



**Commonwealth Edison**  
 One First National Plaza, Chicago, Illinois  
 Address Reply to: Post Office Box 757  
 Chicago, Illinois 60690

*To W. Forney  
DMB*

October 10, 1984

PRINCIPAL STAFF	
RA	DRP
D/RA	DRS
RC	DRSS
PAO	ML
SGA	OL
EIC	OI
DRMA	FILE

Mr. James G. Keppler  
 Regional Administrator - Region III  
 U. S. Nuclear Regulatory Commission  
 799 Roosevelt Road  
 Glen Ellyn, IL 60137

SUBJECT: Braidwood Nuclear Power Station Units 1 and 2  
 Status Briefing on BCAP Held on October 4, 1984  
 at Mazon Emergency Off-Site Facility (EOF)  
 NRC Docket Nos. 50-456 and 50-457

REFERENCE: (a) J. J. O'Connor Letter to J. G. Keppler  
 "Braidwood Construction Assessment Program  
 (BCAP)" dated June 22, 1984

Dear Mr. Keppler:

Reference (a) described the Braidwood Construction Assessment Program (BCAP). The second open briefing on the status of the BCAP effort was provided to the NRC on October 4, 1984 at the Mazon EOF. Forwarded herewith is a meeting summary including a copy of the visual-aid material used in the presentations. The next briefing meeting is scheduled for 9:00 a.m. on November 8, 1984 at the Mazon EOF.

Also forwarded herewith for your information is the BCAP Director's Progress Report for the month of September, 1984.

Please direct any questions relating to BCAP to Mike Wallace, Assistant Manager of Projects and Braidwood Project Manager.

David H. Smith  
 Nuclear Licensing Administrator

Attachments

cc: NRC Resident Inspector - Braidwood  
 NRC BCAP Inspector - Braidwood  
 John Hansel - ERC

(0948d)

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 PDR ADDCK 05000456  
 F PDR

OCT 16 1984  
 IEO/

MEETING SUMMARY

BCAP NRC/CECo/ERC/ MONTHLY MEETING

OCTOBER 4, 1984 9:00 A.M

MAZON EOF

The monthly meeting was opened with a brief statement by R. Warnick, of the NRC Region III, giving the purpose for the meeting, that is, to discuss the BCAP, its progress, and the Independent Expert Overview Group's (IEOG) review of the BCAP.

The following is the agenda utilized for the remainder of the meeting.

I. INTRODUCTION

Presented by the Braidwood Project Manager to provide the major topics of the presentation (see enclosure 1).

II. BCAP TASK FORCE

Presented by the BCAP Director to provide the BCAP's achievements for the month of September and the current status (see enclosure 2).

III. QUALITY ASSURANCE

Presented by the BCAP Quality Assurance Supervisor to describe the overview activities for the month of September and the current status (see enclosure 3).

IV. INDEPENDENT EXPERT OVERVIEW GROUP

Presented by the Assistant Project Manager of the IEOG to describe the overview activities for month of September of the IEOG (see enclosure 4).

Additional items discussed during the meeting are included in enclosure 5. The attendance for the meeting is provided in enclosure 6. The meeting adjourned at 10:15 A.M.

BRAIDWOOD CONSTRUCTION ASSESSMENT PROGRAM

(BCAP)

MONTHLY NRC STAFF BRIEFING

OCTOBER 4, 1984

- |      |                                   |              |
|------|-----------------------------------|--------------|
| I.   | INTRODUCTION                      | MIKE WALLACE |
| II.  | BCAP TASK FORCE                   | NINU KAUSHAL |
| III. | QUALITY ASSURANCE                 | NEIL SMITH   |
| IV.  | INDEPENDENT EXPERT OVERVIEW GROUP | BOB HAMM     |

BRAIDWOOD CONSTRUCTION ASSESSMENT PROGRAM (BCAP)

MONTHLY BRIEFING

PRESENTED TO

REGIONAL OFFICE -- REGION III  
U. S. NUCLEAR REGULATORY COMMISSION

N. N. KAUSHAL  
BCAP DIRECTOR  
OCTOBER 4, 1934



CSR PROGRESS

- ° LIST OF CONSTRUCTION CATEGORIES ESTABLISHED
  
- ° RANDOM PORTION OF THE SAMPLE IDENTIFIED AND INSPECTION PACKAGES ARE READY FOR:
  - HVAC DUCTS
  - HVAC DUCT HANGERS
  - CONCRETE PLACEMENT
  
