APR - 2 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, MARCH 24-26, 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. This was for a variety of reasons including inattention to detail in maintenance and operations, ineffective management control, procedural inadequacies, failure to follow procedures, training inadequacies in maintenance, and hardware reliability concerns. As a result of Dresden being placed on the watch list, Mr. A. Bert Davis, Region III Regional Administrator, established an oversight effort of Dresden similar to what had been done at Zion. The Dresden Oversight Team (DOT) was formed as a result, and I was appointed to be the chairman. The function of the DOT is to:

1. Provide first-hand, periodic oversight and evaluation, from an NRC management perspective, of the progress of the licensee to improve performance at the Dresden Station.

2. Provide feedback to the licensee on the status of their improvement programs, including the program scope, schedule, and whether their efforts are having the intended impact.

3. Monitor closely the NRC inspection effort at Dresden and provide recommendations on the need to make any changes.

4. Provide NRC management with a written periodic update of the status of the licensee's efforts to improve their performance. This will be in the form of a trip report issued after each routine visit to Dresden by the DOT.

The DOT made its first onsite visit to Dresden on March 24-26, 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 senior licensee person contacted on this visit was Mr. D. Galle, CECo Vice-President for BWR Operations.



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During this first onsite visit, the team focused on problem identification and internal communications. We found that the station had identified many areas for improvement but did not fully appreciate the root cause(s) for their performance problems or the reason(s) why Dresden was placed on the NRC watch list. We were concerned that, without addressing the fundamental problems contributing to poor performance, the cyclical performance of Dresden may continue. We found many problems at Dresden, most of which your staff was already aware, including, poor planning, lack of experience in certain areas, poor procedures, and backlog of work, to name a few. We found that management had communicated goals and expectations for improved performance. However, there was a wait-and-see attitude by the plant staff on whether any changes would be long lasting.

The team was pleased with the level of candor in our discussions and interviews with the plant staff. There seems to be a strong appreciation on the part of the Dresden staff for the need to improve performance.

If you have any questions or comments on this report or other DOT activities, please contact me at (708) 790-5603. The next DOT onsite visit has been scheduled for May 12-14, 1992.

ORIGINAL SIGNED BY T. O. MARTIN

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

Attachment: As stated

| RIII | NRR | RIII | RIII | RIII | RIII |
|---|---|---|---|---|---|
| Yes | Yes. | yes | yes | yes | yes |
| Martin/lc | for Barrett | Miller | Greenman | Norelius | Davis |
| 4/1 /92 | 4/1 /92 | 4/ /92 | 4/1 /92 | 4/2/92 | 4/1/92 |

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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
W. L. Axelson, RIII
J. G. Partlow, NRR
B. A. Boger, NRR
J. A. Zwolinski, NRR
R. J. Barrett, NRR
E. J. Leeds, NRR
M. J. Jordan, RIII
S. Stasek, SRI, Fermi
D. Galle, Vice President -
  BWR Operations
T. Kovach, Nuclear
  Licensing Manager
C. W. Schroeder, Station Manager
DCD/DCB (RIDS)
OC/LFDCB
Resident Inspector, LaSalle
  Dresden, 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

**REPORT ON THE FIRST VISIT OF THE DRESDEN OVERSIGHT TEAM MARCH 24-26, 1992**

## I. Scope and Participants

The Dresden Oversight Team (DOT) made its first onsite visit to Dresden on March 24-26, 1992. The DOT primarily focused on whether the licensee had identified appropriate problems for correction and whether the policy and goals of licensee management were being communicated through the organization. The following DOT members participated in this visit:

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

Byron Siegel, the NRR Project Manager for Dresden, was also on site during this period and assisted the team by reviewing licensee activities in the area of assessments/quality programs. Geoff Grant from the Office of the EDO observed the DOT effort.

## II. Overview and Conclusions

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

### Problem Identification

Many of the specific problems identified by the DOT were already identified by the licensee, and, in most cases, some sort of corrective action effort was in planning or instituted for their correction. The licensee was in the process of developing detailed plans for improvement in a number of different areas. These plans should be available for DOT review during the next plant visit in May 1992.

### Root Cause of the Problems Being Experienced by Dresden

There did not seem to be a clear understanding on the part of licensee management for why Dresden was placed on the problem plant list. References were made, on one hand, to a "batters slump", a piling up of events, one too many red telephone calls, and, on the other hand, a general lack of appreciation for quality and procedural compliance.

The licensee instituted a number of programs to improve their overall performance and track their progress. These programs should provide, at least, short term improvement. However, the real effects of these programs has yet to be determined. What was missing from this process is a root cause, or causes, for why their performance has deteriorated. Dresden was first put on the NRC watch list in 1987. At that time they went through a similar process of improving

their performance and were removed from the watch list in December 1988. The DOT was concerned that the performance of the plant may once again degrade without properly addressing this, as yet undetermined, root cause(s).

