



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

November 30, 1992

Docket No. 50-237

Docket No. 50-249

Commonwealth Edison Company
ATTN: Cordell Reed
Senior Vice President
1400 Opus Place - Suite 300
Downers Grove, IL 60515

Dear Mr. Reed:

SUBJECT: DRESDEN OVERSIGHT TEAM SITE VISIT, November 4-6, 1992

As you are aware, Dresden Units 2 and 3 were placed on the NRC watch list after the January 1992 NRC senior management meeting. As a result of Dresden being placed on the watch list the Dresden Oversight Team (DOT) was formed. The DOT will continue to make periodic visits to Dresden to evaluate the progress of the efforts to improve performance, to provide feedback to the Commonwealth Edison Company (CECo) on the status of the improvement programs, to provide recommendations on the NRC inspection effort at Dresden, and to provide a periodic written assessment of CECo's efforts to improve Dresden's performance.

The DOT made its fourth onsite visit to Dresden on November 4-6, 1992. We conducted numerous interviews and reviewed documentation in each of the areas discussed in the attached report. Many of the DOT issues represent impressions and viewpoints derived primarily from these interviews. The team was pleased with the level of candor in our discussions and interviews with the plant staff.

The overall impression of the DOT was favorable in that progress was being made in a variety of areas, including procedure upgrade, modification review, improved planning, communication of management expectations, and maintenance work control. Some improvement was also evident in housekeeping and hardware reliability, however much work remains in these areas. We support the addition of Technical Specification upgrade and conduct of the upcoming unit 2 outage to your list of accelerated priority initiatives. We note the improvement in your planning effort and the significant challenge facing your staff to implement the plan during the upcoming outage.

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If you have any questions or comments on this report or other DOT activities, please contact me at (708) 790-5603.

original signed by

T. O. Martin, Deputy Director
Division of Reactor Safety

Attachment: As stated

cc w/attachment:

- J. M. Taylor, EDO
- J. H. Sniezek, DEDR
- T. E. Murley, NRR
- C. J. Paperiello, RIII
- E. G. Greenman, RIII
- H. J. Miller, RIII
- C. E. Norelius, RIII
- B. Clayton, RIII
- J. G. Partlow, NRR
- J. W. Roe, NRR
- T. L. King, NRR
- J. E. Dyer, NRR
- E. J. Leeds, NRR
- M. J. Jordan, RIII
- C. D. Pederson, RIII
- S. Stasek, SRI, Davis-Besse
- D. Galle, Vice President -
BWR Operations
- T. Kovach, Nuclear
Licensing Manager
- M. D. Lyster, Site Vice
President
- C. W. Schroeder, Station Manager
DCD/DCB (RIDS)
OC/LFDCB
- Resident Inspectors-LaSalle
Dresden, Quad Cities
Richard Hubbard
- J. W. McCaffrey, Chief, Public
Utilities Division
- Robert Newmann, Asst. Director
State of Illinois
- B. Siegel, LPM, NRR
State Liaison Officer

RIII	RIII	RIII	RIII	NRR	RIII
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Martin/jk	Miller	Greenman	Norelius	Leeds	Davis
11/23/92	11/ /92	11/ /92	11/ /92	11/25/92	11/30/92

ATTN: Paperiello
11/30/92
PM for Leeds
yes

November 30, 1992

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T. O. Martin, Deputy Director
Division of Reactor Safety

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RIII	RIII	RIII	RIII	NRR	RIII
<i>DM</i> Martin/jk	<i>DM</i> Miller	<i>WJF</i> Greenman	<i>DM</i> Norelius	Dyer	Davis
11/23/92	11/25/92	11/25/92	11/25/92	11/ /92	11/ /92

**REPORT ON THE FOURTH VISIT OF THE
DRESDEN OVERSIGHT TEAM
NOVEMBER 4-6, 1992**

I. Scope and Participants

The Dresden Oversight Team (DOT) made its fourth onsite visit to Dresden on November 4-6, 1992. During this visit the DOT focused on the programs and actions taken to improve performance. The following DOT members participated in this visit:

T. O. Martin, DOT Chairman
W. Axelson
E. Leeds
M. Jordan
S. Stasek

II. Overview and Conclusions

The results of this review were generally favorable. We found that the licensee was making progress in many areas, but much work remained to be done.