- ° RANDOM PORTION OF THE SAMPLE IS BEING ESTABLISHED FOR:
  - CONDUITS
  - CONDUIT SUPPORTS
  - CABLES
  - SMALL BORE PIPING CONFIGURATION
  - LARGE BORE PIPING CONFIGURATION
  - LARGE BORE PIPING SUPPORTS

CSR PROGRESS - CONT'D

- TWO LEVEL III INSPECTORS (CIVIL/STRUCTURAL AND MECHANICAL/WELD) CERTIFIED
  
- ONE LEVEL II INSPECTOR CERTIFIED IN BOTH MECHANICAL AND WELDING AREAS
  
- TWO LEVEL II INSPECTORS CERTIFIED IN MECHANICAL AREA
  
- CERTIFICATION PACKAGES ARE ESSENTIALLY COMPLETED FOR TWO MORE LEVEL II INSPECTORS (CIVIL/STRUCTURAL)
  
- NO INSPECTIONS PERFORMED TO DATE

CSR PROGRESS - CONT'D

CSR PROGRESS HAS BEEN SLOWER THAN EXPECTED FOR SEVERAL REASONS:

- INTENSIVE AUDIT SURVEILLANCE AND OVERVIEW ACTIVITY RESULTED IN DIVERSION OF TASK FORCE RESOURCES TO SUPPORT THESE ACTIVITIES
- COMMENTS/OBSERVATIONS FROM THESE AUDITS, ETC. ALTHOUGH MOSTLY MINOR REQUIRED ADDITIONAL EFFORT FOR RESOLUTION. NO SERIOUS PROGRAMMATIC DEFICIENCIES HAVE BEEN IDENTIFIED
- QUALIFICATION AND CERTIFICATION OF BCAP INSPECTORS TOOK LONGER THAN ANTICIPATED
- REWORK ON SOME SAMPLE POPULATIONS WAS NECESSARY AS A RESULT OF INCOMPLETE INFORMATION PROVIDED BY CONTRACTORS.

CSR PROGRESS - CONT'D

IN THE COURSE OF PREPARING INSPECTION PACKAGES, THE FOLLOWING OBSERVATION/DISCREPANCY WAS IDENTIFIED:

- OBSERVATION CSR-D-H-2-0-1

THE HVAC CONTRACTOR DID NOT DOCUMENT INSPECTIONS OF FIRE DAMPERS FOR "SQUARENESS" AND "FRAME TO BLADE" CLEARANCES AFTER ERECTION AS RECOMMENDED BY THE FIRE DAMPER VENDOR

RPSR PROGRESS

- FSAR REVIEW FOR IDENTIFYING ESSENTIAL CONSTRUCTION REQUIREMENTS COMPLETED
- REVIEW OF SARGENT AND LUNDY SPECIFICATIONS FOR IDENTIFYING ESSENTIAL CONSTRUCTION REQUIREMENTS IN PROGRESS
- REVIEW OF REQUIREMENTS AGAINST PROCEDURES EXPECTED TO START ON OCTOBER 9
- NO OBSERVATIONS OR CONCERNS HAVE BEEN IDENTIFIED TO DATE
- OVERALL PROGRESS HAS BEEN SATISFACTORY



RSCAP PROGRESS

REVIEW OF THE FOLLOWING SEVEN CAP'S IS IN PROGRESS  
(INCLUDES TWO REVIEWS INITIATED DURING THE LAST  
MONTH):

- QUALITY CONTROL STRUCTURAL STEEL REVIEW
- SAFETY RELATED PIPE SUPPORTS
- NSSS COMPONENT SUPPORTS
- ELECTRICAL INSTALLATION DOCUMENTATION REVIEW
- QUALITY CONTROL INSPECTOR REINSPECTION
- REINSPECTION OF SAFETY RELATED MECHANICAL  
EQUIPMENT
- HVAC WELDING, CONFIGURATION, STIFFENERS  
FITTINGS

