.1	0	Distribution and Control of Q. A. Documents	10/12/84	R E Ham
QAP-17.1	0	Q.A. Records Program	10/12/84	R E Ham

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

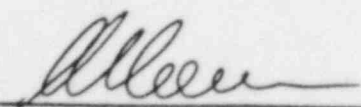
Reviewed By: J E Young for A E Coates Date: 10/24/84
 QA Manager 57

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967
 EMP. NO: H 0967

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-01	3	Program Indoc. for Employees	12/19/84	REHam
BCAP-02	2	Organization & Responsibility	12/19/84	REHam
BCAP-03	^{REH} X2	Records Management	12/19/84	REHam
BCAP-04	2	BCAP Interface with Contractors & A/E	12/19/84	REHam
BCAP-06	^{REH} 86	Observation & Discrepancy/Concern Processing	12/19/84	REHam
BCAP-07	2	BCAP Reports	12/19/84	REHam
BCAP-20	2	CSR Establish Populations	12/19/84	REHam
BCAP-21	4	CSR Sample Selection	12/19/84	REHam
BCAP-23	1	CSR Prep. of Reinspection & Doc. Review Packages	12/19/84	REHam
BCAP-24	2	CSR Performance of Inspection & Doc. Reviews	12/19/84	REHam
BCAP-25	0	CSR Evaluation of Results	12/19/84	REHam
BCAP-41	1	RPSR Ident. of Specs. & Contractor Procedures	12/19/84	REHam

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 1/2/85
 QA Manager 58

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-42	3	RPSR Prep. of Checklists	12/19/84	<i>R E Ham</i>
BCAP-43	1	RPSR Review of Contract Procedures	12/19/84	<i>R E Ham</i>
BCAP-60	1	RSCAP Review Methods	12/19/84	<i>R E Ham</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *Allen* Date: 1/2/85
 QA Manager 59

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967
 EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12/18/84	R E Ham
QAP-10.1	1	Quality Review and Surveillance	12/18/84	R E Ham
QAP-10.2	1	Qualification of Inspection Personnel	12/18/84	R E Ham
QAP-17.1	1	QA Records Program	12/18/84	R E Ham
QAP-18.1	2	QA Audit Program	12/18/84	R E Ham
QAP-18.2	1	Qualification of Audit Personnel	12/18/84	R E Ham

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 1/2/85
 QA Manager 60

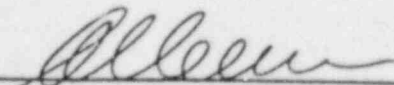
RECORD OF ASSIGNED READING

ASSIGNED TO: R. E. Ham S.S. NO: 247-62-0967

EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	2	Overview Plan	12/18/84	RE Ham
-----	REH X2	BCAP CSR Plan	12/18/84	RE Ham
-----	1	BCAP Site QA Overview Group Plan	12/18/84	RE Ham
001	2	ERC QA Plan for BCAP	12/18/84	RE Ham
	2	RSCA Plan	12/19/84	RE Ham

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 1/2/85
 QA Manager 61

QUALITY ASSURANCE

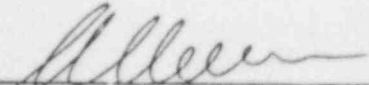
RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel S.S. NO: 310-26-0735
 (Project Manager) EMP. NO: H0735

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	0	BCAP CSR Plan		
	1	BCAP RPSR Plan	10/26/84	JL Hansel
	1	BCAP RSCAP Plan		
BCAP-01	0	Program Indoctrination for Employees	10/26/84	JL Hansel
BCAP-02	1	Organization and Responsibility	10/26/84	JL Hansel
BCAP-03	0	Records Management	10/26/84	JL Hansel
BCAP-04	1	BCAP Interface with Contractors and A/E	10/26/84	JL Hansel
**BCAP-05	-			
BCAP-06	2	Observation and Discrepancy/Concern Processing	10/26/84	JL Hansel
BCAP-07	1	BCAP Reports	10/26/84	JL Hansel
BCAP-08	0	Qualification and Certification of Reinspection Personnel	10/26/84	JL Hansel
BCAP-20	1	CSR Establish Populations	10/26/84	JL Hansel
BCAP-21	1	CSR Sample Selections	10/26/84	JL Hansel
BCAP-22	1	CSR Preparation of Instructions & Checklists	10/26/84	JL Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When Issued

