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MINUTES OF THE MEETING OF THE ACRS SUBCOMMITTEE ON BRAIDWOOD MARCH 8-9, 1984 JOLIET, ILLINOIS

The ACRS Subcommittee on Braidwood Station Units 1 and 2 met at the Quality Lodge in Joliet, Illinois on March 8 and 9, 1984. The purpose of the meeting was to review the application of Commonwealth Edison Company (CECO) for an operating license for the Braidwood Station Units 1 and 2. This matter was discussed in open session.

Notice of this meeting was published in the Federal Register on February 21, 1984 (Attachment A). A copy of the schedule of presentations is Attachment B. A list of attendees is contained in Attachment C. Attachment D is a list of meeting handouts which are kept with the official copy of these minutes. An oral presentation by a member of the Sinnissippi Aliance for the Environment, Stan Campbell, was heard by the Subcommittee. E. Igne was the Designated Federal Employee for this meeting.

R. Axtmann, Chairman of the Subcommittee convened the meeting and read the opening statement. No introductory comments were received by the Subcommittee and its consultants or by anyone else after the opening statements.

J. Stevens, NRR Licensing Project Manager, Braidwood Station, presented an overview of the licensing activities for the plant, a discussion of the duplicate plant concept of Byron and Braidwood, and the status of the unresolved items.

The construction permits for Braidwood were issued on December 31, 1975. The application for the OL for these units was submitted by CECO on June 27, 1978, and a single FSAR was docketed on November 30, 1978 for

duplicate plants, Byron and Braidwood. Unit 1 is about 70 percent complete and Unit 2 is about 53 percent complete. The applicant's current estimate of the fuel load dates are August 1985 for Unit 1 and August 1986 for Unit 2. A public hearing is scheduled for October or November 1984.

The Byron and Braidwood Stations use a duplicate plant design in accordance with the NRC's statement on standardization in nuclear power plants dated August 31, 1978. The NRC Staff's review of the reference design was documented in the Byron SER. The Braidwood SER was issued in November 1983. It addresses only the site-specific areas. The reference design includes the Westinghouse NSSS.

J. Stevens discussed the unresolved issues delineated in the Braidwood SER. The unresolved items are listed in two parts: Part A lists the site-specific items for Braidwood and Part B lists the duplicate plant items. Part B items are those which, when resolved for Byron, are by definition resolved for Braidwood. She listed eight Part A outstanding items and seven Part B items.

A unique system in the Byron/Braidwood design is the volume reduction system which is used to process waste by incineration. This system is designed by Aerojet.

R. Knop, NRC, Region III, presented an overview of the construction experience at the Braidwood site. He stated that major site work began in August of 1975. Since that time, Region III has expended over 6,000 man-days of inspection effort. He stated that this inspection effort is lower than other problem sites because enforcement history through 1981 was routine. The preoperational test program began late last year and is less than 10 percent complete. A senior construction inspector and a senior operations resident inspector have been assigned to the plant since January 1982. In response to a question, R. Knop stated that

construction inspection consists of reviewing the QA program, actual work observation and review of quality records. The first systematic assessment of licensee performance (SALP-1) was conducted during the period of July 1979 through June 1980. For Braidwood, the SALP-1 rating was listed as average for all discipline areas. SALP-2 covered the period of July 1980 through December 1981. During this period the ratings were changed to the category system. Category 1 meant that the licensee management attention and involvement were aggressive, exhibited a high level of performance, and that the NRC could reduce their level of involvement. Category 2 indicated adequate performance by the licensee and that the NRC would maintain the current level of involvement. Category 3 means that the licensee management and attention is acceptable, but that weaknesses are evident that require increased NRC and licensee attention. Braidwood was judged Category 2 (satisfactory) in all areas except that it was stated that the licensee needed to pursue the significance of nonconformance and the corrective actions taken. SALP-3 began in January 1982 and was completed in December 1982. The results of SALP-3 were that one area was rated Category 1, four areas, Category 2 and two areas (relating to safety-related components and QA) were rated Category 3. But, stated R. Knop, overall the level of QA activities was generally acceptable. SALP-4 is currently ongoing and will be completed in June 1984.

R. Knop next discussed construction experiences at the Braidwood site. He stated that for the period of 1973 through 1981 nothing out of the ordinary was found. In 1982, a construction assessment team was formed because of construction problems that were observed at other sites in the region. He stated that the team consisted of six inspectors spending about 500 man-hours at Braidwood. The results within the areas inspected were considered satisfactory; only two items of noncompliance (not deemed significant) were found. During this time frame (1982), a resident inspector noted that some of the steam generator bolts were missing, damaged or loose. Further investigations revealed that many of

the records for the installation of the steam generator, reactor coolant pumps and some other safety-related components were either nonexistent or inadequate. This incident led to a civil penalty in February 1983. This noncompliance involved record traceability, failure to have approved installation procedures, and failure to have approved inspection procedures and inadequate QA audits. In response to a question, R. Knop stated that satisfactory correction of this problem is in process or completed.

Follow-up inspection of the civil penalty found programmatic weaknesses in the QA program regarding heating, ventilation and air conditioning systems, small- and some large-bore piping systems, and some electrical systems. R. Knop stated that these QA weaknesses did not involve significant hardware problems.

The licensee has taken significant corrective actions including changes in management and organization, increase in the number of QC inspectors, retraining of crafts people, and revision and upgrading of procedures where necessary. During an enforcement conference between the licensee and NRC, the licensee committed to a quality review and verification program of past work. An independent source will provide overview to this QA reverification program. CECO has made a significant commitment to ensure the quality of the Braidwood units.

C. Reed, CECO Vice President of Nuclear Operations, was the spokesman for the licensee. He stated that CECO had no comments on the NRC Staff's presentation.