OVERALL RSCAP PROGRESS HAS BEEN SATISFACTORY

RSCAP PROGRESS - CONT'D

REVIEW TO DATE HAS IDENTIFIED THE FOLLOWING  
OBSERVATIONS:

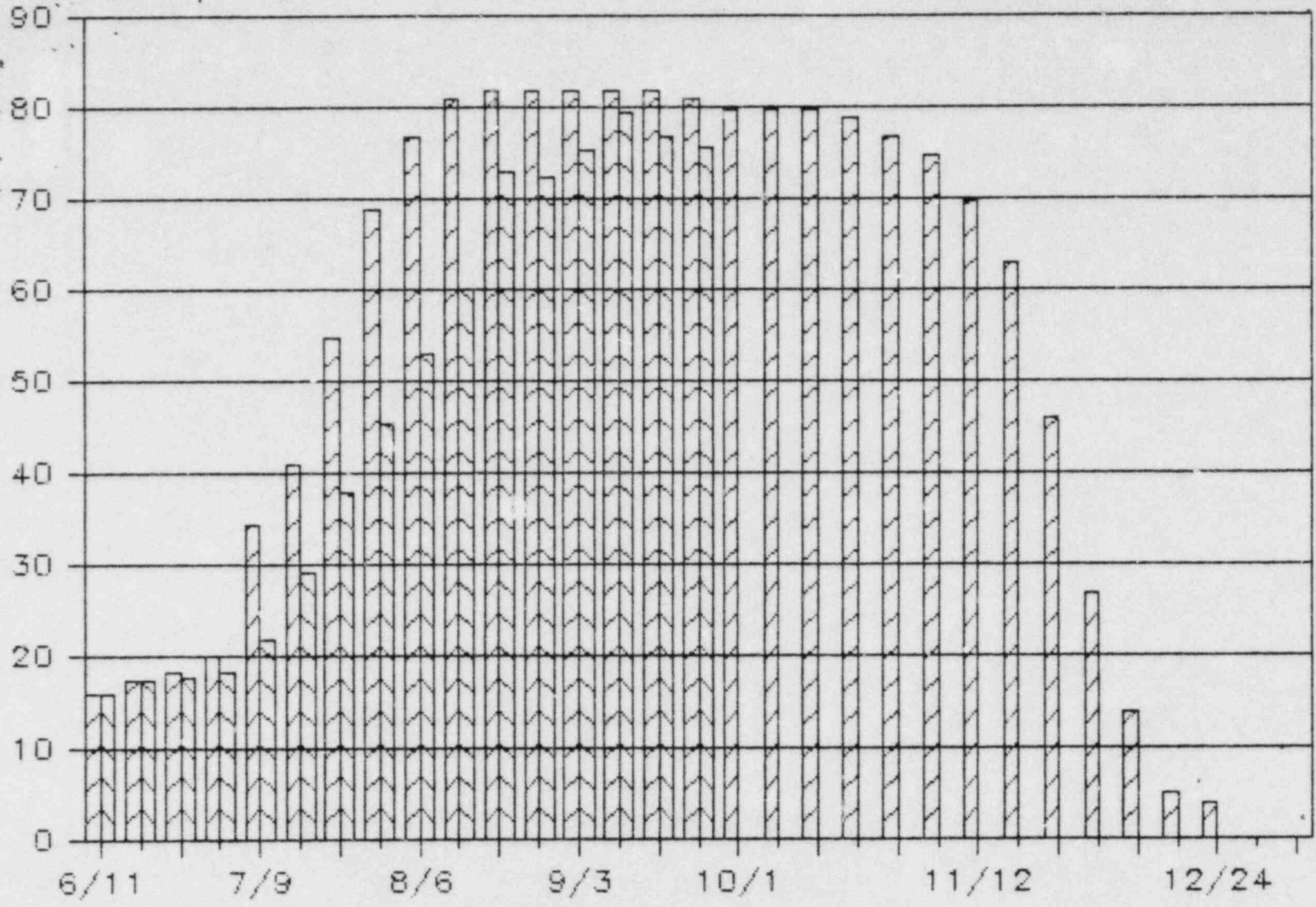
- 004-01 - FAILURE TO COMPLETE FORM REQUIRED  
BY THE PROCEDURE
  