Reviewed By:  Date: 10/29/84
 QA Manager 62

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel S.S. NO: 310-26-0735
 (Project Manager) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	10/26/84	JL Hansel
BCAP-24	0	CSR Performance of Inspection & Document Reviews	10/26/84	JL Hansel
**BCAP-25	-	CSR Evaluation of Results		
BCAP-41	0	RPSR Identification of Required Documents	10/26/84	JL Hansel
BCAP-42	1	RPSR Preparation of Checklists	10/26/84	JL Hansel
BCAP-43	0	RPSR Review of Contract Procedures	10/26/84	JL Hansel
QAP-4.1	0	Procurement Document Control	10/26/84	JL Hansel
QAP-5.1	0	Prep., Review & Approval of Q. A. Procedures	10/26/84	JL Hansel
QAP-6.1	0	Distribution and Control of Q.A. Documents	10/26/84	JL Hansel
QAP-17.1	0	Q.A. Records Program	10/26/84	JL Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *Allen* Date: 10/29/84
 QA Manager 63

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

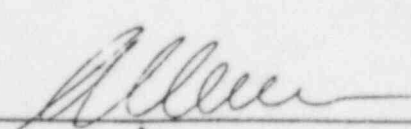
ASSIGNED TO: J. L. Hansel
(QA & Audits)

S.S. NO: 310-26-0735

EMP. NO: H0735

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/26/84	JL Hansel
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/15/84	JL Hansel
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/15/84	JL Hansel
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	10/26/84	JL Hansel
QAP-2.1	1	Daily Log	10/26/84	JL Hansel
^{Call} ^{10/16/84} QAP- 11.1 ^{17.1}	1	QA Audit Program	10/26/84	JL Hansel
DP & P-101	0	QA Policy	10/26/84	JL Hansel
DP & P-102	0	QA Programs	10/16/84	JL Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: 

Date: 10/29/84

QA Manager

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel S.S. NO: 310-26-0735
 EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-01	3	Program Indoc. for Employees	12/13/84	J. L. Hansel
BCAP-02	2	Organization & Responsibility	12/13/84	J. L. Hansel
BCAP-03	1	Records Management	12/13/84	J. L. Hansel
BCAP-04	2	BCAP Interface with Contractors & A/E	12/14/84	J. L. Hansel
BCAP-06	5	Observation & Discrepancy/Concern Processing	12/14/84	J. L. Hansel
BCAP-07	2	BCAP Reports	12/14/84	J. L. Hansel
BCAP-20	2	CSR Establish Populations	12/17/84	J. L. Hansel
BCAP-21	4	CSR Sample Selection	12/17/84	J. L. Hansel
BCAP-23	1	CSR Prep. of Reinspection & Doc. Review Packages	12/17/84	J. L. Hansel
BCAP-24	2	CSR Performance of Inspection & Doc. Reviews	12/17/84	J. L. Hansel
BCAP-25	0	CSR Evaluation of Results	12/17/84	J. L. Hansel
BCAP-41	1	RPSR Ident. of Specs. & Contractor Procedures	12/18/84	J. L. Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: M. F. Edwards Date: 12/19/84
 M. F. Edwards QA Manager 65

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel S.S. NO: 310-26-0735
 EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-42	3	RPSR Prep. of Checklists	12/18/84	J. L. Hansel
BCAP-43	1	RPSR Review of Contract Procedures	12/18/84	J. L. Hansel
BCAP-60	1	RSCAP Review Methods	12/18/84	J. L. Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *Allen* Date: 12/19/84
 H. E. CURRAN QA Manager 66

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel

S.S. NO: 310-26-0735

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12/17/84	J. L. Hansel
QAP-10.1	1	Quality Review and Surveillance	12/12/84	J. L. Hansel
QAP-10.2	1	Qualification of Inspection Personnel	12/17/84	J. L. Hansel
QAP-17.1	1	QA Records Program	12/12/84	J. L. Hansel
QAP-18.1	2	QA Audit Program	12/17/84	J. L. Hansel
QAP-18.2	1	Qualification of Audit Personnel	12/17/84	J. L. Hansel