J. Westermeir, Byron/Braidwood Project Engineer, CECO, presented a brief discussion on the design differences between the Byron and Braidwood plants. He stated that the Braidwood plant is identical to the Byron plant except for site-related matters. Heat rejection in Byron uses cooling towers while Braidwood uses a cooling lake. The essential

service water cooling at Braidwood is accomplished with a seismically qualified cooling pond integral with the cooling lake, while mechanical draft cooling towers perform this function at Byron.

L. DelGeorge, Assistant Vice President, CECO, discussed Commonwealth Edison Company's corporate support structure. He stated that as a result of a recent organization change the Chairman and President of Commonwealth Edison Co. has overall responsibility for the QA program during construction and operation. This change enhances CECO management's attention to QA.

M. Wallace, Braidwood Project Manager, CECO, discussed the project management organization. He stated that the Manager of Projects reports directly to the President and Chairman of Commonwealth Edison. The function of this group has evolved from experiences obtained from the Byron and LaSalle projects. This group is involved in the day-to-day direction of contractor priorities and establishment of performance goals and measurement of contractor performance. This group also has direct line responsiblity for the accomplishment of testing activities, quality review and verification programs, and preparation of personnel and operating procedures for plant operations.

In reply to a question, M. Wallace stated that all of the major contractors at Braidwood are unique to Braidwood and have not worked at either LaSalle or Byron.

J. Guda, Station Superintent, Braidwood, discussed the station organization. This group consists of four major areas: operation, maintenance, administration and support and personnel administration.

W. Shewski, Manager of QA, CECO, discussed how the quality assurance organization is organized, staffed and operated at Braidwood. He stated that the QA organization is independent of engineering, construction and

operations. The group is free to probe, identify problems and, if necessary, stop work. Three major departments in this organization are QA for engineering, QA for operations and QA for maintenance. The total manpower in this group numbers 156 people. The quality control function at Braidwood is performed by Pittsburgh Testing Laboratory, an independent testing contractor. About 70 to 80 inspectors are on site. They work directly for CECO's site quality assurance group. W. Shewski stated that a unique concept in QC, called unit concept inspection, was implemented about a year and a half ago. In this case, everything within a given volume or particular system of a plant is inspected to vendor and construction drawings to verify that it is built according to design requirements. He stated that CECO's QA operation has not been perfect, but CECO takes justifiable pride in the quality of the end product and the QA organization's ability over the years to identify deficiencies, minimize quality problems and to have a positive influence on the corrective programs when quality problems do arise.

At Braidwood, during the period from September 1979 to April 1980 the QA and construction efforts were interrupted because of financial considerations. After work was resumed, renewed QA/QC efforts and efforts of the NRC inspectors revealed concerns with equipment qualification which eventually resulted in a fine of $100,000 being levied by NRC. The documentation of the installation and the timeliness of CECO's response to the problems were identified. Verification programs have been instituted by CECO to address these problems and to ensure that it did not extend to other areas. These programs involve completion of the inspection of the installed safety-related equipment and hangers, heating, ventilation and air conditioning welding configuration duct fitting details, verification of qualification of past inspectors, verification of electrical inspection and installation documentation. These programs are either complete or nearly complete. Inspection programs to verify the instrumentation line separation and identification and the piping material traceability are about to start.

Considerable emphasis has been given to evaluation and verification of the Braidwood design. In addition, an INPO self-evaluation was performed in November 1982. The evaluation indicated that the areas of fire protection and safety training needed attention, but overall CECO has fared well in the evaluation.

L. DelGeorge concluded this section by stating that the corporate organization has recently focused on regulatory improvement. It has also added more experienced people to the QA/QC program. In response to a question, M. Wallace stated that the total number of people on site is about 3500, which includes contractors, A/E and CECO personnel.

G. Fitzpatrick, Production Training Manager, CECO, discussed their production training facility and training programs. He stated that its mission is to help assure safe, economical and efficient operation of its generating stations. He stated that CECO was the pioneer in using full-scale simulators as a part of its training program. CECO has recently purchased two full-scale simulators, one for LaSalle and the other for Byron/Braidwood. CECO has also built a $21-million production training facility featuring a 95,000 square-foot facility that went into full operation in early 1983. The human factors activity is incorporated in the training department.

J. Harris, Head of Operations Training Section, CECO, discussed the equipment-attendant training, high-voltage-switching training and licensed-operator training at the production training center. He stated that approximately 70 ROs and SROs will be trained and licensed prior to fuel load of Braidwood Unit 1. CECO has developed a job position entitled "Station Control Room Engineer" (SCRE) to provide plant control room assistance in event of an accident. He will be a degreed engineer, have an SRO license, and will receive the additional training required for the position. He stated that Braidwood will require one of its two shift supervisors to have at least six months' hot experience and shift

advisors on hand until the NRC-proposed requirement that a shift supervisor have at least one year of hot experience has been met.

R. Squires, Head, Human Factors, CECO, addressed the human factors review approach for the Braidwood Station control room. The approach includes the preliminary design assessment (PDA) and the detailed control room design review (DCRDR). The PRA of the Byron/Braidwood control room was started in January 1981. The assessment used existing draft criteria delineated in the NRC's "Guidelines for Control Room Design Reviews." Three man-years of human factors effort plus operator comments were used to perform the assessment. As a result, many changes were made to the control board design including the addition of about 8 mimics. A human engineering check list review was also conducted. Review of the control board labeling produced several human-engineering discrepancies which were corrected. These changes and modifications will be incorporated prior to fuel loading.