- 004-02 - FAILURE TO USE INSPECTION TOOL  
REQUIRED BY PROCEDURE

SUMMARY BCAP STATUS

- RSCAP AND RPSR PROGRESS HAS BEEN SATISFACTORY
- CSR PROGRESS HAS BEEN SLOWER THAN ANTICIPATED
- INSPECTOR CERTIFICATIONS TOOK LONGER THAN PLANNED
- WORK PREPARATORY TO INSPECTIONS HAS BEEN THOROUGHLY CHECKED
- NO INSPECTIONS HAVE BEEN INITIATED
- GOAL FOR THE NEXT MONTH IS TO MAKE SIGNIFICANT PROGRESS ON INSPECTIONS

# TOTAL BCAP EQUIVALENT MANPOWER

PERSONNEL



STATUS AS OF WEEK #16 BEGINNING 9/24/84  
[Hatched Box] PLANNED [Cross-hatched Box] ACTUAL

BCAP Q.A.

MONTHLY BRIEFING

N. P. SMITH

OCTOBER 4, 1984



- ORGANIZATION/PERSONNEL
  
- DEVELOPMENT EFFORTS
  
- DOCUMENT REVIEW EFFORTS
  
- AUDIT/SURVEILLANCE SCHEDULES AND RESULTS
  
- BCAP Q.A. INTERNAL REVIEWS
  
- HOLD POINTS

ORGANIZATIONAL/PERSONNEL

- ADDED ONE TECHNICAL SPECIALIST
  
- LOST ONE LEAD ENGINEER

PERSONNEL

EXPERIENCE LEVELS

(AVERAGE YEARS)

	OVERALL		NUCLEAR		Q.A.	
	1 SEPT.	1 OCT.	1 SEPT.	1 OCT.	1 SEPT.	1 OCT.
GENERAL SUPERVISOR - Q.A. LEAD ELEMENT ENGINEERS OVERINSPECTION SUPERVISOR Q.A. ENGINEERS/SPECIALISTS	21.9	22.9	13.4	15.9	5.3*	5.0
INSPECTORS	14	14	7.4	7.4	--	--

\*RECALCULATED

DEVELOPMENT EFFORTS

- ADDED 4. Q.A. SPECIAL INSTRUCTIONS
  
- REVISED 11 Q.A. SPECIAL INSTRUCTIONS
  
- DELETED 1 Q.A. SPECIAL INSTRUCTION
  
- CONDUCTED TRAINING TO THE ABOVE CHANGES
  
- REVISION TO Q.A. PLAN TO REFLECT JUNE 30, 1984  
EFFECTIVE DATE FOR CSR

BCAP DOCUMENT REVIEWS  
(SEPTEMBER)

REVISION TO POLICY PLANS	3
REVISIONS TO PROCEDURES/INSTRUCTIONS	26
LESSON PLANS	3
EXAMINATION QUESTION BANKS	6
CERTIFICATION EXAMINATIONS	6
REINSPECTION CHECKLISTS/INSTRUCTIONS	5
CERTIFICATION PACKAGES	2
	<hr/>
	51



BCAP INSPECTOR CERTIFICATION  
PACKAGE REVIEW PROCESS

- AT PRESENT PERFORMED PRIOR TO THE INSPECTOR(S) PERFORMING INSPECTIONS.
- REVIEW PERFORMED IN ACCORDANCE WITH A SITE QUALITY INSTRUCTION. ELEMENTS OF THE REVIEW INCLUDE THE FOLLOWING:
  - EVALUATION OF EXPERIENCE FOR THE CORRESPONDING EDUCATION AND CERTIFICATION LEVEL.
  - VERIFICATION THAT REQUIRED TRAINING HAS BEEN COMPLETED.
    - A. INDOCTRINATION
    - B. READ/STUDY
    - C. CLASSROOM
    - D. ON-THE-JOB
  - VERIFICATION OF SATISFACTORY COMPLETION OF PRACTICAL AND WRITTEN EXAMINATIONS.
  - VERIFICATION THAT REQUIRED CERTIFICATION DOCUMENTS ARE COMPLETED IN ACCORDANCE WITH THE BCAP PERSONNEL QUALIFICATION AND CERTIFICATION PROCEDURE.
- ANY COMMENTS DOCUMENTED AND RESOLVED BY FORMAL COMMENT SHEET.

