April 1, 1992

Docket No. 50-237 Docket No. 50-249

Commonwealth Edison Company ATTN: Mr. Michael Wallace Chief Nuclear Operating Officer 1400 Opus Place - Suite 300 Downers Grove, IL 60515

Dear Mr. Wallace:

04070064 930401

05000237 PDR

SUBJECT: DRESDEN OVERSIGHT TEAM SITE VISIT, March 9-12, 1993

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 status of CECo's efforts to improve Dresden's performance.

The DOT made its fifth onsite visit to Dresden on March 9-12, 1993. 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 overall impression of the DOT was that progress continues to be made in a variety of areas, including procedure upgrade, work planning, communication of management expectations, hardware reliability, and work control. However, the self assessment and internal monitoring of your improvement efforts was considered weak. The Unit 2 refueling outage is going well and your response to the Unit 3 forced outage appeared to be an effective use of time and resources.

Once again, the team was pleased with the level of candor in our discussions and interviews with the plant staff.

IFOI

#### Commonwealth Edison Company

#### April 1, 1992

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

2

# Sincerely, original signed by

# T. O. Martin, Acting 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 C. E. Norelius, RIII B. Clayton, RIII J. G. Partlow, NRR B. A. Boger, NRR J. A. Zwolinski, NRR J. E. Dyer, NRR J. Stang, NRR M. J. Jordan, RIII C. D. Pederson, RIII S. Stasek, SRI, Davis Besse L. O. DelGeorge, Vice President, Nuclear Oversight & Regulatory Services M. Lyster, Site Vice President C. W. Schroeder, Station Manager J. Shields, Regulatory Assurance Supervisor D. Farrar, Nuclear Regulatory Services Manager OC/LFDCB Resident Inspectors - Dresden, LaSalle, Quad Cities Richard Hubbard J. W. McCaffrey, Chief, Public Utilities Division Robert Newmann, Asst. Director State of Illinois Licensing Project Manager, NRR State Liaison Officer Chairman, Illinois Commerce Commission RIII Yas RIII RIII at the (W) Martin/lc Greenman Noł 3/30/93 3/32/93 3/31/93

NRR RIII M fr Miller Dyer **8// / /**93 **4**/1/93

RIII Davis 9/1/93

### REPORT ON THE FIFTH VISIT OF THE DRESDEN OVERSIGHT TEAM MARCH 9-12, 1993

# I. <u>Scope and Participants</u>

The Dresden Oversight Team (DOT) made its fifth onsite visit to Dresden on March 9-12,1993. During this visit the DOT focused on the progress of the Unit 2 outage and the programs and actions taken to improve performance. The following DOT members participated in this visit:

- T. O. Martin, DOT Chairman
- J. Dyer
- J. Stang
- M. Jordan
- S. Stasek

#### II. <u>Overview and Conclusions</u>

Adequate programs have been developed to address the fundamental weaknesses, however progress is slow. Improvements were noted with regard to the reorganization, adding a site VP (Mike Lyster), and the onsite addition of engineering resources. Some longstanding materiel condition problems are being addressed. Outage and work planning has improved. Much remains to be done with regard to materiel condition and housekeeping. The licensee's self assessment program is lacking. The makeup of the site management team has changed considerably in the last 12 months and has not been stable long enough to clearly assess their impact.

The self-assessment and overall strategic planning effort were weak.

The licensee made some major adjustments in their self-assessment and improvement plan strategy. New goals were put into effect for 1993, which were a departure from the 12 improvement initiatives that were used in the past. The new goals were safe operations, cost reduction, personnel development, and self assessment. Objectives and strategies were not yet developed to fully implement these new goals.

At the time of the DOT visit there was a lack of a good self-assessment tool to measure performance. Also, based on a review of findings generated, the CECo QA organization was not providing a significant evaluative input. A system for tracking performance, similar to the one used at Zion (windows), is being planned. This system will replace the Dresden Performance Improvement Report that has not been issued since December 1992. Because so little concrete work had been done in this area, the DOT was not able to assess the potential effect of these changes.

A reorganization and several significant personnel changes have recently been made, but it was too soon to assess their effect.

A new site VP has been added (Mike Lyster), the scope of the plant manager's (Chuck Schroeder) responsibilities have been limited to focus more on operations and maintenance, personnel were added to engineering, and most design functions were moved to the site. The assignment of additional operators in the control room to facilitate the outage was considered very positive.