The primary objective for DCRDR is to improve the design of the control room. The DCRDR provides for collecting data, investigating, assessing and reporting of control room human engineering discrepancies found at operating nuclear stations. The CECO has developed this generic program plan to standardize the methodology for the DCRDRs across its six nuclear generating stations. The DCRDR will be performed on one unit, and the results applied to the other unit at each station. The reviews will be done in series by a DCRDR team consisting of three full-time and one part-time human factors engineer, and an instrument and control engineer. Completion of this study is expected within six months. CECO feels that the DCRDR study will be very useful.

At this point, the meeting was recessed to reconvene on March 9, 1984 at 8:30 a.m.

W. Brenner, Lead Emergency Planner, CECO, discussed emergency planning. In the State of Illinois the two primary State agencies with responsibilities for ensuring off-site radiological emergency preparedness are the Illinois Emergency Services and Disaster Agency (IESDA) and the Illinois Department of Nuclear Safety (DNS). IESDA has primary responsibility at the State level for disaster preparedness and the DNS, for the radiological preparedness elements of off-site emergency planning. The Braidwood principal emergency off-site emergency planning document is the Illinois Plan for Radiological Accidents (IPRA), Braidwood Volume VII. He stated that since 1980 IESDA and CECO have successfully conducted 13 major emergency preparedness exercises, and have received the FEMA 350 interim approval.

In response to a question, W. Brenner stated that it is his impression that the State of Illinois will not distribute potassium iodide to the general public as a State policy.

T. Weis, Project Engineering Department, CECO, discussed the safety parameter display system (SPDS). The Byron/Braidwood SPDS provides a CRT display system to help operating personnel make quick assessments of the plant safety status. Additionally, the display serves to concentrate a minimum set of plant parameters in an area from which the plant safety status can be assessed. The selection of the parameters is based on enhancing the operator's capability to assess plant status in a timely manner without surveying the entire control room. The Byron/Braidwood SPDS was functionally designed by CECO in conjunction with Westinghouse and ARD Corporation. The display format and the algorithms were provided by Westinghouse, and human factors evaluation and display enhancement techniques, by ARD. The SPDS provides real time information for operator use in monitoring plant status. It is continuously available in the control room to display information quickly and reliably for assessing plant safety status. The information is also available in the Emergency Off-Site Facility (EOF). The intent of the

SPDS is to provide a display system which permits the operator to monitor the state of the plant process and to detect any abnormalities for which corrective might be taken to terminate the event prior to the initiation of an automatic trip or safeguards actuation and 2) to enable the operator to assess the safety status of the plant and verify proper safeguard function to mitigate the consequence of the event. The critical functions monitored are reactivity control, reactor coolant inventory, containment activity levels, containment integrity and secondary system status.

In reply to a question on SPDS with regard to emergency procedures, it was stated that even if the SPDS is not available (about one percent of the time) the operator can rely on other safety parameters not on the SPDS to monitor a given accident. The SPDS can be an aid in taking the operator through the emergency operating procedures, but it is by no means essential. The Braidwood emergency operating procedures are now available.

T. Weis, CECO, next discussed briefly the implementation of Reg. Guide 1.97, Rev. 2, Post-Accident Monitoring Instrumentation. CECO initiated a survey of the instrumentation required by Reg. Guide 1.97, Rev. 2 and has initiated the following significant changes to satisfy the requirements:

- Two post-accident neutron monitoring channels were provided
- Four wide-range reactor coolant system pressure channels have been purchased. They will be located outside the containment to monitor the environment
- Two reactor vessel level channels have been installed

- The core exit thermocouples have been divided into two redundant trains with separate power supplies.

T. Weis also stated that these and other changes will provide operators with diverse, redundant and qualified instrumentation to ensure maintenance of critical safety functions by operating personnel.

K. Aingle, CECO, discussed the steam generator modifications for the Byron/Braidwood stations. Westinghouse Model D4s are used in Unit 1 and Model D5s in Unit 2 of Byron/Braidwood stations. These steam generators incorporate a counterflow preheater section to increase their thermal efficiency. The concern here is excessive tube vibration, causing some tubes to impact against the support plates which results in excessive tube wear. Results of extensive analytical and experimental work by Westinghouse and the industry led to fixes or modifications that will alleviate this problem. Westinghouse recommended that CECO 1) expand some preheater tubes at the region of the tube support area in order to reduce the gap between the tube and support plate and 2) divert 10 percent of the feedwater flow to the auxiliary feedwater nozzle.

The Byron ASLB in their January 13, 1984 initial decision, decided in favor of the applicant with respect to the intervenor's contention on steam generator tube integrity.

J. Gudac, CECO, discussed the Salem event regarding ATWS. Braidwood committed to a procedure on preventative maintenance inspection of the reactor trip breakers.

J. Westermeir, CECO, discussed siting, seismic and flooding differences between Braidwood and Byron. The sites are typical farm regions. Seismically, for both plants the SSE and OBE values are 0.20 and

0.09 g's, respectively. Braidwood is founded on bed rock. With regard to flooding, there are no design basis flooding differences between Byron and Braidwood. Braidwood is about 18 feet above PMF level for the Mason River.

J. Maxwell, ACRS Consultant, next posed questions concerning the cooling pond located within a man-made lake. He asked for discussion on the following items:

- Stability of the banks in case of an unexpected, large seismic event
- The potential for rapid dewatering
- The possibility of contamination of groundwater in areas adjacent to the lake.

L. Hollish, Sargent & Lundy, replied to J. Maxwell's concern regarding the loss of water by dike failure due to catastrophic seismic events. The conditions that they examined were breach of the surrounding dike and complete loss of the cooling pond. In this case, the cooling pond exists completely below the ground level and the lake could be lost to the existing ground surface elevation and the cooling pond would retain water. The stability of the dikes of the lake was investigated and found to be stable. The factor of safety obtained from deterministic analysis exists on the dike integrity although no PRA study was performed. Regarding the potential for contamination of groundwater by seepage from the pond, L. Hollish stated that an impermeable clay barrier has been constructed. Installation of water level measuring devices around the entire perimeter of the lake validated the adequacy of the clay barrier. In reply to a question, it was stated that a quantitative risk estimate regarding dam failure was not performed.