This report identifies a number of specific positive observations and concerns which will be followed in future visits. The principle observations and conclusions are summarized below.

Materiel condition is improving but much remains to be done. The team noted improvement in plant housekeeping and the condition of some hardware. However, there remains a large backlog of maintenance activities, pending modifications, and identified problems in the equipment reliability issues database (ERID). Significant improvements were recently made to the reactor feed pump seals in Unit 2 and to the condensate pump motors in Unit 3.

The Corporation's financial situation was not having a negative impact on the station. The licensee recently received notification of an Illinois Commerce Commission (ICC) hearing examiner that recommended that CECO be allowed a \$423.7 million rate increase based on a finding that Byron 2 and Braidwood 1 were 100% used and useful. Braidwood 2 was not considered used and useful. This finding was somewhat positive but will still require CECO to refund some money to its customers. The licensee emphasized that the improvement initiatives at Dresden will not be compromised by the financial situation, and the DOT found no indication of cutbacks on programs or schedules to suspect otherwise.

The need for significant cultural change was recognized. Independent assessments of CECO were recently completed by Tenera, Cresap, INPO, and the NRC (response to SRM). As a result, the licensee is focusing on reorganization of the Nuclear Operations Division, management effectiveness, business planning, and issue management. These initiatives are being undertaken as part of the Integrated Management Action Plan (IMAP). Significant corporate organizational changes are being made as a result of IMAP. In mid-

November Mike Lyster, formerly with Cleveland Electric Illuminating, was selected as the full-time site VP for Dresden as a new position.

Appropriate changes were made in the accelerated priority initiatives. The accelerated priority initiatives are now:

- Materiel condition
- Planning, scheduling, and work control
- D2R13 outage starting in mid-January 1993
- Operational authority/effectiveness
- Implementation of new Technical Specifications

The DOT determined that the level of progress in each of these areas was acceptable. Sufficient progress was made to warrant dropping the procedure upgrade effort and modification improvement initiatives from this list. The licensee intends to implement the standard BWR tech specs for Dresden and is working toward a schedule to complete this effort by October 1993. The DOT agreed that these changes to the accelerated priority initiatives were appropriate.

Communications with staff and between departments continues to improve. Dresden management has put forth an effective effort to communicate expectations to their staff. Examples of these improvements include quarterly all-station meetings, a site newspaper, additional staff meetings, and an informational telephone number regarding organizational changes. Interviews with the staff were generally positive in regard to communications with management and interdepartmental communications. This is an area that has shown noticeable improvement over the last 6 months. The amount of change taking place at the station presents a continuing management challenge with respect to communications.

Planning continues to improve. Continued improvement was evident in this area. Although the level of planning seems appropriate for the upcoming Unit 2 refueling outage in January 1993, the actual implementation of the plan will be a significant test.

III. Plant Status

During the visit, Units 2 and 3 were operating at or near 100% power. Approximately 7 alarms were actuated for each unit. The number of instruments with problem tags did not seem to be abnormally high.

IV. Operations

Enhancements to operations continue to progress.

Since the last DOT visit, several initiatives for improved operations performance have progressed significantly. The Shift Engineer's (SEs) office and control room access window were completed with plant personnel acknowledging reduced traffic into the control room as the result. The Shift Control Room Engineer (SCRE) administrative duties were reduced with some of those

shifted to the SE office. In addition, the licensee plans to place another SRO in the control room during plant outages with responsibility for the unit in shutdown.

Upgraded requirements relating to procedural adherence, control room logkeeping practices, shift turnovers, shift briefs, and radio communications were fully implemented with management expectations adequately communicated to all levels of the organization within these areas. However, adherence to the new requirements was inconsistent. For example, repeat-backs during radio communications were not consistently used and logbook entries sometimes were not adequate to reconstruct activities on shift.