With regard to personnel changes, Sig Berg, the previous technical superintendent was replaced by Roger Flahive, and Herb Massin, previously responsible for CECo BWR engineering, was assigned to the site in the new position of site engineering and construction manager. These personnel changes were viewed as positive. One concern however was the limited amount of BWR experience of the new technical superintendent. His prior experience was entirely in PWRs.

Communication within the station was good.

A lot had been done to communicate expectations to the plant staff, and we saw evidence that the message of quality consciousness and doing the job right the first time was received at all levels. Interdepartmental communications has improved, and teamwork appears to be good. One concern was the limited amount of time that site management spent in the plant. The notable exception to this was Mr. Kotowski, the operations manager.

#### III. <u>Plant Status</u>

During the visit, Units 2 and 3 were shutdown. Unit 2 was in the middle of a refueling outage and Unit 3 was in a forced outage due to damage to the high pressure turbine caused by material (wrench, bolt, and piece of bar stock) that was apparently left on a stationary blade when the turbine was reassembled. The integrity of the turbine casing was maintained, but a row of stationary and a row of rotating blades were peened over.

#### IV. <u>Operations</u>

Empowerment of operations to be the production leader has occurred, but not all of operations was convinced.

The station has been working on empowering the operations department to be the leaders of the station. This has improved over time and operations department management has accepted this role. However, not all levels of the operation organization agree that this empowerment has occurred. Some of the nonsupervisory operations personnel feel that operations does not exert enough influence to decide which work will be done. As evidence of this they saw long standing equipment problems such as check valve leakage from the diesel generator day tank, unavailable service water radiation monitors, and a malfunctioning air compressor crossover valve. The team observed the operations department establishing priorities for work requests at shift briefings and work planning meetings. However, rather than addressing work activities collectively for the unit, they were addressed on six separate schedules for each involved work group, with the appearance of passive endorsement by operations. Assignment of the Shift Outage Manager and Control Room Outage SRO was of benefit to control of outage and non-outage activities.

The station assigned a Shift Outage Manager and an extra Control Room Outage SRO to assist the shift with the refueling outage for Unit 2. These individuals were SRO licensed, provided oversight of outage work activities, and addressed outage related problems from the control room. This enabled the Shift Engineer and Shift Control Room Engineer to dedicate more attention to the operating unit. The team considered this initiative to be very positive. Operations personnel interviewed also thought this initiative was positive and beneficial to safety.

Communications of the management's expectations

Management has put forth considerable effort to communicate their expectations for performance to all levels of the operations department. This was clear in that all levels were knowledgeable of management expectations for self-checks prior to doing work. However, some of the department felt that management was not willing to receive and address some of their concerns, such as system training for auxiliary operators and incorporating some improvements in the outof-service program. Additionally, several operators commented that they are being held to higher standards than the technicians and that this did not seem fair to them. Considering that the operators are the ones holding an NRC license, holding them to higher standards is appropriate.

#### V. <u>Maintenance</u>

The maintenance department was recently reorganized.

The Quality Control department was moved into the maintenance organization and now reports to the maintenance superintendent. This was done to allow for better coordination and teamwork between the workers and the QC inspectors. Those interviewed believed this change will result in better communication between the workers and QC inspectors.

The work control process was improved.

Aspects of the current work control process was reviewed during this visit. Those interviewed indicated that the work package quality had substantially improved. Work instructions were better and reference documents included in the work packages were, overall, of higher quality. However, some material was deemed unnecessary. Specifically, when only a portion of a controlled procedure is to be used, workers indicated it was common to include the whole procedure, making for some cumbersome work packages. Also, the quality of some of the vendor supplied information was not very useable and in some cases inaccurate. Discussions with plant management revealed that both areas of concern were being addressed.

Materiel condition and housekeeping improvements were difficult to asses during a dual unit outage.

Tours of both units as well as building exteriors were conducted during our visit. At the time, the plant was in a dual unit outage, therefore, a direct

comparison of materiel condition and housekeeping to previous visits could not be done. However, housekeeping appeared to be about average when compared to outages observed at other plants. There was much material stored and staged in the plant to support work activities.