G. Klopp, CECO, provided a brief insight into the risk assessment work that CECO performed. CECO has been able to draw on Zion PRAs and Byron risk studies, industry IDCOR work and other generic PRA work done by other utilities. The Byron study is directly applicable to Braidwood because of the replication of design. The study indicates that the proposed NRC safety goals can be met with a large margin at a confidence level in excess of 90 percent. Based on the PRA study, no physical modifications were made in the design of Braidwood, although some administrative changes were implemented.

An oral presentation was made by S. Campbell of Sinnissippi Alliance for the Environment (SAFE). SAFE intervened before the Atomic Safety and Licensing Board on the operating license application of Byron. This group also intervened before the local Illinois Commerce Commission concerning Commonwealth Edison's nuclear construction program and its quality. Mr. Campbell hinted that, because of financial reasons, Commonwealth Edison is constructing plants at such a rapid rate that safety matters are neglected. He also suggested that the construction workers are being harassed by the utility and fear to bring forward construction deficiency information.

A member of the Subcommittee observed that about five to seven construction deaths had occurred at Byron and Braidwood. He was distressed that hundreds of millions of dollars are spent to prevent the public from getting a few millirems of radiation during plant operation while the loss of human life during plant construction seems relatively unimportant.

Subsequent to the meeting, CECO submitted a letter formally responding to the above comments. Below is an excerpt from that letter.

> "Since site activity began on the Braidwood Project in August 1975, some eight and one half years ago, over 21,700,000 man hours have

"been expended. During that period, there have been no construction related fatalities on the job site. The four deaths which did occur on the job site all were due to natural causes.

As a part of the corporate Commonwealth Edison Safety Program, every work unit in the Company, comprised of Edison management and bargaining unit personnel, participates in safety contests to promote an awareness for safety. On the Braidwood site our Station Organization is one such unit. Through early March 1984, that group had experienced over 1,6000,000 man hours without suffering an injury which resulted in a loss of job time. Moreover, since personnel in the Station Organization were first assigned to the Project, no person in that group has ever experienced an accident resulting in lost job time. In addition, it is corporate policy to require each site contractor to have and maintain a safety program for all their personnel.

We believe that these statistics demonstrate our exemplary safety record and the Commonwealth Edison Company concern with and commitment to safety in constructing our Braidwood Station."

The Subcommittee, after a brief caucus, stated that it did not feel that sufficient information regarding QA/QC on Braidwood was presented to indicate that this matter was satisfactorily resolved. Since the ASLB hearing on Braidwood is scheduled for October 1984, the Subcommittee felt that it would be prudent at this time to obtain additional information in order to assess the impact of the QA/QC concerns at Byron as they may apply to Braidwood; Commonwealth Edison Co. concurred with the Subcommittee's plans. The Subcommittee further decided that additional information is necessary before this matter is reviewed by the full ACRS.

* * *

NOTE: A complete transcript of the meeting is on file at the NRC Public Document Room at 1717 H St., N.W., Washington, D.C., or can be obtained at cost from Tayloe Associates, 1625 I St., NW Suite 1004, Washington, DC 20006 (292) 293-3950.

Project staff is planning a self-contained audio-visual training package on technical issues related to correct use and educational strategies to increase correct use rates. Project KISS will provide those individuals who conduct education and loaner programs with a reference manual of instructions for the proper use of all dynamically tested car seats.

Lieutenant Governor, State of Mississippi: Jan. 16: H-83-52: Is directing the recommendation concerning misuse of child safety seats to Senator John William Powell, Chairman, Senate Highways and Transportation Committee for his review.

Department of Public Safety, State of Alaska: Feb. 2: H-83-49 and -50: Legislation has been introduced in both the State House and State Senate concerning child passenger protection. The Alaska Highway Safety Planning Agency has also implemented public awareness programs with regard to this problem.

State of Georgia: Jan. 27: H-83-52: Office of Highway Safety has a program to provide information to medical personnel, maternal and infant health care personnel, parents, and parents-to-be on the importance of the proper use of child safety seats.

Department of Transportation, State of New York: Feb. 1: H-79-48: A median treatment conforming to the latest standards has been completed on several sections of the Grand Central Parkway, including the area where the June 8, 1979, accident occurred. This improvement will be monitored to confirm its effectiveness in eliminating the vaulting cross-over problem.

Ford Motor Company: Feb. 2: H-83-60 and
The Ford Tot-Guard and the Ford Infant ier and their correct use are fully scribed in specific user instructions provided with and attached to each system. These instructions include specific directions with regard to age, weight, and height, and identify safety belt and harness routing points.

Speaker of the House of Representatives, State of Utah: Dec. 28: H-83-49 and -50: A bill concerning a child restraint law will be introduced in the House Budget Session on Jan. 9, 1984.

Intermodal—*Research and Special Programs Administration: Feb. 2: I-83-4:* Agrees that preshipment inspection criteria for drums being used to ship regulated hazardous materials that go beyond existing criteria in 49 CFR 173.26 should be considered. Proposed certain preshipment inspection criteria for inclusion in 49 CFR 173.24 in the Advance Notice of Proposed Rulemaking in Docket No. HM-181. These criteria will be expanded in the upcoming Notice of Proposed Rulemaking in Docket No. HM-181, to require inspection for container integrity.