By the end of the DOT visit, it appeared that the licensee had a greater appreciation for the need to identify and address the fundamental reason(s) for their performance problems.

**Licensee Approach to Resolution of their Problems**

The licensee embarked on a program to "improve the team, improve the plant, and improve the process". As a continuance of this approach they were developing action plans and were tracking improvement in 11 areas:

> communications; empowerment; accountability and performance appraisal; staffing; prioritization and resource management; planning, scheduling and work control; procedure upgrade; commitment management; resolution of technical issues; and backlogs.

Specific action plans were in the process of development to address, in detail, each one of these 11 areas. Without a clear understanding of the reason(s) for their performance problems, as discussed above, this approach seemed to lack focus.

**Communication of Management Goals and Expectations**

In the last several months, the licensee has made a concerted effort to convey some positive upper level management expectations down through the organization to the lowest levels at the plant. There was a broad appreciation at the staff level for what management expectations were, however there was also a wait-and-see attitude in the licensee staff as to whether these long term goals would have any lasting impact. There was also a feeling on the part of the licensee staff that, with the huge backlog of work, there did not seem to be much change in how business was conducted (business as usual) which was frequently reactive in nature (crisis management).

## III. Plant Status

During the visit, Unit 2 was operating at approximately 40% power due to problems with their main feed pump seals. Unit 3 remained in a refueling outage with an anticipated startup about 1 week away. Major work activities were being conducted on main feed pump seals, MSIV repair to eliminate leakage, and the emergency diesel generators.

## IV. Management Performance

In the Fall of 1991, the Dresden Status Review Team (DSRT) performed an assessment of the station's performance problems. The group identified 11 fundamental areas for improvement, which support three overall goals: improve the team, improve work processes, and improve the plant. These 11 areas are listed above, in section II.

The strategies developed in these areas require tangible progress in well defined areas, such as outage planning, procedure upgrade and resolution of equipment issues. In these areas, plant management and staff recognize the need for improvement, work is in progress, and there are good quantitative indicators to measure progress.

Several other of these areas relate to more intangible issues, such as communication, staff empowerment, and accountability. Acceptance of these goals by management and staff will clearly take time. Moreover, it will be more difficult to define action plans to implement these goals and develop indicators to track improvement. Consequently, we expect progress in these areas to be slower. Two positive initiatives in this area are the CECo Vision Through Quality (VQ) program and a recently initiated program to have management and staff visit other sites. Continued management commitment will be required in order to foster staff buy-in to these initiatives.

The plant's process for planning and evaluating these improvement initiatives was still evolving. For instance, there were over 60 projects funded through a special $12.5 million improvement budget; yet there was currently no clear statement of how these projects supported the overall improvement strategies listed above.

## V. Engineering and Technical Support

### Backlog and Work Planning

There was a considerable backlog of work in the engineering area. This includes modifications, procedure changes, and resolution of equipment problems and deficiencies (DVRs). This problem seems to be made worse by the lack of good long range work planning. Outage planning has not been effective at informing people when activities will be accomplished. Daily work schedules were often adjusted at the last minute. Much of the work in the tech staff area appears to be done without much prior planning (crisis management). The licensee concurred that there was a considerable backlog in many areas and that work planning was not meeting its intended objectives. During future visits the DOT will continue to review licensee efforts to reduce backlog and improve work planning.

### Lack of Experience of Technical Staff

Many of the personnel performing important system engineer functions had approximately 2 years experience. There did not seem to be a well defined career path for system engineers within the Technical Staff organization, however, many of the more experienced technical staff persons have been shifted into operator licensing training. The continued movement of experienced technical staff into other areas will make it difficult for the licensee solve their technical staff problems. Based on a limited sample of one, it appears that the level of overtime worked by the technical staff may be excessive (in excess of 1000 hours per year). The licensee acknowledged the lack of experience of the technical staff.

### Lack of Design Basis Information for Equipment

There was a broad appreciation by all levels of technical personnel that there was a significant lack of readily available design basis information that made performing a variety of technical activities more difficult, including writing technical and safety evaluations, preparing maintenance instructions, procuring replacement parts, performing modifications, and making operability determinations. The licensee acknowledged the general lack of design basis information and had several programs to address this issue including an FSAR upgrade project and a design basis document development program. The DOT will look further into these programs during future visits.

### Prioritization Scheme for Capital Expenditures

Dresden was using a system for prioritizing capital expenditures that was consistent at all the CECO facilities. This involved a fairly complex numerical system that took into consideration a variety factors. Line items involving over $400K were individually approved by the CECo Board of Directors. This system appeared to be a good means for establishing priorities.

### Corporate Engineering Group Located Onsite

The contribution of the onsite corporate engineering group (ENC) was regarded by the plant as a strong positive element in assisting with modifications, resolving plant problems, and helping with operability determinations.