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: _____

Allen
H E COCORDS QA Manager

Date: _____

12/19/84

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: J. L. Hansel S.S. NO: 310-26-0735

EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	2	Overview Plan	12/14/84	<i>J. L. Hansel</i>
-----	1	BCAP CSR Plan	12/14/84	<i>J. L. Hansel</i>
-----	1	BCAP Site QA Overview Group Plan	12/15/84	<i>J. L. Hansel</i>
001	2	ERC QA Plan for BCAP	12/15/84	<i>J. L. Hansel</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *Allen* Date: 12/19/84
J. F. Williams QA Manager 68

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: J. E. Hoff S.S. NO: 497-54-3137
 (QA 3 Audits) EMP. NO: 143137

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/10/84	<i>J. E. Hoff</i>
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/10/84	<i>J. E. Hoff</i>
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/10/84	<i>J. E. Hoff</i>
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	10/10/84	<i>J. E. Hoff</i>
QAP-2.1	1	Daily Log	10/10/84	<i>J. E. Hoff</i>
^{11.1} QAP- 2.1	1	QA Audit Program	10/10/84	<i>J. E. Hoff</i>
DP & P-101	0	QA Policy	10/10/84	<i>J. E. Hoff</i>
DP & P-102	0	QA Programs	10/10/84	<i>J. E. Hoff</i>

2001
10/15/84

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *J. E. Hoff* Date: 10/15/84
 QA Manager 69

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: J. E. Hoff S.S. NO: 497-54-3137

EMP. NO: H-3137

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1	BCAP Site QA Overview Group Plan	12/18/84	<i>J. E. Hoff</i>
001	2	ERC QA Plan for BCAP	12/18/84	<i>J. E. Hoff</i>
-----	2	BCAP Overview Plan	12/18/84	<i>J. E. Hoff</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *Allen* Date: 12/21/84
 QA Manager 70

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: J. E. Hoff S.S. NO: 497-54-3137
 EMP. NO: H-3137

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12/17/84	<i>J. E. Hoff</i>
QAP-10.1	1	Quality Review and Surveillance	¹⁷ 12/17/84	<i>J. E. Hoff</i>
QAP-10.2	1	Qualification of Inspection Personnel	12/17/84	<i>J. E. Hoff</i>
QAP-18.1	2	QA Audit Program	12/17/84	<i>J. E. Hoff</i>
QAP-18.2	1	Qualification of Audit Personnel	12/17/84	<i>J. E. Hoff</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 12/21/84
 QA Manager 71

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: Robert V. Laney

S.S. NO: 176-32-1255

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed <i>1984</i>	*Signature
---	<i>2</i>	ERC QA Plan for BCAP	"-1	<i>R. Laney</i>
---	<i>6/84</i>	BCAP Policy Document	"-1	<i>R. Laney</i>
---	7/16/84	BCAP Site QA Overview Group Plan	"-1	<i>R. Laney</i>
QAP-1.1	0	Personnel Qualifications	"-1	<i>R. Laney</i>
QAP-1.2	0	Indoctrination and Training of Personnel	"-1	<i>R. Laney</i>
QAP-2.1	<i>1</i>	Daily Log	"-1	<i>R. Laney</i>
QAP-10.1	0	Quality Review and Surveillance	"-1	<i>R. Laney</i>
QAP-10.2	0	Qualification of Inspection Personnel	"-1	<i>R. Laney</i>
QAP-15.1	0	Documentation and Disposition of Observations and Discrepancies	"-1	<i>R. Laney</i>
QAP-16.1	0	Corrective Action	"-1	<i>R. Laney</i>
QAP-18.1	<i>1</i>	Quality Assurance Audit Program	"-1	<i>R. Laney</i>
QAP-18.2	0	Qualification of Audit Personnel	"-1	<i>R. Laney</i>
ANSI/ASME-N45.2.12	1977	Requirements for Auditing of QA Programs for Nuclear Power Plants	"-1	<i>R. Laney</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

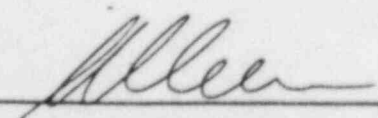
Reviewed By: *J. E. Young* DATE: *11/13/84*
 QA Manager 72