Marine—*U.S. Coast Guard: Jan. 24: M-81-37:* Requiring containerized dangerous cargo to be stowed near the centerline of the vessel is impractical. Such a regulation would be a severe burden on containership operations resulting in loss of revenue to carriers, delay in shipments, and disruption of port and shipboard activities without a commensurate increase in safety. *M-81-38:* Since the Coast C[illegible] believes that stowage of containerized dangerous cargo near the centerline is impractical, it will not recommend that the International Maritime Organization adopt such a regulation.

Ohio Department of Natural Resources: Jan. 23: M-83-76 and -77: The Division of Watercraft addresses the problem of alcohol and recreational boating in media campaigns and is gathering data on the effects of alcohol and boating. Legislative action is underway that addresses the implied consent statute in regard to alcohol involvement with boating.

Pipeline—*El Paso Natural Gas Company: Jan. 26: P-83-31 through -37:* Acknowledges receipt of recommendations and will reply by Mar. 30 concerning specific actions taken at the Blanco Compressor Station and to prevent similar failures at its other stations.

Railroad—*Burlington Northern Railroad: Jan. 17: R-83-101:* Unless every train has an operable radio which is continuously monitored by head end and rear end crews, a train operating procedure requiring the use of the radio to exchange information between trains on, entering, or departing main track routes would be a hazard to railroad operations. Radios can and do fail; their broadcast range is effected by prevailing atmospheric conditions; crew member's duties do not permit continuous monitoring of the radio; and transmissions can be misinterpreted.

Elgin, Joliet and Eastern Railway Company: Feb. 6: R-83-60 and -61: Has established procedures whereby management supervisory personnel are required to observe and/or contact operating department employees as they are reporting for duty and on many occasions when they report off duty. However, these requirements, although they are strictly enforced, are not a part of any written procedures manual for management personnel.

Bessemer and Lake Erie Railroad Company: Feb. 2: R-83-60 and -61: Has established procedures whereby management supervisory personnel are required to observe and/or contact operating department employees as they are reporting for duty and on many occasions when they report off duty. However, these requirements, although they are strictly enforced, are not a part of any written procedures manual for management personnel.

Note.—Single copies of these response letters are available on written request to: Public Inquiries Section, National Transportation Safety Board, Washington, D.C. 20594. Please include respondent's name, date of letter, and recommendation number(s) in your request. The photocopies will be billed at a cost of 14 cents per page ($1 minimum charge).

H. Ray Smith, Jr.,

Federal Register Liaison Officer.

February 14, 1984.

[FR Doc. 84-4533 Filed 2-17-84; 8:45 am]

BILLING CODE 4910-58-M

Nuclear Regulatory Commission

Advisory Committee on Reactor Safeguards, Subcommittee on Braidwood Station; Meeting

The ACRS Subcommittee on Braidwood Station will hold a meeting on March 8 and 9, 1984, at the Quality Lodge, 19747 Frontage Road (at I-55, Route 50 and 52), Joliet, IL. The Subcommittee will review the application of the Commonwealth Edison Company for an operating license for the Braidwood Station. Notice of this meeting was published January 24, 1984 (49 FR 2972).

In accordance with the procedures outlined in the Federal Register on September 28, 1984 (48 FR 44291), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Cognizant Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting shall be as follows:

Thursday, March 8, 1984—8:30 a.m. until 12:30 p.m.

Friday, March 9, 1984—8:30 a.m. until the conclusion of business

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the Commonwealth Edison Company, NRC Staff, their consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Elpidio Igne (telephone 202/634-1413) between 8:15 a.m. and 5:00 p.m., EST.

ATTACHMENT A

Date: February 15, 1984.
hn C. Hoyle,
dvisory, Committee Monagement Officer.
[FR Doc. 84-4256 Filed 2-17-84; 8:45 am]
BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards; Proposed Meetings

In order to provide advance information regarding proposed meetings of the ACRS Subcommittees and of the full Con. nittee, the following preliminary schedule is published to reflect the current situation, taking into account additional meetings which have been scheduled and meetings which have been postponed or cancelled since the last list of proposed meetings published January 24, 1984 (49 FR 2972). Those meetings which are definitely scheduled have had, or will have, an individual notice published in the Federal Register approximately 15 days (or more) prior to the meeting. Those Subcommittee meetings for which it is anticipated that there will be a portion or all of the meeting open to the public are indicated by an asterisk (*). It is expected that the sessions of the full Committee meeting designated by an asterisk (*) will be open in whole or in art to the public. ACRS full Committee meetings begin at 8:30 a.m. and Subcommittee meetings usually begin at 8:30 a.m. The time when items listed on the agenda will be discussed during full Committee meetings and when Subcommittee meetings will start will be published prior to each meeting. Information as to whether a meeting has been firmly scheduled, cancelled, or rescheduled, or whether changes have been made in the agenda for the March 1984 ACRS full Committee meeting can be obtained by a prepaid telephone call to the Office of the Executive Director of the Committee (telephone 202/634-3267, ATTN: Barbara Jo White) between 8:15 a.m. and 5:00 p.m., Eastern Time.

ACRS Subcommittee Meetings

Quality and Quality Assurance in Design and Construction, February 24, 1984, Washington, DC. The Subcommittee will have a closed meeting to review and discuss with the NRC Staff its draft report to Congress on Quality Assurance during construction of nuclear power plants (report required by Pub. L. 97-415, NRC Authorization Act, Section 13). Notice of this meeting was published February 2, 1984.

Reactor Radiological Effects, ebruary 24, 1984, Washington, DC. The ubcommittee will review GPU Nuclear Corporation's cleanup plans for Three Mile Island (TMI) Nuclear Power Station Unit 2 and FEMA's report for recent TMI radiological emergency exercises. Notice of this meeting was published February 7, 1984.