## VI. Operations and Planning

### Licensed Operator Staff Experienced but Limited

Of the people interviewed, the operations staff had more than 10 years experience in the operations department. Operating crew staffing exceeded Technical Specification requirements but was weak in the overall number of available licensed reactor operators and senior licensed operators. The operations department was providing licensed personal to other departments. The licensee acknowledged the need to continuously increase the licensed staffing for the operations department. The use of overtime for operators will be looked at in future visits.

### Communications of Management Expectations

There was a large effort in communicating management expectations to the working level. These expectations were communicated and understood in the areas of procedure usage, repeat back of action statements, and use of the phonic alphabet. These were all considered to be positive initiatives. There was a wait-and-see attitude in the operations department on whether the pressure will continue to conduct this type of communication.

### Large Backlog of Procedures

There was a large backlog of procedure revisions and temporary procedure changes. This caused some frustration with initiating new procedure changes and thus stimulated the use of the temporary procedure changes. See section IX, Procedures and Administrative Controls, for more details on procedures.

### Daily and Outage Planning

The planning department considered themselves the coordinating group for work effort, but the daily work schedule was not always used by the working groups.

Comments were made by various licensee personnel that the schedules were not worth the paper they were printed on and they were changed as soon as they were issued. The planning group self-identified a number of items for improvement and included these actions in the Dresden Management Action Plans (DMAP). The team will be looking at these issues in the future to see if any improvements are made in this area.

### Control Room Activities

The control room personnel had a professional attitude in performing activities. Operators were attentive to their panels and alarms, the control room was properly manned, and there was no major congestion around the operator's work stations. There were approximately eight alarm lights that were continuously lit in the operating unit for various reasons.

## VII. Maintenance

### Goals and Expectations

Maintenance department management were bringing their staff into line with their views for process, plant, and people initiatives. Personnel down to the first line supervisor level were well aware of management's goals and expectations. Vertical communications were taking place through departmental meetings, tailgate sessions, and one-on-one meetings.

### Initiatives Affecting Maintenance Department

There were a number of improvement initiatives recently implemented, or in the process of being implemented, that will affect the maintenance department. Plant-wide initiatives included the procedure upgrade program, the formation of vision through quality (VQ) program, and a program to improve the plant's materiel condition. Improvement initiatives specific to the maintenance department were too recently implemented to assess their effectiveness. These initiatives include programmatic post-maintenance testing improvements, implementation of a reliability centered maintenance program which involves the review of 15 systems for determination of appropriate preventative and predictive maintenance actions, and improvement of work packages. The maintenance department management was also planning on initiating a program to prioritize their backlog of lower priority maintenance work requests. The DOT will look at these plans further in the future.

**Maintenance Staff View of New Program Initiatives**

Maintenance staff views management as being highly reactive (overly) to NRC and INPO concerns. New programs were viewed as reactionary and there was a wait and see attitude toward the implementation of new initiatives. There was no firm sense of acceptance or buy-in from the staff for most of management's newer initiatives.

**Materiel Condition**

The team did not focus heavily on assessing materiel condition of the plant on this visit. The materiel condition was noted by the team to have improved over the last couple of years however there was still much room for improvement. Water leaks, oil leaks on equipment, chipped, and pealing paint were in evidence throughout the plant. However, there was evidence that a considerable amount of work was accomplished during the past 6 months of outages on both units. During a plant tour, without entering any controlled surface contamination areas, Tom Martin, Geoff Grant, and the Plant Manager picked up a small amount of contamination on their shoes. This contamination was identified by the extremely sensitive portal radiation monitors and was easily removed by washing. The team was informed the next day that the licensee had identified the source of the contaminations.

During the DOT visit Unit 2 was being operated at reduced power, approximately 40%, due to a chronic failure problem of the seals on the reactor main feed pumps. The DOT was concerned about the licensee's apparent inability to properly address this long standing equipment problem.

The licensee was planning a major initiative to improve the materiel condition of the plant. This effort had not yet been implemented and will be reviewed in future DOT visits.

## VIII. Radiation Safety and Radwaste

Radwaste

The team examined all major radwaste backlog issues, interviewed staff, and examined process equipment. There has been extensive planning and implementation to reduce the major radwaste backlog. The NS-1 project (unit one chemical decon) was operational and on schedule for completion by September 1992. The south stock bay project (220 waste drums from the 1980s) was approximately 33% complete, and the unit one "old" radwaste laydown area was also scheduled for cleanup. Overall the radwaste organization appeared to work well as a team with a clear understanding of their mission. The cleanup projects were adequately staffed, budgeted, and supported by senior management. Other radwaste programs (sludge tank rooms and system upgrades) were also progressing satisfactorily. Communication between the radwaste and radiation protection departments has also improved. The team requested the licensee to deeply examine what lessons-learned surface from these extensive radwaste reduction efforts to deal with radwaste generated from the early 1980s and to determine what "old plant habits or traditions" may need to be changed. The team stressed that radwaste disposal for

the 1990s is more complicated, demanding more management attention than was previously given.