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. V. Laney S.S. NO: 176-32-1255
 EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-20	2	CSR Escobition Populations	12/19/14	R. V. Laney
BCAP-21	4	CSR Sample Selection	"	R. V. Laney
BCAP-23	1	CSR Prep. of Reinspection & Doc. Review Packages	"	R. V. Laney
BCAP-24	2	CSR Performance of Inspection of Doc. Reviews	"	R. V. Laney
BCAP-25	0	CSR Evaluation of Results	"	R. V. Laney
BCAP-41	1	RPSR Ident of Specs. & Contractor Procedures	"	R. V. Laney
BCAP-42	3	RPSR Prep. of Checklists	"	R. V. Laney
BCAP-43	1	RPSR Review of Contract Procedures	"	R. V. Laney
BCAP-60	1	RSCAP Review Methods	"	R. V. Laney

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 1/2/85
 QA Manager 73

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. V. Laney S.S. NO: 176-32-1255

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12/19/84	R. V. Laney
QAP-10.1	1	Quality Review and Surveillance	"	R. V. Laney
QAP-10.2	1	Qualification of Inspection Personnel	"	R. V. Laney
QAP-18.1	2	QA Audit Program	"	R. V. Laney
QAP-18.2	1	Qualification of Audit Personnel	"	R. V. Laney

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 1/2/85

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: R. V. Laney S.S. NO: 176-32-1255

EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	2	Overview Plan	12/9/84	<i>R. V. Laney</i>
-----	1	BCAP CSR Plan	"	<i>R. V. Laney</i>
-----	1	BCAP Site QA Overview Group Plan	"	<i>R. V. Laney</i>
001	2	ERC QA Plan for BCAP	"	<i>R. V. Laney</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 1/2/85

EVALUATION RESEARCH CORPORATION

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: M. A. Patrick S.S. NO: 204-14-7529
 (Sr. Electrical Lead) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	0 1 1	CSR Plan RPSR Plan RSCAP Plan	10/16/84	M. A. Patrick
BCAP-20	1	CSR Establish Populations	10/16/84	M. A. Patrick
BCAP-21	1	CSR Sample Selections	10/16/84	M. A. Patrick
BCAP-22	1	CSR Preparation of Instructions & Checklists	10/16/84	M. A. Patrick
BCAP-23	0	CSR Preparation of Reinspection & Document Review Packages	10/16/84	M. A. Patrick
BCAP-24	0	CSR Performance of Inspection & Document Reviews	10/16/84	M. A. Patrick
**BCAP-25	-	CSR Evaluation of Results		
BCAP-41	0	RPSR Identification of Specifications and Contractor Procedures	11/6/84	M. A. Patrick
BCAP-42	1	RPSR Preparation of Checklists	11/5/84	M. A. Patrick
BCAP-43	0	RPSR Review of Contract Procedures	11/7/84	M. A. Patrick
BCAP-60	0	RSCAP Review Methods	11/5/84	M. A. Patrick
QAP 4.1	0	Procurement Document Control	1/24/84	M. A. Patrick

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When Issued

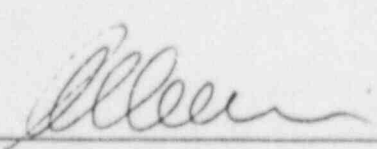
Reviewed By: *M. A. Patrick* Date: 11/7/84
 QA Manager 76

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: N. A. Petrick S.S. NO: 204-14-7529
 (QA & Audits) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	9/24/84	NAPetrick
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	11/6/84	NAPetrick
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	11/6/84	NAPetrick
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	9/24/84	NAPetrick
QAP-2.1	1	Daily Log	9/24/84	NAPetrick
^{18.1} QAP- 21.1	1	QA Audit Program	11/6/84	NAPetrick
DP & P-101	0	QA Policy	10/16/84	NAPetrick
DP & P-102	0	QA Programs	10/16/84	NAPetrick

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 11/7/84
 QA Manager 77

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: Chris Simmons S.S. NO: 254-78-1957
EMP. NO: 51957