Qualification Program for Safety-Related Equipment, February 29, 1984, Washington, DC. The Subcommittee will review the status of Generic Issue A-46, "Seismic Qualification of Equipment for Operating Reactors" and review details of the NRC Electrical Equipment Qualification and Plant Aging Research Programs. Notice of this meeting was published February 7, 1984.

Braidwood Nuclear Power Plant, March 8 and 9, 1984, Joliet, IL. The Subcommittee will review the application of the Commonwealth Edison Company for an operating license.

Reactor Operations, March 13, 1984, Washington, DC. The Subcommittee will review a differing professional opinion (DPO) related to the Westinghouse Safety Parameter Display Systems (SPDS).

Maintenance Practices and Procedures, March 14, 1984, Washington, DC. The Subcommittee will review the current status of maintenance practices and procedures for nuclear power reactors.

Reliability and Probabilistic Assessment, March 14, 1984, Washington, DC. The Subcommittee will review the revised PRA reference document.

Safety, Philosophy, Technology, and Criteria, March 14, 1984, Washington, DC. The Subcommittee will meet with NRC Management and discuss with them their perception of the risk which they associate with a selected collection of recent NRC decisions and the basis on which this level of risk is considered to be acceptable.

Combined Emergency Core Cooling Systems (ECCS) and Decay Heat Removal, March 20 and 21, 1984, Washington, DC. The Subcommittee will discuss the status of feed-and-bleed capability in PWRs.

ACRS Seminar on Probabilistic Risk Assessment, March 22 and 23, 1984, Washington, DC. A seminar will be held on the state-of-the-art of probabilistic risk assessment.

Class 9 Accidents, March 30, 1984, Washington, DC. The Subcommittee will discuss the final Severe Accident Policy Statement.

Extreme External Phenomena, April 4, 1984, Washington, DC. The Subcommittee will review the generic methodology for developing design basis severe winds for SEP plants and to review the specific application to Ginna.

Metal Components, April 19 and 20, 1984, Washington, DC. The Subcommittee will discuss reactor coolant water chemistry and its effects on material behavior, review the status of pressurized thermal shock and discuss BWR pipe cracking matters.

Reactor Radiological Effects, Date to be determined (late April), Morris IL. The Subcommittee will review Dresden decontamination plan.

AC/DC Power Systems Reliability, Date to be determined, Washington, DC. The Subcommittee will discuss the status of the NRC Staff actions on Generic Issue B-56, "Diesel Reliability," and Generic Issue A-30, "Adequacy of Safety-Related DC Power Supplies" and Task Action A-44, "Station Blackout."

Emergency Core Cooling Systems, Date to be determined, Washington, DC. The Subcommittee will continue the review of the joint NRC/B&W/EPRI integral test program.

Westinghouse Water Reactors, Date to be determined, Washington, DC. The Subcommittee will continue pre-Preliminary Design Approval review of Westinghouse Advanced Pressurized Water Reactor. This meeting will be closed.

Regulatory Activities, Date to be determined, Washington, DC. The Subcommittee will review Regulatory Guide 1.35, Rev. 3, "Inservice Inspection of Ungrouted Tendons in Prestressed Concrete Containment Structures," Regulatory Guide 1.35.1, "Determining Prestressing Forces for Inspection of Prestressed Concrete Containments," Regulatory Guide 1.12, Rev. 2, "Seismic Instrumentation," and proposed general revisions to Appendix J to 10 CFR 50, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors."

River Bend Nuclear Power Plant, Date to be determined, St. Francisville, LA. The Subcommittee will review the application of the Gulf States Utilities for an operating license.

ACRS Full Committee Meeting

March 15-17, 1984: Items are *tentatively* scheduled.

*A. *NRC Enforcement Policy*—Proposed revised general statement of policy and procedure for enforcement actions.

*B. *Proposed Containment Guidelines*—Proposed NRC Task Action Plan, Containment Performance Guidelines.

*C. *Quality Assurance/Quality Control*—Proposed NRC initiatives to response to Public Law 97-415.

A 2

EDS
3-7-84

TENTATIVE AGENDA AND SCHEDULE

ACRS BRAIDWOOD SUBCOMMITTEE VISIT AND MEETING ON BRAIDWOOD STATION, UNITS 1 AND 2 MARCH 8 AND 9, 1984 JOLIET, ILLINOIS

MARCH 8, 1984 (8:30 AM to 6:30 PM)

TOPIC	PRESENTER	TIME
I. OPENING STATEMENT	DR. AXTMANN ✓ (CHAIRMAN)	8:30 AM
II. REPORT BY NRC STAFF		8:40 AM
A. NRR DISCUSSION · UNRESOLVED ISSUES · DIFFERING PROFESSIONAL OPINIONS, IF ANY	STEVENS ✓	
B. I&E DISCUSSION OF CONSTRUCTION ISSUES	KNOP ✓ MACGREGOR	
C. CECO COMMENTS — none — Reed	DELGEORGE WALLACE ✓	
III. PRESENTATIONS BY COMMONWEALTH EDISON — Cordell Reed		
A. PRINCIPAL DESIGN FEATURES OF BRAIDWOOD AND DIFFERENCES BETWEEN BYRON AND BRAIDWOOD	WESTERMEIER ✓	9:40 AM
B. OVERVIEW OF PLANT CONSTRUCTION AND STARTUP SCHEDULE	m. Ko WALLACE ✓	9:50 AM
C. ORGANIZATION AND MANAGEMENT EFFECTIVENESS		10:00 AM
1. CORPORATE SUPPORT ORGANIZATION	DELGEORGE ✓	
2. PROJECT MANAGEMENT ORGANIZATION	WALLACE	
3. PLANT OPERATING ORGANIZATION	GUDAC ✓ — Break 11:00	
4. QUALITY ASSURANCE ✓ 11:15	SHEWSKI ✓	
5. SUMMARY	DELGEORGE ✓	
-- BREAK --		11:00 AM