EXAMPLE

Experience Evaluation

For: Level III  
Candidate

Education:

Requirements (BCAP-08 & ANSI N45.2.6 (1978))	Experience Summary				Requirement to Experience Comparison
	Discipline & Level	Time Frame	Months Experience	Type	
1. 8 years with 2. & 3.					Exceeds req'mnts. by _____.
2. At least 2 yrs as a L-II					Exceeds req'mnts. by _____.
3. At least 2 yrs associated with nuclear facilities					Exceeds req'mnts. by _____.

Evaluation Results:

Performed By: BCAP-Q.A.  
Signature Date

BCAP Q.A. AUDIT SCHEDULE  
(ANNUAL)

SHEET 1 OF 1

|  - SCHEDULED AUDIT

|  - COMPLETED AUDIT

ACTIVITY/ SUBJECT AREA	YEAR	1984															
	MONTH	SEPTEMBER			OCTOBER				NOVEMBER				DECEMBER				
	WEEK ENDING	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28
CSR - PROCEDURES																	
BCAP-20			X X									X					
BCAP-21			X X								X						
BCAP-22				X X									X				
BCAP-23					X									X			
BCAP-24						X									X		
RPSR - PROCEDURES																	
BCAP-41				X X									X				
BCAP-42				X X									X				
BCAP-43				X X										X			
RSCAP - PROCEDURES																	
BCAP-60				X X									X				
ADMIN. - PROCEDURES																	
BCAP-01			X X									X					
BCAP-02			X X									X					
BCAP-03			X X									X					
BCAP-04			X X									X					
BCAP-06			X X										X				
BCAP-07			X X										X				
BCAP-08			X X										X				

BCAP Q.A. SURVEILLANCE SCHEDULE  
(ANNUAL)

SHEET 1 OF 1

x
---

 - SCHEDULED SURVEILLANCE

x   x
-------

 - COMPLETED SURVEILLANCE

ACTIVITY/ SUBJECT AREA	YEAR	1984															
	MONTH	SEPTEMBER			OCTOBER				NOVEMBER				DECEMBER				
	WEEK ENDING	14	21	28	05	12	19	26	02	09	16	23	30	07	14	21	28
CSR - PROCEDURES																	
BCAP-20				X X		X		X		X							X
BCAP-21			X X	X	X		X		X					X			
BCAP-22				X		X		X		X		X					X
BCAP-23			X X	X	X		X		X		X						X
BCAP-24				X	X	X		X		X		X					X
RPSR - PROCEDURES																	
BCAP-41				X X	X	X		X		X		X					X
BCAP-42				X X	X	X		X		X		X					X
BCAP-43				X	X		X		X		X						
RSCAP - PROCEDURES																	
BCAP-60				X X	X	X		X		X		X					X
ADMIN. - PROCEDURES																	
BCAP-01				X		X		X		X		X					X
BCAP-02				X		X		X		X		X					X
BCAP-03				X		X		X		X		X					X
BCAP-04				X		X		X		X		X					X
BCAP-06					X		X		X		X		X				X
BCAP-07					X		X		X		X		X				X
BCAP-08					X		X		X		X		X				X

(0069B)

SITE AUDIT\* RESULTS

	<u>FINDINGS</u>	
	<u>OPEN</u>	<u>CLOSED</u>
BCAP ADMIN PROCEDURES	1	2
BCAP CSR PROCEDURES	4	0
BCAP RSCAP PROCEDURES	0	0
BCAP RPSR PROCEDURES	0	1
	<hr/>	
TOTAL	5	3

- \* DETAILED STEP-BY-STEP VERIFICATION  
7 FINDINGS INVOLVED PROCEDURAL VIOLATIONS OF A MINOR NATURE.  
1 FINDING INVOLVED PROCEDURAL VIOLATION WITH DELAY POTENTIAL.