Just prior to the DOT visit, the position of materiel condition coordinator (MCC) that had been established within the past year was eliminated. Management indicated that the intent was to make housekeeping a responsibility of the individual work groups and is to be formalized following the unit 2 refueling outage. In the interim, the outage expeditor has informally assumed some of the MCC duties to help fill the gap until the new program can be developed and implemented.

One noteworthy success story was the recently completed cleanup of the unit 2 reactor building equipment drain tank area. A reduction in radiation and contamination levels by a factor of 4 to 5 resulted from the licensee's efforts in that area.

To help improve overall equipment reliability, a program was being developed to monitor equipment performance on an ongoing basis. Parameters and components to be monitored were being determined at the time of our visit. The program was very much in its infancy but holds promise if implemented as described.

Some chronic equipment problems appear to have been resolved.

Some of the longstanding equipment problems appear to be reaching resolution. In particular, the licensee believes the reactor recirculation pumps and the reactor feed pump seal problems have been corrected. To this end, the licensee made effective use of consultants who were instrumental in determining the root cause for many of the problems and aided CECo personnel in implementing the necessary corrective actions. A true test of their corrective actions will be improved operations following the outage.

Work backlogs were being reduced.

An initiative to reduce the backlogged work within maintenance was being implemented at the time of our visit. The licensee indicated that their short term goal would be to minimize the number of unit 2 outstanding work requests at the completion of the current refueling outage. Maintenance management recently instituted a trending program to monitor progress. However, specific long term goals were not yet developed. The number of non-outage related work requests was not considered excessive.

#### VI. Engineering and Technical Support

Issues from the vulnerability assessment team (VAT) were integrated into 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. Items identified by the vulnerability assessment team (VAT) were integrated with the priorities of the other items in the ERID. A listing of 50 equipment problems, referred to as the

"top 50", was generated to provide uniformity within the station of the most significant equipment problems. This was a new initiative. The DOT will review the impact of this list in the future to determine whether higher priority items are appropriately addressed.

The current unit 2 refueling outage work planning process did not utilize input from the Equipment Reliability Issues Database (ERID).

The ERID database was not sufficiently developed to provide input to the Dresden, Unit 2, work planning process prior to the start of the outage. Approximately 2 weeks into the outage, licensee management reviewed the known material condition of important systems and identified a significant amount of emergent work for the outage. Additional work was subsequently identified when systems were opened up during the outage. At the time of the DOT visit, licensee estimates of outage work package growth were approximately 20%, which could extend the outage by approximately 2 weeks beyond its originally scheduled 91 day duration. Licensee management established a goal to accomplish all outage work to improve the materiel condition of the plant. The DOT will follow up on the performance of outage work items during the next visit.

#### The organizational changes in engineering were positive.

The changes to both the technical staff and site engineering and construction organizations appear to be positive. Approximately 15 engineers from CECo headquarters were transferred to the site in the last year. Other engineering resources were moved within the site to strengthen the onsite engineering and construction organization. These changes should allow site engineering to be much more responsive.

The overall experience level of the technical staff has been stabilized and is improving. The technical staff organization was streamlined by eliminating several assistant technical supervisor positions. These more experienced persons were included in the line organization as system engineers. Other experienced staff were added. Some improvement was also noted in improving the career path for tech staff in that more senior engineers were being allowed to function in a system engineer role. Although positions were created for component specialists, the staff assigned were not yet actively performing these roles.

#### VII. <u>Procedures Upgrade Effort & Corrective Actions</u>

A new corrective action program was implemented, but some departments were slow to implement the program.

In August 1992, the CECo corporate Integrated Reporting Process (IRP) was implemented at the Dresden station. The program provides a methodology to identify problems, establish methods of investigation, identify root causes, and develop corrective actions to prevent reoccurrence and provide data for trending. A problem identification form (PIF) is used to input data into the system. PIFs are screened by the event screening committee. The committee meets every day to disposition any PIFs generated in the last 24 hours. During the visit, the team attended an events screening meeting. The meeting was well attended by most departments at the station, and communications between the various departments

was good. During the week the team interviewed a number of personnel at the Dresden station concerning corrective action programs. The IRP system made it substantially easier for plant personnel to identify, track, and trend problems because all problems can be identified on one form (PIF) and put into one system (IRP).