ATTACHMENT B

TOPIC	PRESENTER	TIME
D. BRAIDWOOD TRAINING PROGRAMS	FITZPATRICK HARRIS	11:10 AM
E. HUMAN FACTORS • PRELIMINARY DESIGN ASSESSMENT (PDA) • DETAILED CONTROL ROOM DESIGN REVIEW (DCRDR)	SQUIRES	11:25 AM
F. EMERGENCY PLANNING 1. OFF-SITE • EMERGENCY OPERATING FACILITY (EOF)	BRENNER	11:35 AM
2. ON-SITE		
• SAFETY PARAMETER DISPLAY SYSTEM (SPDS)	WEIS	
• REGULATORY GUIDE 1.97	WEIS	
• EMERGENCY OPERATING PROCEDURES (EOPs)	GUDAC	
• TECHNICAL SUPPORT CENTER (TSC)	GUDAC	
• OPERATIONAL SUPPORT CENTER (OSC)	GUDAC	
-- LUNCH --		NOON
IV. TOURS		
• LEAVE QUALITY LODGE		1:00 PM
A. PRODUCTION TRAINING CENTER (PTC)	FITZPATRICK	
• ARRIVE AT PTC		1:30 PM
• LEAVE PTC		2:30 PM
B. BRAIDWOOD STATION AND SITE	WALLACE	
• ARRIVE AT BRAIDWOOD		2:45 PM
• LEAVE BRAIDWOOD		5:00 PM
C. MAZON EMERGENCY OPERATING FACILITY	GOLDEN	
• ARRIVE AT EOF		5:30 PM
• LEAVE EOF		6:00 PM
• ARRIVE AT QUALITY LODGE		6:30 PM

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MARCH 9, 1984 (8:30 AM TO END OF BUSINESS)

TOPIC	PRESENTER	TIME
III. PRESENTATIONS BY CECO (CONTINUED)		
G. STEAM GENERATOR MODIFICATIONS	AINGER	9:40 ~~8:30~~ AM
H. SECONDARY WATER CHEMISTRY — no quest	BLOMGREN	8:40 AM
I. RESPONSE TO SALEM EVENT AND ATWS	GUDAC	9:00 AM
J. SITING, SEISMIC AND FLOODING DIFFERENCES FROM BYRON — prd inquiry — & Holden.	WESTERMEIR	9:15 AM
✓ K. RISK ASSESSMENT INSIGHTS	KLOPP	9:30 AM
V. DISCUSSION/QUESTIONS BY ACRS		9:40 AM
-- BREAK --		10:30 AM
VI. PUBLIC PRESENTATIONS, IF ANY		11:30 AM
VII. SUBCOMMITTEE CAUCUS		12:00 PM
VIII. DISCUSSION OF ACRS FULL COMMITTEE AGENDA		12:30 PM
IX. ADJOURNMENT		

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ATTENDEE LIST

ACRS BRAIDWOOD SCTE MTG
MARCH 8, 198 4
JOLIET, IL

NAME	AFFILIATION
LOUIS O. DELGEORGE	COMMONWEALTH EDISON
MICHAEL J. WALLACE	" "
JOHN F. GUDAC	" "
CORDELL REED	" "
Walter J. Shewski	" "
E Douglas Swartz	" "
[illegible]	" "
Dennis Farrar	" "
JoAnne G. Bloom	Isham Lincoln & Beale
Joseph Gallo	"
Kenneth Ainger	Commonwealth Edison
JAMES T. WESTERMEIER	" "
JAMES D. DERESS	" "
GEORGE T. KLOPP	" "
John C. Golden	" "

Artmann
Mark
Ward
Salvendy
Mathis
Maxwell
Jane BFC

ATTACHMENT C

ATTENDEE LIST

ACRS BRAIDWOOD SCTE MTG

MARCH 8, 1984

JOLIET, IL

NAME	AFFILIATION
B.J. YOUNGBLOOD	NRC: NRR: LB #1 - CHIEF
J.R. STEVENS	NRC: NRR: LB #1 - PROJ. MGR.
L.J. CLSHAN	NRC: NRR: LB #1 - Proj. Mgr.
R A Benedict	NRC/NRR/LQB
R C Knop	NRC / RIII
L.G. McGregor	NRC / RIII
W. Forney	NRC / RIII
C. A. Lau	CECo, Prod. Training
E.B. Silverman	ARD CORP./HUMAN FACTORS/CONSULT. TO CECO
R.E. HOWARD	CECO, STA. ELECT. GN&RL DEPT.
R.J. SQUIRES	CECO, HUMAN FACTORS, PRODUCTION TRAINING
J.W. HARRIS	CECO, PRODUCTION TRAINING
E.E. FITZPATRICK	CECO, PRODUCTION TRAINING
W.C. MAMMOSER	CECO, PROJECT ENGINEERING DEPT, B/B
D.P. CHRISTIANA	CECO, Project ENGRING Dept.

ATTENDEE LIST
ACRS BRAIDWOOD SCTE MTG.
MARCH 8, 1984
JOLIET, IL.