Operators were noted to be attentive to their panels and a professional decorum was maintained within the control room.

The operations department more fully appreciates its role in controlling plant activities.

The operations department and the Shift Engineers in particular recognize their role as the overall focal point to maintain cognizance and control of facility activities. It appeared during the DOT visit that full implementation of this concept was in progress with some level of success noted.

V. Maintenance

Communications within the Maintenance Department and between departments was improving.

Communications of expectations within the maintenance department has improved. Most maintenance department management personnel down to the first level supervisors received detailed job descriptions explaining specific management expectations with regard to supervisory functions, communications, housekeeping, radiological protection, and other job specifics. Interviews with plant staff confirmed that personnel were aware of management expectations and accepted the recently implemented improvement initiatives. Communications between departments also improved as a result of the implementation of a new work control process and improved scheduling. Maintenance personnel indicated that radiological protection support has improved and maintenance work schedulers appear to be working closely with planners in the Work Planning Department.

Materiel Condition and housekeeping improvements were evident.

Since the last DOT visit in June, the licensee increased management attention on materiel condition by placing the newly appointed Technical Superintendent, Sig Berg, in charge of equipment reliability while the Materiel Condition Coordinator, Jerry Huffman, devotes his attention to site housekeeping improvements and reclamation of contaminated areas. With regard to equipment reliability, several previously implemented

programs, such as the reactor feed pump task force, continue. Other changes affecting equipment reliability are still in the planning stages.

The team observed improvements in housekeeping both inside and outside of the plant. Inside the plant, improvements were noted in general plant cleanliness, a reduction in the amount of improperly stored equipment, significant upgrading of the CRD pump room (however, several valve stems were inappropriately painted), and improved implementation of the licensee's "pink ticket" program that focuses station laborers and dedicated maintenance staff on areas needing cleanup and minor repair. Outside the plant, significant improvements were noted in overall appearance of the station, including, a blacktopped roadway, concrete walk paths, an overall reduction in debris and clutter, and a reduction in temporary outbuildings. There was also a reduction in contaminated material stored outside.

Management expectations with regard to housekeeping were well communicated to the maintenance department general foreman and first level supervisors. Job descriptions now include written expectations with regard to housekeeping and radiation protection. Interviews with the maintenance staff indicated a uniform understanding that areas are to be left cleaner than originally found. There was also a decrease in contaminated areas, leading several foremen to comment that decontamination has improved productivity.

However, station management indicated that significant work remains before Dresden reaches their level of expectations.

A new work control process was implemented.

The maintenance department, in conjunction with work planning, recently implemented a new work control process. The work control process closely coupled the work schedulers in maintenance with work planners in work planning. This resulted in work planning schedules that more accurately reflected planned activities. Work packages were complete (including parts, procedures, RWP, and out of service) and were ready to be performed the week prior to when the work is actually scheduled. However, the system was still in its infancy and only about 40% of a week's scheduled work was actually performed. Emergent work continues to require a great deal of the licensee's time. Their goal is for maintenance staff to be able to accomplish 80% of work planned in any given week.

The licensee attributed the low percent completion rate of maintenance work activities to problems with improper resource loading of manpower. The licensee stated that this stemmed from an unfamiliarity with planning software usage. Personnel in the planning group indicated that this problem was being resolved and that the percent completion rate would improve as maintenance gained more experience in inputting manpower data into the system.

The Reactor Feed Pump Task Force made progress in resolving chronic pump problems.

The reactor feed pump task force made good progress identifying pump failure mechanisms and recommending a series of hardware fixes to correct these recurrent problems. A new cartridge type seal was installed on two of the three feed pumps on Unit 2, and initial indications are that the seals are a significant improvement. All pumps will receive the new cartridge seal. Other hardware fixes planned include increasing the size of the seal cooling heat exchangers and cooling lines, installation of larger turbine building component cooling water pump impellers, and permanent installation of monitoring instrumentation. These hardware fixes were ongoing and planned for each unit's refueling outage.