The team had several concerns with the IRP system. Root cause analysis may not be performed on problem situations that are corrected by work requests. There is a provision in the IRP system for assessing root cause if a problem corrected by a work request repeated itself 3 times, but the team considered this threshold too restrictive. Some departments (Engineering, Operations, and Technical Staff) appear to be slow to implement fully the IRP system. If a less rigorous system, specific to the work group, is used to analyze, resolve, and track problems, a PIF may never be written. In such cases, tracking and trending of problems may not be getting to the correct level of management for proper review. Additionally, craft personnel were apparently not used as a resource to input PIFs. Craft personnel interviewed were not fully familiar with the IRP system and had questions on how to write a PIF.

#### The procedure upgrade effort was on track.

The procedure upgrade program began in 1992 and was intended to upgrade approximately 3700 procedures including the Dresden Administrative Procedures (DAP). The program was scheduled to be completed in April 1993. Since the last DOT visit, the program has been successful in reducing the backlog of procedure changes and reducing the backlog of temporary procedures requiring change. Personnel interviewed by the team were enthusiastic about the program, with the operators indicating that the program was long over due. Interviews also revealed that the Dresden Administrative Procedures were cumbersome and that "work arounds" were common practice. These procedures were not yet upgraded. The overall quality of the upgraded procedures was much improved but considered average overall. It is noteworthy that the licensee has been able to maintain the schedule for this effort.

# The Technical Specification Upgrade Program (TSUP) was on track.

This program will upgrade both the Dresden and Quad Cities Technical Specifications (TS) to align them more like the Standard BWR TS. CECo currently has submitted 5 applications for review and approval. Another 7 packages are expected. The NRC plans to finish review and approval of the entire program in early 1994. The people interviewed by the team seemed very enthusiastic about the program. Licensed operators were temporarily assigned to the Regulatory Assurance Group to ensure that all operators are properly trained on the new TS and that they are implemented correctly. The team viewed this as a positive step.

#### VIII. Outages

Preparation for the Dresden, Unit 2, outage was an improvement over previous outages at the site.

The licensee was using a computer software program to plan and monitor the

progress of scheduled work during the outage. This tool improved the coordination of work and estimates of outage duration for key systems and components. The Dresden, Unit 2, outage was initially planned to be of greater scope than previous outages to correct many long-standing equipment problems. Several significant systems and components were being overhauled for the first time in the plant's life. Goals were established to have the materials and work packages ready for all identified work at the start of the outage. Although these goals were not met in all cases, a significant improvement was observed from previous outages. Interviews with licensee management indicated that they were approximately 90-95% ready to accomplish identified work at the start of the outage. However a significant increase in workload was created by the additional emergent work identified after the start of the outage.

Control of outage work for the Dresden, Unit 2, refueling outage improved over previous outages.

The Unit 2 Operating Engineer was the focal point for the coordination with different organizations for outage prioritization station work and accomplishment. His goal was to accomplish all outage work during the outage but acknowledged that with the emergent work, the schedule could be extended. He led discussions on planned and accomplished activities at the daily outage meetings and held the various organizations accountable for their performance. Additionally, as mentioned above, the licensee stationed two additional SRO licensed personnel on shift to facilitate outage control. The Shift Outage Manager reported to the Shift Engineer and controlled Unit 2 outage activities throughout the site, including shutdown risk management. The Control Room Supervisor reported to the Shift Outage Manager and was responsible for controlling Unit 2 control room activities and coordinating with the Unit 3 Shift Control Room Engineer (SCRE). These additional personnel were held accountable for safe execution of the outage plan by the Unit 2 Operating Engineer. The team identified no significant concerns with the process for controlling outage work activities.

The response to the unit 3 forced outage appeared to be an effective use of time and resources.

During the DOT visit Unit 3 was in a forced outage due to damage to the high pressure turbine. The licensee appeared to effectively diagnose the sequence of events leading to the turbine damage and was aggressively continuing their investigation. Further confirmatory analysis of the foreign material was still occurring during the DOT visit. A short term corrective action plan was developed to repair the damaged turbine, but no long term corrective actions were decided to prevent recurrence. The licensee was effectively using the forced outage time to complete several maintenance items on plant equipment that would improve the overall reliability of the plant. A floating schedule of prioritized work items was developed and fitted to the outage time provided by the turbine work. The Unit 3 Operating Engineer was aggressively pursuing accomplishment of the identified work items with the contractor and resources dedicated to Unit 3.

# 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. Mike Lyster, Station Vice President; Chuck Schroeder, Plant Manager; and other Dresden representatives were present.