OFF-SITE AUDIT RESULTS

<u>AUDIT AREA</u>	<u>FINDINGS</u>	
	<u>OPEN</u>	<u>CLOSED</u>
DANIEL INTERNATIONAL QC INSPECTOR CERTIFICATION PROGRAM	0	0

SURVEILLANCE RESULTS

<u>AREA</u>	<u>OPEN</u>	<u>ITEMS</u>	<u>CLOSED</u>
RSCAP TRAINING	0		1
CSR PROCEDURES	3		0
	<hr/>		
TOTAL	3		1

BCAP Q.A. INTERNAL REVIEWS

- DETAILED STEP-BY-STEP VERIFICATION TO ASSURE  
BCAP Q.A. WAS IMPLEMENTING PROCEDURES CORRECTLY
  
- 4 CORRECTIVE ACTION REQUESTS WRITTEN (1 CLOSED)

NO ITEMS FOUND THAT WOULD IMPACT Q.A. WORK DONE TO DATE.

HOLD POINTS

PURPOSE: TO PUT BCAP-Q.A. IN A PRO-ACTIVE MODE IN  
ASSURING QUALITY.

- BCAP Q.A. LETTER OF SEPTEMBER 6, 1984 PLACED HOLD POINT ON
  - IMPLEMENTATION OF COMPLETED CHECKLISTS FOR CSR AND RPSR
  - INSPECTOR PERFORMANCE OF FIELD INSPECTIONS

HOLD POINTS STATUS

- RPSR CHECKLISTS - HOLD RELEASED OCTOBER 3, 1984  
BASED ON AUDIT
  
- CSR CHECKLISTS - AWAITING CLOSURE OF AUDIT FINDINGS
  
- INSPECTORS - HOLD BEING RELEASED FOR INDIVIDUAL  
INSPECTORS FOLLOWING BCAP Q.A. CERTIFICATION REVIEW



BCAP STATUS  
MEETING

for

September, 1984

INDEPENDENT EXPERT OVERVIEW GROUP

October 4, 1984

## TOPICS

- o Introductory Remarks
- o Documentation Reviews Completed
- o Overview Activities
- o Status of Observations and Requests  
for Corrective Action
- o Open Issues and Concerns

DOCUMENTATION REVIEWS COMPLETED

- o BCAP PLAN
- o OVERVIEW PLAN
- o CSR
- o RPSR
- o RSCAP
- o BCAP QUALITY ASSURANCE
- o ADMINISTRATIVE PROCEDURES

## DOCUMENT REVIEWS COMPLETED

### Plans

- RPSR Plan, Rev. 1

### Procedures

- BCAP-01, Rev. 1
- BCAP-04, Rev. 1
- BCAP-06, Rev. 1 & 2
- BCAP-20, Rev. 1
- BCAP-21, Rev. 1
- BCAP-22, Rev. 1
- BCAP-41, Rev. 1
- BCAP-42, Rev. 1
- BCAP-43, Rev. 1

### BCAP/QA Procedures

- QASI-01 through 16

### CSR Draft Checklists

- HVAC Hangers and Auxiliary Steel
- Generic AWS D1.1 Visual Weld Inspection
- AWS D1.3 Visual Weld Inspection

## Overview Activities

### Audits:

- o RSCAP (0 findings)
- o Administration (4 findings)

### Surveillances:

- o CSR (Populations)
  - Small Bore Piping Configuration  
(Issued Observation BCAP-OBS-02)
  - Concrete Placement
  - Structural Steel
  - Electrical Conduit
  - HVAC Duct
  - HVAC Hangers/Auxiliary Steel
  - Generic AWS D1.1 Visual Weld  
Inspection
  - AWS D1.3 Visual Weld Inspection
- o RPSR
- o RSCAP
- o Inspector Certifications



Activities for September	Observations or Findings		Answered Satisfactorily		RCA's Written		Open or Unresolved	
	Mo.	Cum.	Mo.	Cum.	Mo.	Cum.	Mo.	Cum.
<b>AUDITS:</b>								
RSCAP Administration	0	0	4	4				
<b>SURVEILLANCES:</b>								
CSR	1	1					1	1
RPSR								
RSCAP Administration	1	1	1	1				
BCAP Quality Assurance								
<b>INSPECTIONS:</b>								
TOTAL	6	6	5	5			1	1

## CLOSED ISSUES/CONCERNS

### RSCAP

Activity is underway by a separate group to assess the adequacy of commitments to correct/prevent recurrence of each problem.

