Commonwealth Edison
Braidwood Nuclear Power Station
Route #1, Box 84
Braceville, Illinois 60407
Telephone 815/458-2801

October 14, 1994
BW/94-0158

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted in accordance with the requirement of 10CFR50.73(a)(2)(i)(B), which requires a 30-day written report.

This report is number 94-006-00, Docket No. 50-457.

K. L. Kofron
Station Manager
Braidwood Generating Station

KLK/CP/dla
o:\corresp\zcbw94

Encl: Licensee Event Report
No. 457/94-006-00

cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
CECo Distribution Center
IDNS

IE22
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NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Braidwood 2	05000457	1 OF 6

TITLE (4)
Snubber for 2B CV Pump Inoperable due to a Programmatic Deficiency and Personnel Error

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBERS
09	20	94	94	-- 006 --	00	10	20	94	None	
									FACILITY NAME: None	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
	20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER
	20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
	20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
P. Lau, Regulatory Assurance	(815)458-2801 x2957

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
				N						

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

A Chemical and Volume Control (CV) system snubber was removed in order to work on an adjacent Containment Spray (CS) valve. The required 72 hour Limiting Condition for Operation Action Requirement (LCOAR) was not entered upon its removal. Although the snubber was reinstalled eight hours after the valve work, the snubber was not tested and, therefore, could not be considered operable. The error was discovered, the appropriate testing was performed, and the snubber was found acceptable. A Programmatic Deficiency and Personnel Error were the root causes of this event. Corrective actions include a work control procedure revision, a technical review process evaluation, and a training evaluation.

A. PLANT CONDITIONS PRIOR TO EVENT:

Units: Braidwood 2; Event Date: September 20, 1994;
Event Time: 1245;
Mode: 1 - Power Operation; Rx Power: 100%
RCS [AB] Temperature/Pressure: NOT/NOP

B. DESCRIPTION OF EVENT:

There was no plant equipment inoperable at the beginning of this event that contributed to the severity of the event.

An Action Request was written sometime prior to August 2, 1994 requesting for valve 2CS001A (Containment Spray Pump Suction Valve from the Refueling Water Storage Tank)(CS)[BE] the stem and stem nut be cleaned and inspected as well as the removal, testing, and reinstallation of the spring pack assembly.

The Mechanical Maintenance Work Analyst (MMWA) performed a walkdown of the job and identified the need to remove a snubber as it was in the way of the 2CS001A valve stem nut. During the development of the work package in the Electronic Work Control System (EWCS) the MMWA placed the removal of snubber 2CV08021S as step 3 in the traveler to allow accessibility to the stem/stem nut. At step 30 in the traveller the MMWA put in the following step: "contact ISI at X2245 to notify them that snubber is being installed then reinstall snubber support 2CV08021S per doc 7 and the direction of the ISI group". Additionally, the MMWA placed an ASME Section XI repair/replacement Report (BwAP 1600-5T1) in the package. The MMWA placed the work package in routing on August 2, 1994.

The Technical Review was next in the process. The assigned System Engineering System Engineer (SESE) did not review the traveler steps in the package as he did not have computer authorization to view the traveler, therefore he believed all he needed to do was review the basic work to be done and approve the work not the process or procedure.

The EWCS package went to a Quality Control Inspector (QCI) for review. The QCI reviewed the ASME Section XI repair/replacement Report (BwAP 1600-5T1), identified in section 2.c.5 the following "VT-3/4 required if support 2CV08021S is removed/reinstalled, NIS-2 required if code parts repaired/replaced", and signed the applicable Sections as the QC reviewer. The QCI did not insert the applicable In Service Inspection (ISI) Visual Tests (VT) 3/4 testing requirements

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

B. DESCRIPTION OF EVENT (continued):

(Panel M130 in EWCS), therefore no Post Maintenance Testing was indicated on the EWCS Panels. This process was to be done at the final Quality Control release of the work per an agreement within the Quality Control group.

The package was then forwarded to the following groups for information only: Fire Protection review, Operations Technical Specification review, Electrical Maintenance review, Limitorque Valve Coordinator review, and In Service Inspection (ISI) review.

The package was then returned to the MMWA for transfer to Work Planning for scheduling the job.

On 09/06/94 the Mechanical Maintenance (MM) Supervisor responsible for the work reviewed the work package for the 2CS001A valve following the Action/Work Request Processing Procedure (BwAP 1600-1) step 15.a.1 and found that shift authorization was not required to start the work.

The MM Supervisor held a pre-job briefing with his crew and the MM crew commenced the work. The crew verified the 2CS001A valve was out of service and commenced work. Additionally, the Limiting Condition for Operation Action Requirement (LCOAR) for the 2A Containment Spray system had been entered. About 0830 the crew removed the 2CV08021S snubber from the 2CV05CB-6" line as it was in the way of performing their work on the 2CS001A valve (at this time another 72 hour LCOAR (4.7.8-1a) should have been entered for the snubber on the 2B Chemical and Volume Control (CV)[CB] system). Later on that same shift the MM crew completed the work on the 2CS001A valve and reinstalled the 2CV08021S snubber.