Doc. No.	Rev.	Title	Date Completed 1984	*Signature
---	0	ERC QA Plan for BCAP	10-3	<u>C. Simmons</u>
---	0	BCAP Policy Document	10-3	<u>C. Simmons</u>
---	7/16/84	BCAP Site QA Overview Group Plan	10-3	<u>C. Simmons</u>
QAP-1.1	0	Personnel Qualifications	10-3	<u>C. Simmons</u>
QAP-1.2	0	Indoctrination and Training of Personnel	10-3	<u>C. Simmons</u>
QAP-2.1	1	Daily Log	10-3	<u>C. Simmons</u>
QAP-10.1	0	Quality Review and Surveillance	10-3	<u>C. Simmons</u>
QAP-10.2	0	Qualification of Inspection Personnel	10-3	<u>C. Simmons</u>
QAP-15.1	0	Documentation and Disposition of Observations and Discrepancies	10-3	<u>C. Simmons</u>
QAP-16.1	0	Corrective Action	10-3	<u>C. Simmons</u>
QAP-18.1	1	Quality Assurance Audit Program	10-3	<u>C. Simmons</u>
QAP-18.2	0	Qualification of Audit Personnel	10-3	<u>C. Simmons</u>
ANSI/ASME-N45.2.12	1977	Requirements for Auditing of QA Programs for Nuclear Power Plants	10-4	<u>C. Simmons</u>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: J. E. [Signature] QA Manager Date: 10/8/84

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. J. Simmons S.S. NO: 259-78-1957
 (QA & Audits) EMP. NO: S 1957

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1	BCAP Overview Plan		<i>Chris Simmons</i> 10-24-84
ANSI N45.26	1978	Qualifications of Inspection, Examination & Testing Personnel		<i>Chris Simmons</i> 10-18-84
ANSI N45.223	1978	Qualification of QA Program Audit Personnel		<i>Chris Simmons</i> 10-18-84
DP & P-101	0	QA Policy		<i>Chris Simmons</i> 10-18-84
DP & P-102	0	QA Programs		<i>Chris Simmons</i> 10-18-84
----	Aug. 30, 1984	CECo Letter to the NRC-BCAP		<i>Chris Simmons</i> 10-18-84

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *J. P. ...* Date: 10/24/84
 QA Manager 79

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. J. Simmons S.S. NO: 259-78-1957

EMP. NO: S1957

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12-13	<i>Chris Simmons</i>
QAP-10.1	1	Quality Review and Surveillance	12-13	<i>Chris Simmons</i>
QAP-10.2	1	Qualification of Inspection Personnel	12-13	<i>Chris Simmons</i>
QAP-18.1	2	QA Audit Program	12-13	<i>Chris Simmons</i>
QAP-18.2	1	Qualification of Audit Personnel	12-13	<i>Chris Simmons</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *A.E. Lockwood* Date: 12/17/84

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. J. Simmons S.S. NO: 259-78-1957

EMP. NO: 51957

Doc. No.	Rev.	Title	Date Completed 1984	*Signature
-----	1	BCAP Site QA Overview Group Plan	12-14	<i>C. J. Simmons</i>
001	2	ERC QA Plan for BCAP	12-14	<i>C. J. Simmons</i>
-----	2	BCAP Overview Plan	12-14	<i>C. J. Simmons</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: A.E. CORDON *Alcorn* Date: 12/17/84

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. H. Thompson S.S. NO: 302-38-6814
 (QA & Audits) EMP. NO: T-6814

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/16/84	C.H. Thompson
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/16/84	C.H. Thompson
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/16/84	C.H. Thompson
-----	Aug 30, 1984	CECo Letter to the NRC-BCAP	10/16/84	C.H. Thompson
QAP-2.1	1	Daily Log	10/16/84	C.H. Thompson
^{18.1} QAP- 2.1	1	QA Audit Program	10/16/84	C.H. Thompson
DP & P-101	0	QA Policy	10/16/84	C.H. Thompson
DP & P-102	0	QA Programs	10/16/84	C.H. Thompson

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: [Signature] Date: 10/24/84
 QA Manager 82

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. N. Thompson S.S. NO: 302-38-6814
 (Admin. & Records Mgr) EMP. NO: 5-6814