NAME	AFFILIATION
JAMES G. TOSCAS	Commonwealth Edison Co.
B. G. TREECE	Sargent & Lundy
W. C. CLEFF	SARGENT & LUNDY
MJ ASZTALOS	Westinghouse
J. R. SCHULTIES	WESTINGHOUSE
D C RICHARDSON	WESTINGHOUSE
GE GROTH	COMMONWEALTH EDISON
L.J. TAPELLA	COMMONWEALTH EDISON
T.R. Sommerfield	CECo
[illegible]	[illegible], Inc.
DL LEONE	S&L
ED PIERARD	CECO
FELIX WILLAFORD	CECo
CHET SOLTYS	CECO
A. W. SCHNEIDER, JR	CECo
G. L. LANDGREN	CECo.
W B. PASCHAL	S&L
K. J. Green	S&L
L. L. Holish	Sargent & Lundy
RJ NETZEL	Sargent & Lundy
S R Boeing	S&L
W.R. SPEZIALETTI	(W)

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ATTENDEE LIST

ACRS BRAIDWOOD SCTE MTG:
MARCH 8, 1984
JOLIET, IL

NAME	AFFILIATION
THOMAS WEIS	Commonwealth Edison
NICK KONSTANTINOU	"
PAUL DONAVIN	"
DAN CHRISTIANA	"
WILLIAM C. MAMMOSER	"
Stanley E. Campbell	Sinnissippi Alliance - 326 N. Avon, Rockford 611
JOHN C. CONNOR	WESTINGHOUSE
GERALD P LAHTI	SARGENT & LUNDY
R.E. BUSCH	NORTHEAST UTILITIES
R.T. Laudenat	Northeast Utilities
J.O. CROCKETT	NORTHEAST UTILITIES
R. E. JORTBERG	Director Nuclear Safety Commonwealth Edison.
N.N. KAUSHAL	Commonwealth Edison.
J. K. BRENNAN	Commonwealth Edison
J. L. ROULO	" "
M. M. Mayfield	Sargent & Lundy
M. Oper	Westinghouse
R.E. STOULTS	" "
Daniel L. Shamblin	Commonwealth Edison Co.
Roderick Kelly	Joliet Herald-News
Richard C. Schiebel	Commonwealth Edison
Patti Capello-Bandzes	Northeast Utilities - Licensing
LINDA CASTIGLIONE	DAY, Berry & Howard

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ATTENDEE LIST
Braidwood
March 9, 1984

NAME	AFFILIATION
Axtmann	ACRS
WARD	"
MARK	"
Mathis	ACRS CONS
Maxwell	"
Salvendy	"
Igne	RFE
Youngwood	NRC
JR Stevens	NRC
L.N OLSHAN	NRC
RC Knop	NRC
L. G. McGregor	NRC
W. Ferney	NRC
R. L. Schulz	NRC
Stan Campbell	326 N. Avon Rockford IL 61103 - SAFE
Bridget Rorem	117N. Linden, Essex IL 60935 - Applesued
R.E. BUSCH	NORTHEAST UTILITIES
Linda Castiglione	Day, Berry & Howard
Patti Capello-Bandzes (called 3/12 re when next site full mtg date)	Northeast Utilities - Licensing
J.O. CROCKETT	NORTHEAST UTILITIES
F.G. Lentine	Commonwealth Edison
P. A. BOYLE	"
W.C. MAMMOSER	"

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

BRAIDWOOD

FEBRUARY 24, 1984

MAR. 9, 1984

ATTENDEES PLEASE SIGN BELOW

(PLEASE PRINT) NAME	AFFILIATION
Louis O. DelGeorge	Commonwealth Edison
Michael J. Wallace	Commonwealth Edison
John F. Gudac	Commonwealth Edison
Cordell Reed	" "
Walter J. Shewski	" "
E. Douglas Swartz	" "
G.T. Klopp	" "
Tom Tramm	" "
JoAnne G. Bloom	Isham Lincoln & Beale
J.D. Deress	Commonwealth Edison
J.T. Westermeier	" "
K.A. Ainger	" "
W. Brenner	" "
T.D. Weis	" "

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

BRAIDWOOD

FEBRUARY 24, 1984

MAR. 9, 1984

ATTENDEES PLEASE SIGN BELOW

(PLEASE PRINT) NAME	AFFILIATION
Name	AFFILIATION
JOHN C. BLOMGREEN	COMMONWEALTH EDISON
JAMES G. TOSCAS	Commonwealth Edison Co.
DENNIS RICHARDSON	WESTINGHOUSE
Mike ASZTALOS	"
WILLIAM B PASCHAL	SARGENT + LUNDY
W. C CLEFF	"
B. G TEEECE	"
F.J. WETZEL	S&L
L. HOLISH	S&L
Martin Oper	Westinghouse
Bruce S. Monty	Westinghouse
W R SPEZIALETTI	W WESTINGHOUSE
J.R. SCHULTIES	W
J. C. Mesmeringer	W
John C. Connor	Commonwealth Edison.
R. E. JOHNBERG	" "
DANIEL DEMOS	" "
N. Kaushal	" "
D. E. O'Brien	" "
M.J. Andrews	" "
L. J. TAPELLA	" "
F.D WILLAFORD	" "
E.C. PIERARD	" "
[illegible]	" "

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

BRAIDWOOD

FEBRUARY 24, 1984

MAR. 8-9, 1984

ATTENDEES PLEASE SIGN BELOW

(PLEASE PRINT) NAME	AFFILIATION
L. Cook	B.N.F. Inc.
D. P. CHRISTIANA	COMMONWEALTH EDISON
N.J. KONSTANTINOU	" "
C. L. Mc Donough	" "
CHET SOLTYS	" "
W.C. MAMMOSER	" "
P.A. BOYLE	" "
F.G. Lentine	" "
A K Singh	Sargent & Lundy
P.P. DONAVIN	COMMONWEALTH EDISON
K.J. Green	Sargent + Lundy
G.L. LANDGREN	Commonwealth Edison Co
A.W. SCHNEIDER, JR.	" " "
D L LEONE	SARGENT & LUNDY
S.R. Boeing	Sargent & Lundy
R. A. MCCLOSKEY	RETIRED
Roderick Kelly	Joliet Herald-News
J. L. ROULO	Commonwealth Edison
G.P. WAGNER	COMMONWEALTH EDISON Co.
R.A. Flessner	" "

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