VI. Engineering and Technical Support

Significant organizational changes are planned to make the technical staff a more capable engineering entity.

The licensee recently conducted a working group study to provide recommendations on the organization and function of the technical staff with the intent of making this group more effective and involved. This group recommended the creation of component level engineers (in addition to system engineers), changes to the procedures governing system engineers giving them additional ownership and authority, utilization of a work team concept, and additional clerical support. It appeared from discussions with plant management that there would be significant organizational changes made in this area with the intention of raising the impact and effectiveness of the technical staff. One concern expressed to the licensee was that the work team concept would be more effective if implemented by an experienced technical staff. Thirty of the 84 persons assigned to the Tech Staff had less than 3 years experience. The DOT will monitor organizational changes of the Technical Staff in future visits.

Issues from the vulnerability assessment team (VAT) were evaluated for relative significance and added to the equipment reliability issues database (ERID).

A complex method was used to prioritize the approximately 80 significant VAT items, and these items were listed within the equipment reliability issues database (ERID). The intent of the ERID is to ensure a uniform prioritization of the more significant materiel deficiencies in the plant. Although the VAT items were individually prioritized, at the time of the DOT visit, the priorities of the VAT items had not yet been integrated with the priorities of the other items in the ERID. The licensee stated that they intended to do so. Although the DOT did not conduct a comprehensive review of the VAT item priority, the methodology for assigning priorities and the relative priority assignments for the items reviewed appeared reasonable.

The backlog of proposed modifications was reviewed, prioritized, and scheduled.

In March 1992 the DOT was critical of Dresden for having a backlog of about 800 proposed modifications that were not prioritized. The licensee has since made significant progress in establishing a program to effectively review these mods that includes screening by the system engineer, a mid-level review board, and a management level committee. This process appears to have been effectively implemented in that this backlog was virtually eliminated and schedules for modifications installation were established for each of the next two refueling outages and the intervening non-outage period. As previously noted, the modification improvement initiative was dropped as an accelerated priority initiative.

VII. Procedures Upgrade Effort & Administrative Controls

Progress continued in reducing procedure backlog and upgrading procedures.

The work in reducing the backlog of procedure changes and issuance of the new upgraded procedures has been effective. In both of these areas the program is on schedule to meet the goals established for the end of the year. The procedure change program was streamlined to make it more efficient. This included the establishment of a meeting of the on site review committee to review procedures in lieu of routing the procedure to each member of the committee. Also a change to the Technical Specifications allowed some procedure changes to be accomplished more efficiently. The Procedure Review Manager is continuing to look for ways to make the procedure change program more efficient including possible changes to the administrative program for issuance of a procedure and possible changes to the Dresden performance indicators to better identify performance in the area of procedure issuance. As previously noted, the procedure upgrade effort was dropped as an accelerated priority initiative.

A new corrective action program for handling conditions adverse to quality was implemented but had a weakness.

A new corrective action program was implemented in mid August, consolidating many of the old corrective action programs and utilizing a Problem Identification Form (PIF) to report a broad range of problems. The new program appeared effective at streamlining the process for handling conditions adverse to quality and identifying root causes to prevent reoccurrence. The classification of the causes of events were also changed from the 5 causal factors identified in the NRC's licensee event reports (LERs) to the 17 causal factors identified in the INPO Human Performance Enhancement system. The utility was in the process of developing a new program to lump the 17 causal factors into three major areas called "people problems, program problems and equipment problems." These can then relate somewhat to personnel errors, procedure errors, and equipment failure. The new program

made it substantially easier for plant personnel to identify a problem because all problems can now be identified on one form. This eliminated the challenge of trying to figure out which system to use. One weakness in the new system was that root cause may not be addressed for a problem if the problem was corrected by a work request (WR) instead of a PIF. There was a provision in the licensee's program for assessing root cause if a problem corrected by a WR repeated itself 3 times in a 12 month period. The team felt that this threshold was too high and that a PIF should be issued along with a WR in certain instances.