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-01	0	Program Indoctrination for Employees	10/17/84	CNT Thompson
BCAP-02	1	Organization and Responsibility	10/17/84	CNT Thompson
BCAP-03	0	Records Management	10/17/84	CNT Thompson
BCAP-04	1	BCAP Interface with Contractors and A/E	10/17/84	CNT Thompson
**BCAP-05	-			
BCAP-06	2	Observation and Discrepancy/Concern Processing	10/17/84	CNT Thompson
BCAP-07	1	BCAP Reports	10/17/84	CNT Thompson
BCAP-08	0	Qualification and Certification of Reinspection Personnel	10/17/84	CNT Thompson
QAP-4.1	0	Procurement Document Control	10/17/84	CNT Thompson
QAP-5.1	0	Prep., Review & Approval of Q.A. Procedures	10/17/84	CNT Thompson
QAP-5.1	0	Distribution and Control of Q.A. Documents	10/17/84	CNT Thompson
QAP-17.1	0	Q.A. Records Program	10/17/84	CNT Thompson

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

** When issued

Reviewed By: J.E. [Signature] Date: 10/21/84
 QA Manager 83

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: C. W. Thompson S.S. NO: 302-38-5814
 (Admin. & Records Mgr.) EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
ANSI N45.2.9	1974	Requirements for Collection, Storage, and Maintenance of QA Records	10/27/84	CW Thompson
ANSI N45.2.10	1973	QA Terms & Definitions	10/27/84	CW Thompson

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: J. E. Young for A. C. Coakley Date: 10/21/84
 QA Manager 84

QUALITY ASSURANCE

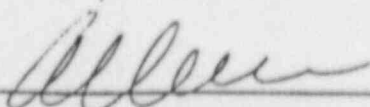
RECORD OF ASSIGNED READING

ASSIGNED TO: C. M. Thompson S.S. NO: 302-38-6814

EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1	BCAP Site QA Overview Group Plan	12/31/84	C.M. Thompson
001	2	ERC QA Plan for BCAP	12/31/84	C.M. Thompson
-----	2	BCAP Overview Plan	12/31/84	C.M. Thompson

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 12/21/84
QA Manager 85

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

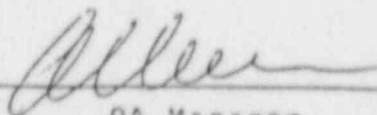
ASSIGNED TO: C. M. ThompsonS.S. NO: 302-38-6814

EMP. NO: _____

Doc. No.	Rev.	Title	Date Completed	*Signature
BCAP-01	3	Program Indoc. for Employees	12/21/84	C. M. Thompson
BCAP-02	2	Organization & Responsibility	12/21/84	C. M. Thompson
BCAP-03	1	Records Management	12/21/84	C. M. Thompson
BCAP-04	2	BCAP Interface with Contractors & A/E	12/21/84	C. M. Thompson
BCAP-05	5	Observation & Discrepancy/Concern Processing	12/21/84	C. M. Thompson
BCAP-07	2	BCAP Reports	12/21/84	C. M. Thompson

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: _____



QA Manager

Date: _____

12/21/84

QUALITY ASSURANCE
RECORD OF ASSIGNED READING

ASSIGNED TO: C. M. Thompson S.S. NO: 302-38-6814

EMP. NO: -----

Doc. No.	Rev.	Title	Date Completed	*Signature
QAP-1.1	1	Personnel Qualifications	12/20/84	<i>C.M. Thompson</i>
QAP-10.1	1	Quality Review and Surveillance	12/20/84	<i>C.M. Thompson</i>
QAP-10.2	1	Qualification of Inspection Personnel	12/20/84	<i>C.M. Thompson</i>
QAP-17.1	1	QA Records Program	12/20/84	<i>C.M. Thompson</i>
QAP-18.1	2	QA Audit Program	12/20/84	<i>C.M. Thompson</i>
QAP-18.2	1	Qualification of Audit Personnel	12/20/84	<i>C.M. Thompson</i>

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By: *[Signature]* Date: 12/21/84
QA Manager 87