**Radiation Protection**

The team examined most major Radiation Protection Department issues and interviewed several staff health physicists. The department appeared to be adequately staffed, however, most staff had extensive workloads. The licensee was planning improvements in several major areas of radiation protection, including:

- Overall station person-rem doses were higher than management expectations, however, the trend has been positive. General plant source term reduction initiatives were scheduled to reduce the high traffic area doses. Several process piping systems with elevated dose rates were located in high traffic areas in the turbine and reactor building.

- General station radiation worker training and attitudes need improvement as evidenced by recent events. The corporate training production staff was improving basic radiation worker lesson plans to capture lessons-learned from recent events to help instill a responsible attitude for radiation protection on the part of the worker.

- Overall department procedures were overly complicated and difficult to get revised. The department was working with other station departments to upgrade and improve the quality of these procedures.

- Operational experience (SROs or Auxiliary Operators) within the radiation protection department was weak, which impacted interdepartmental interface and the technical skills available to improve overall station ALARA engineering.

The DOT will follow up on these areas in future visits.

The station was embarking on a major initiative to improve the materiel condition of the plant without a significant contribution by radiation protection personnel. The team felt that active participation in this program by the Radiation Protection Department would be appropriate for consideration of things such as temporary shielding, housekeeping and controlled surface contamination areas, and ALARA engineering.

## IX. Procedures & Administrative Controls

Overall a commitment to procedural adherence was evident in all interviews conducted. It appeared that management expectations in this area were adequately communicated to all applicable levels of the organization.

**The Time to Implement a Procedure Revision was Excessive**

The licensee currently had a large number of outstanding procedure changes in process. The average turnaround time to have a procedure revised was approximately 250 days and was due, in large part, to the current review and

approval process. Related to this was the large number of temporary procedure changes that currently exist. Hundreds of these temporary changes were in effect, many more than 6 months old and some dating back to 1989. This problem had been recognized by the licensee with additional manpower being arranged. During interviews, several individuals indicated that one effect of the large backlog was that personnel would rather attempt to work around a procedural problem than initiate a procedure change request and impact an already overburdened process.

The team considered the existence of hundreds of temporary procedure changes and the excessive amount of time required to revise a procedure to be significant weaknesses.

**Procedure Change Process**

The team evaluated the procedure change process to understand how procedures were revised at Dresden. Certain bottlenecks were identified that significantly slowed the process. Specifically, the serial manner in which reviews were done, coupled with many interim administrative loop-back steps, increased the time required to issue revisions to procedures. In addition, the Technical Specification review and approval requirements were more restrictive at Dresden than most plants, necessitating additional reviews that may not be necessary in all cases. The licensee was preparing a Technical Specification change request to modify these review and approval requirements. The licensee was also evaluating other ways of streamlining the process.

**Procedure Upgrade Program**

All individuals interviewed felt the Procedure Upgrade Program was a worthwhile endeavor with the quality of the procedures much improved. The upgrade process has taken several years to get to the present point with a substantial amount of work remaining. The licensee was confident that the current schedule was realistic with future completion dates obtainable. Bottlenecks in the procedure revision process has had some negative effect on this effort. In addition, a requirement for CECo to do a 100% validation of procedures in the upgrade process prior to their issuance resulted in some delays due to a lack of manpower to do the validations. The licensee discussed with the team the posibility of validating certain procedures prior to use rather than prior to issuance. This seemed like a reasonable approach, particularly for those non-operationally oriented procedures that were used infrequently.

The DOT will examine the licensee's progress in this area and the overall quality of procedures during future visits.

## X. Licensee Assessments/Quality Program (QA/QC)

In the areas of Nuclear Quality Programs (NQP) and the Onsite Nuclear Safety Group (ONSG), which are corporate functions, good communications were found to exist between corporate and counterpart organizations at other sites through regularly scheduled phone calls and meetings. NQP also participated in audits at other sites. This was found to be beneficial.

Recent NQP initiatives included an audit of the licensee's materiel evaluation of the plant, a CECo-wide comparative audit, and a trending program that provided input into the corporate windows program. In addition, NQP was utilizing performance based audits. ONSG initiatives included engineering safeguards performance monitoring, an integrated reporting program that is under development, and a lessons learned program that has been recently implemented. QC was conducting regularly scheduled meetings of QC managers and had a good working relationship with NQP. QC was also sending inspectors to other stations to participate in inspections and to exchange information.

The initiatives undertaken in the NQP and ONSG organizations, although relatively new and under development, were considered positive. The DOT will review the effect of some of these initiatives in the future.