The outage planning showed a marked improvement.

The utility committed a large effort to schedule and plan the work to be done in the upcoming Unit 2 outage and the work that needs to be done in preparation for the outage. This scheduling included a comprehensive look at shutdown risk. The outage planning group has a procedure to review shutdown risk daily during the outage. Based on a limited review, the team was favorably impressed with this program. The outage scheduling program included input from all departments including health physics and maintenance. The results of the planning efforts showed a willingness of the departments to work together to assure concerns are addressed up front. The outage scheduling appeared to be good and was generally well developed. It appeared that some work that could be done before the outage will not be done until the outage begins. This will put an additional burden on the licensee's staff to address the existing work packages and the emergent work that occurs during an outage.

VIII. Radiation Protection and Radwaste Controls

During this visit, the team interviewed several radiation protection supervisors and foremen, mechanical maintenance foremen, operations foremen and several workers to determine if senior station management's expectations were being clearly communicated to and implemented by the working level and first line supervisors. The team's overall observations in this area were generally favorable.

The Radiation Protection Department was more involved in daily planning with Operations and Maintenance.

Pre-job planning improved to the point where the maintenance work analyst and ALARA coordinator were working together weeks before a job and well in time for the final RWP development. The workers were developing a questioning attitude regarding the radiation work practices and requesting more assistance from the radiation protection technicians (RPTs). However, this new planning has yet to be fully implemented and tested during a major outage.

Contamination events and radiation occurrence reports were trending down.

The key departments established ALARA goals and communicated those goals to the workers. Various work groups, particularly mechanical maintenance (MM), were developing creative ALARA techniques to reduce dose, such as the use of remote tools, TV monitors, and effective pre-job briefings. The MM department, which receives the highest collective dose, was continuing to refine methods to reduce their dose on repetitive high dose jobs such as valve lapping and reactor head stud removal. This area continues to warrant management attention to ensure all departments endorse and pursue ALARA goals.

The plant tour of the reactor and turbine building showed marked improvement in radiation protection controls.

Contaminated areas of the plant were reduced from 37 percent to 22 percent. Those areas requiring frequent access by operations personnel received priority attention. As a result of the latest improvements most auxiliary operator inspections can be done without anti-C clothing. There was a reduction in the amount of radioactive materials located around the exterior of the plant. Most Unit 1 radwaste was removed from the site, and controls of the contaminated soil were significantly improved.

Source term reduction efforts were progressing in the reactor and turbine building

Several "hot taps" were installed and used to remove crud traps in several radwaste process pipes that were causing unnecessary dose to workers. The overall station radwaste reduction effort continued to be on schedule with the goal of reducing onsite radwaste to less than 500 cu. ft. by the end of 1992. A major clean up of the reactor building equipment drain tank was currently scheduled which should remove a longstanding source term contributor.

Radioactive waste shipments will be temporarily suspended after January 1993 primarily due to financial considerations.

This issue will be discussed further with the licensee relevant to all CECO sites to assure that radwaste will be safely stored in the interim.

Advanced radiation worker training program showed merit.

The team reviewed the licensee's lesson plans for this training and found it to be much improved and detailed in key subject matters. The training courses were recently implemented more on a case by case bases for specific outage high dose jobs. The current NGET training staff was changed to include two qualified and experienced individuals. The team recommended the licensee consider acceleration of this training to those key workers who will be involved in high dose jobs during the upcoming Unit 2

outage.

Communication and worker awareness of radiation protection issues improved.

The licensee's tailgate sessions and general safety meetings were effective in getting key messages down to the staff level relating to radiation worker protection. Several workers interviewed indicated these sessions were beneficial in understanding NRC inspection results and expectations.

IX. Exit Meeting

An exit meeting with the licensee was held on November 6, 1992. Mr. A. Bert Davis, Regional Administrator, was in attendance as the senior NRC representative. Mr. Dennis Galle, Vice President of BWR Operations; Chuck Schroeder, Plant Manager; and other Dresden representatives were present.