### RPSR

A review of the FSAR to determine applicable requirements/commitments is nearing completion.

### General

The inconsistency between June 1 and June 30 dates is being corrected as the affected documents are revised.

LMW 81/90A

## Open Issues/Concerns

### Issues

- 1) Revisions of documents to incorporate revisions committed to the IEOG:
  - a) BCAP Program Document
  - b) BCAP Overview Plan
  - c) RSCAP Plan
  - d) CSR Plan
  - e) BCAP QA Plan
  - f) BCAP Procedures BCAP-07, 60
  
- 2) Response to Observation BCAP-OBS-002  
(Small Bore Piping Configuration Population)

### Concerns

- 1) Inspector certifications

ENCLOSURE 5

Items Discussed at NRC/CECo/ERC Meeting

October 4, 1984 9:00 A.M.

- Q. Will the RSCAP element include a sample inspection of hardware in the field?
- A. The RSCAP element will not include a sample inspection of hardware. However, the CSR element will include, as a part of it's sample, hardware inspections of items involved in the corrective action programs.
- Q. Does BCAP Q.A verify the inspector education and experience stated in the Inspector Qualification Package?
- A. BCAP Q.A. does verify inspector education and experience on a spot check basis. Furthermore, BCAP Q.A. has performed an off-site audit of Daniel International Corporation to assure the adequacy of their education and experience verification program.
- Q. How many people has the IEOG assigned to the BCAP overview?
- A. The IEOG normally has from 6 to 10 personnel on site at any time, and will adjust the number of personnel assigned as required to maintain the proper overview involvement.

## Enclosure 6

<u>NAME</u>	<u>POSITION</u>	<u>ORGANIZATION</u>
R. Warnick	Branch Chief	Region III, NRC
R. Gardner	Reactor Inspector	Region III, NRC
C. W. Schroeder	Proj. Licensing & Compliance Supt.	CECo
D. Swartz	Nuclear Licensing Administrator	CECo
N. P. Smith	Gen. Supervisor - QA	CECo
D. H. Smith	Nuclear Licensing Administrator	CECo
E. E. Fitzpatrick	Asst. Manager - QA	CECo
R. E. Ham	Asst. Project Manager	ERC
W. L. Chase	Asst. Project Manager	ERC
K. T. Kostal	Proj. Director Braidwood.	S&L
R. L. Byers	BCAP Asst. Director	BCAP
G. M. Orlov	BCAP Asst. Director	BCAP
W. J. Shewski	Manager QA	CECo
J. D. Deress	Proj. Engineering Manager B/B	CECo
D. L. Shamblin	Proj. Construction Superintendent	CECo
D. L. Cecchett	Licensing Engineer	CECo
R. J. Lauer	Attorney	IL&B
D. Powell	Division of Engineering	IL Dept. of Nuclear Safety
R. Minue	Nuc. Eng./Div. of Engineering	IL Dept. of Nuclear Safety
A. Scaccia	Offsite Planner	CECo
R. Marabito	Public Affairs Officer	Region III, NRC
I. M. Johnson	Communications Coordinator	CECo
J. Hoppe		IL Commerce Com.
N. N. Kaushal	BCAP Director	CECo
M. J. Wallace	Asst. Mgr. of Projs. & Proj. Mgr. Braidwood	CECo
T. J. Maiman	Manager of Projects	CECo



Braidwood Station

Braidwood Construction Assessment Program

Program Progress Report

Report Period September 1 - September 30, 1984

I. SUMMARY STATUS

This is the third monthly Progress Report on the Braidwood Construction Assessment Program (BCAP). This report covers the period from September 1 through September 30, 1984.

During this period the plans and procedures were revised to incorporate working experience and also to accommodate review comments and results of audits and surveillances by Independent Expert Overview Group (IEOG) and Commonwealth Edison Quality Assurance. Particular attention was also devoted to the qualification and certification of the inspectors.