QUALITY ASSURANCE

RECORD OF ASSIGNED READING

ASSIGNED TO: J. E. Young S.S. NO: 358-34-6428
 (QA & Audits) EMP. NO: 46428

Doc. No.	Rev.	Title	Date Completed	*Signature
-----	1.	BCAP Overview Plan	10/24/84	J E Young
ANSI N45.2.6	1978	Qualification of Inspection, Examination & Testing Personnel	10/24/84	J E Young
ANSI N45.2.23	1978	Qualification of QA Program Audit Personnel	10/24/84	J E Young
----- Aug 30, 1984		CECo Letter to the NRC-BCAP	10/24/84	J E Young
QAP-2.1	1	Daily Log	10/24/84	J E Young
^{1P.1} QAP- 2.1	1	QA Audit Program	10/24/84	J E Young
DP & P-101	0	QA Policy	10/24/84	J E Young
DP & P-102	0	QA Programs	10/24/84	J E Young

*Signature acknowledges that I have read the documents and have been provided an opportunity to have questions answered to assure my understanding.

Reviewed By:  Date: 11/8/84

ERC TRAINING
ATTENDANCE SHEET

TRAINING SESSION DATE: 10/31/84

BRAIDWOOD

LOCATION: SITE OFFICE DURATION: _____

TOPIC: GAP-2.1, Rev 1, "Daily Logs"

My signature acknowledges that I have received instruction on this topic. It also indicates that I have been provided an opportunity to have questions answered to ensure my understanding of the material presented.

<u>PRINT NAME</u>	<u>SIGNATURE</u>	<u>ORG/DEPT.</u>	<u>SS#</u>
WAYNE L. CHASE	<i>Wayne L. Chase</i>	ERC CONSULTANT	58-14-5760
JON E. HOFF	<i>Jon E. Hoff</i>	ERC/MSS	497-54-3137
JAMES E. YOUNG	<i>J. E. Young</i>	ERC/MSS	358-34-6428
Robert E. Helm	<i>Robert E. Helm</i>	ERC/MSS	247-62-0967
Chris J. Simmons	<i>Chris Simmons</i>	ERC/MSS	259-78-1957
Chester H. Brown	<i>C. H. Brown</i>	ERC/Consultant	019-03-58
DONNA L. Togliatti	<i>Donna L. Togliatti</i>	ERC	352-36-3196

~~_____

_____~~

L. M. Thompson
TRAINING INSTRUCTOR

6.3 Certification Records of Added Personnel

September 24, 1984

TO: ERC Files

SUBJECT: Qualification of ERC Personnel/Employees performing work
for the Braidwood Construction Assessment Program (BCAP)

I have reviewed the education records, professional work experiences and personal qualifications which I feel are required for C. H. Brown, Jr. to perform as a member of the ERC/BCAP Independent Expert Overview Group and find him/~~her~~ fully qualified to so perform.

Restham for
J. L. Hansel
ERC Project Manager

JLH/dlt



MEMO

December 6, 1981

TO: ERC Files

SUBJECT: Qualifications of ERC Personnel/Employees performing work for the Braidwood Construction Assessment Program (BCAP).

I have reviewed the education records, professional and work experiences and personal qualifications which I believe are required for P. L. Clark to perform as a member of the ERC/BCAP Independent Expert Overview Group, and find him fully qualified to so perform.

RE Hansel

J. L. Hansel
Project Manager

JLH:CMT/dit

October 9, 1984

TO: ERC Files

SUBJECT: Qualification of ERC Personnel/Employees performing work
for the Braidwood Construction Assessment Program (BCAP)

I have reviewed the education records, professional and work experiences and personal qualifications which I feel are required for G. J. Simmons to perform as a member of the ERC/BCAP Independent Expert Overview Group and find him fully qualified to so perform.

J. L. Hansel
ERC Project Manager

*RE Ham for
JL Hansel*

JLH/dlt

November 8, 1984

TO: ERC Files

SUBJECT: Qualification of ERC Personnel/Employees performing work for the Braidwood Construction Assessment Program (BCAP).

I have reviewed the education records, professional and work experiences and personal qualifications which I believe are required for G. A. Haworth to perform as a member of the ERC/BCAP Independent Expert Overview Group, and find him fully qualified to so perform.