The QCI on the job was unsure of the tolerances for the acceptance criteria for the snubber. He told the MM crew he was contacting the ISI inspector for verification of the tolerance. The ISI inspector provided the QCI with the correct tolerance.

The lead Mechanic assumed the QCI had asked the ISI inspector to perform a VT 3/4 examination. The "B" Mechanic on the crew went back to the Mechanical Maintenance shop with the QCI, and the MM Supervisor signed off step 30 in the traveller assuming that the ISI inspector had been notified.

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B. DESCRIPTION OF EVENT (continued):

A different Quality Control Inspector performed the final QC review and did not identify that the VT 3/4 examination had not been completed. The work package was signed off as being complete, the Containment Spray system was returned to operation, and the LCOAR was exited. The 2B CV system snubber had not been tested, therefore, it could not be considered operable.

On September 19, 1994 during a discussion between the original ISI inspector and the QCI who performed the QC review of the snubber on September 6, 1994 it was discovered that the VT 3/4 for snubber 2CV08021S had not been accomplished. Therefore it was concluded that the 2B CV system should have been in LCOAR since snubber LCOAR 2BwOS 7.8-1a would have expired on 09/09/94 at approximately 0830, but was not.

This event is being reported pursuant to 10CFR50.73(a)(2)(i)(B)- any operation or condition prohibited by the plant's Technical Specifications.

On October 4, 1994 a Braidwood Event Review Presentation was held in the Station Managers office, where this event was discussed with all of the departments and personnel involved. Process improvements and corrective actions were identified and discussed. These are listed in the report below.

C. CAUSE OF THE EVENT:

This event has two problems associated with it, one being the removal of a snubber on one ESF system (the Chemical and Volume Control (CV) system) while work is being done on another ESF system (Containment Spray (CS)) without placing the 2B CV System Pump in a Limiting Condition for Operation Action Requirement for snubber removal. The other was a failure to complete the ISI VT 3/4 examination of the CV snubber prior to the completion of the work package.

The root cause of the first problem was a Programmatic Deficiency. The Administrative procedure was not written to identify when components from opposite systems need to be worked on simultaneously.

The root cause for the second problem associated with the event was Personnel Error. Personnel failed to follow the Administrative procedure for work control (two different Quality Control Inspectors at different points in the work control process and the Mechanical Maintenance Supervisor).

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D. SAFETY ANALYSIS:

This event had no effect on plant or public safety as the snubber was found to be operable by the VT 3/4 inspection. The snubber was reinstalled within the first 8 hours of the allowable 72 hours of snubber LCOAR 2BwOS 7.8-1a. The snubber being in place prior to the completion of the work package and not having been touched from that time to the final inspection demonstrates it would have worked. Therefore, the 2B CV pump would have been able to provide water to the vessel if called upon to do so.

E. CORRECTIVE ACTIONS:

Immediate corrective action was to perform the In Service Inspection VT 3/4, which was accomplished at 1600 on 09/19/94.

A review was performed for opposite train work within a given work package of 18 pre-outage code related work packages and 180 outage code related work packages with no packages having dual train components. The sample size provides a good confidence level that this problem is not prevalent.

To address the first problem the following corrective actions will be taken:

Work control procedure BwAP 1600-1 will be revised such that when components in a different system are worked on as part of the work, a separate action request will be required to be written so that each system will be identified. Subsequent review by Operations will identify conditions where opposite trains are being requested to be worked on. Additionally, the action requests must be tied together for scheduling purposes, and shift authorization to begin work will be required. This item will be tracked to completion by Nuclear Tracking System Action Item # 457-180-94-00601.

All System Engineering personnel performing the Technical Reviews have been given authorization to review the applicable portions of the work package.

An evaluation will be performed to determine what exactly needs to be included in a technical review and whom should perform which parts of the review. This item will be tracked to completion by NTS Action Item # 457-180-94-00602.

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E. CORRECTIVE ACTIONS (continued):

The second problem of the three individuals failing to follow the Administrative procedure was addressed by having individual discussions with each of the personnel involved. Additionally, the Quality Control Department as a group was spoken to with respect to the need for strict procedural adherence.

An additional corrective action as a result from the Braidwood Event Review Presentation will be:

An evaluation will be performed to determine what additional training may be applicable, if any, for Maintenance Work Analysts, Maintenance Supervisors, and other Maintenance personnel associated with the application of the Braidwood Technical Specifications as it applies to their responsibilities. This item will be tracked to completion by NTS Action Item 457-180-94-00603.

F. PREVIOUS OCCURRENCES:

None.

G. COMPONENT FAILURE DATA:

None.