Under CSR, effort continued on completion of checklists and instructions and associated inspection packages. Under RPSR, review of the FSAR for identification of essential construction requirements, was completed. Under RSCAP, review of two additional programs was initiated bringing the total under review to seven. However, no inspections (under CSR) have been performed to date.

As of September 30, 1984 the number of personnel assigned to the BCAP effort has risen to 84. Satisfactory office and clerical support continues to be available to the BCAP workforce.

II. SCHEDULE ANALYSIS

The overall BCAP effort is approximately six weeks behind schedule. This delay is a combination of the previously reported delays (three weeks in the completion of procedures) and the current period delays (three weeks in the training/certification of inspectors and the preparation of reinspection & document review packages). The overall effort will be replanned to take this delay into account.

III. PERSONNEL AND EQUIPMENT STATUS

Actual number of personnel totalled 84 as of September 30, 1984, compared to the planned 82 at this time. Inspection personnel participated in accessibility walkdowns, and training for reinspection/documentation reviews. Two of the three required level III inspectors have been certified.

#### IV. BCAP ELEMENT STATUS

##### A. CSR STATUS

During September work concentrated on writing and issuing the population checklists and instructions and training and certification of inspectors. Out of a total of 70 checklists and instructions, three have been completed and an additional 15 are in various stages of review.

Procedure revisions were made to CSR-20,21 and 22 to more clearly define the activities done to establish populations, select samples and prepare checklists and instructions.

Inspections are scheduled first for HVAC ducts, duct hangers and concrete placements. All activities and documents have been completed, reviewed and approved to support the inspection of these three populations. Small bore piping configuration and electrical conduit, conduit hangers and cables are the next populations scheduled for inspection; contractors' lists of completed items for these categories continue to be reviewed to determine their accuracy and completeness.

Sargent & Lundy design documents are being used to define population items for conduit, conduit hangers and cable trays.

Certification of two level III inspectors, one for mechanical and weld disciplines and one for the civil/structural discipline, has been completed. Training and certification of level II inspectors is in progress. Certification of level II inspectors in the mechanical, weld and civil/structural disciplines is expected to be completed in the first week of October. This will support initiation of inspections on HVAC ducts, HVAC duct hangers and concrete placements.

Audits of CSR were performed by BCAP-QA and IEOG

##### B. RPSR Status

During September 1984, the RPSR group completed training on BCAP procedures 41, 42, and 43. Other RPSR activity involved reviewing the FSAR for construction requirements that fell within the RPSR scope. This review was completed. Preparation of six checklists with construction requirements from applicable Sargent & Lundy specifications was also started. About 20% of these checklists were completed. At least 15 additional checklists will be completed by the end of the RPSR effort. The staff of the RPSR element increased to eight by the addition of a support structural and HVAC engineer.

C. RSCAP Status

During this period, review of two additional programs was initiated. This brings the total number of programs under review to seven. The review of these programs was completed to the extent shown:

- a. Quality Control Structural Steel Review - 65%
- b. Safety Related Pipe Supports - 58%
- c. NSSS Component Supports - 45%
- d. Electrical Installation Documentation Review - 30%
- e. Quality Control Inspector Reinspection - 25%
- f. Reinspection of Safety Related Mechanical Equipment - 10%
- g. HVAC Welding, Configuration, Stiffeners Fittings - 10%

Work has not begun on review of the following two significant corrective action programs:

- h. Piping Heat Number Traceability
- i. Instrumentation Installation Verification

Audits of RSCAP effort were performed by BCAP-QA and IEOG.

V. PROBLEMS/DISCREPANCY FINDINGS

A. Implementation Problems

During September, a significantly increased level of audit and surveillance activity resulted in expenditure of substantial BCAP resources in support of these activities. A number of minor findings regarding early engineering work and the first issue of some procedures also resulted in unanticipated BCAP effort on corrective actions. None of these findings reflect programmatic deficiencies. However, they did contribute to lack of satisfactory progress on CSR. A detailed evaluation of the qualifications of inspectors prior to certification also resulted in delays in completing the inspector certifications.

B. Major Discrepancy Findings

None to date.

VI. RECOMMENDATIONS

No specific recommendations are offered at this time.

*N. N. Kaushal*  
N. N. Kaushal, Director  
Braidwood Construction Assessment Program