RE Hansel
J. L. Hansel
Project Manager

JLH:REH/dlt

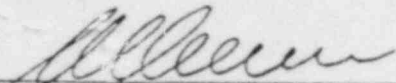
EVALUATION RESEARCH CORPORATION
ENERGY and ENVIRONMENTAL SCIENCES
DIVISION

This is to certify that

CHRIS J. SIMMONS

*has successfully met the requirements of ANSI 45.2.6
"Qualifications of Inspection, Examination and Testing
Personnel for Nuclear Power Plants"
and is hereby certified as a*

**Quality Assurance Inspector
LEVEL III — CIVIL (Structural)**



Manager, Quality Assurance

Date 10/9/84

95

EVALUATION RESEARCH CORPORATION

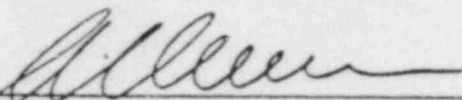
ENERGY and ENVIRONMENTAL SCIENCES
DIVISION

This is to certify that

CHRIS J. SIMMONS

*has successfully met the requirements of ANSI 45.2.6
"Qualifications of Inspection, Examination and Testing
Personnel for Nuclear Power Plants"
and is hereby certified as a*

**Quality Assurance Inspector
LEVEL III — MECHANICAL**



Manager, Quality Assurance

Date

10/9/84

EVALUATION RESEARCH CORPORATION

ENERGY and ENVIRONMENTAL SCIENCES
DIVISION

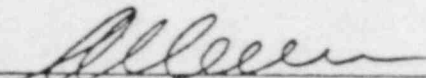
This is to certify that

CHRIS J. SIMMONS

*has successfully met the requirements of ANSI 45.2.6
"Qualifications of Inspection, Examination and Testing
Personnel for Nuclear Power Plants"
and is hereby certified as a*

Quality Assurance Inspector

LEVEL III — WELDING



Manager, Quality Assurance

Date 10/9/84

**EVALUATION
RESEARCH
CORPORATION**

PERSONNEL CERTIFICATION

NAME: Paul L. Clark

EMPLOYEE I.D. NO:
Contract

LEVEL OF CERTIFICATION	DISCIPLINE	EFFECTIVE DATE OF CERTIFICATION	RECERTIFICATION DUE
III	Electrical	12/6/84	12/6/85

BASIS FOR CERTIFICATION:

- EDUCATION
- GENERAL EXPERIENCE
- VISUAL ACUITY EXAM
- TRAINING
- ANNUAL PERFORMANCE EVALUATION

OTHER FACTORS Prior certificates by Long Island Lighting Co. 9/19/83

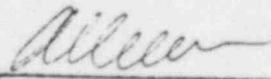
LIMITATIONS OF CERTIFICATION:

None

THE ABOVE NAMED INDIVIDUAL IS CERTIFIED TO THE REQUIREMENTS OF QAP

PROCEDURE 10.2, Rev. 1

A. E. Cocoros



SIGNATURE - QA MANAGER

12/6/84

DATE

EVALUATION RESEARCH CORPORATION

ENERGY and ENVIRONMENTAL SCIENCES
DIVISION

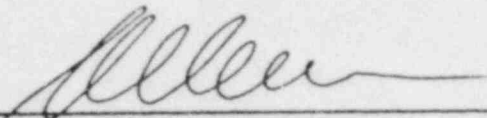
This is to certify that

Paul L. Clark

*has successfully met the requirements of ANSI 45.2.6
"Qualifications of Inspection, Examination and Testing
Personnel for Nuclear Power Plants"
and is hereby certified as a*

Quality Assurance Inspector

Level III - Electrical



A.E. Cocoros, QA Manager

Date

12/6/84

EVALUATION RESEARCH CORPORATION

ENERGY and ENVIRONMENTAL SCIENCES
DIVISION

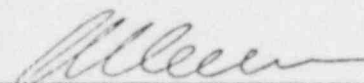
This is to certify that

C.M. THOMPSON

*has successfully met the requirements of ANSI 45.2.23
"Qualification of Quality Assurance Program Audit
Personnel for Nuclear Power Plants"
and is hereby certified as a*

Quality Assurance Lead Auditor

A. E. COCOROS



Manager, Quality Assurance

Date

12/11/84

6.4 Quality Assurance Plan