

May 28, 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, MAY 14-16, 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 second onsite visit to Dresden on May 12-14, 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.

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During this second visit the DOT focused on the programs and actions taken to improve performance. We found that the station had taken positive actions in many areas. Although these actions appeared to be a step in the right direction, the impact of most of these efforts has not yet been determined. Problems were still evident with backlogs of work, materiel condition, housekeeping, and work planning.

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

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 June 23-25, 1992.

original signed by

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

Attachment: As stated

See Attached Distribution

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REPORT ON THE SECOND VISIT OF THE  
DRESDEN OVERSIGHT TEAM  
MAY 12-14, 1992

**I. Scope and Participants**

The Dresden Oversight Team (DOT) made its second onsite visit to Dresden on May 12-14, 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
- R. Barrett
- C. Pederson
- E. Leeds
- M. Jordan
- S. Stasek

Byron Siegel, the NRR Project Manager for Dresden, was also on site during this period and primarily assisted Rich Barrett in the review of management effectiveness.

**II. Overview and Conclusions**

During the first onsite visit, the team focused primarily on problem identification and internal communications. During this second visit we focused more on the programs and actions taken to improve performance. We found that the station had taken many positive actions to improve performance. Although these actions appear to be a step in the right direction, the impact of most of these efforts has not yet been determined. A challenge exists for the Dresden staff to accept the many changes presently taking place.

Significant problems were still evident with backlogs of work, materiel condition, housekeeping, and work planning.

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

**Materiel Condition:** Overall housekeeping and materiel condition were still considered to be weak. Some additional emphasis has been placed on this area but no significant improvements have recently been made. The licensee's housekeeping program does not appear to be effective, and an initiative to improve equipment reliability and availability is currently in the developmental stage.

**Leadership:** Plant management has shown initiative by implementing and aggressively pursuing several programs including the Vulnerability Assessment Team, the accelerated priority initiatives, the radwaste reduction project, and the source term reduction effort. The accelerated priority initiative is an effort by the licensee to show short-term, tangible progress in key areas including procedure backlog, work planning, control room processes, materiel condition, and modification improvements. Management has also begun to spend

more time overseeing plant activities, especially on back shifts and weekends, with positive results noted.

**Self Assessment:** Dresden's ability to identify, assess and correct conditions adverse to quality (CAQ) should be enhanced by the planned implementation (in July 1992) of the Integrated Reporting Program. Other self assessment initiatives include the Equipment Reliability Issues Database. The Improvement Support Team continues to make progress in developing methods to evaluate plant progress on the 11 goals and strategies.

**Empowerment:** Strong plant management support for implementation of the Vision Through Quality (VQ) program is a significant step toward staff empowerment and job ownership. The recent decision to invest more responsibility for daily work planning in shift management is a further step in that direction. The VQ program has been recently implemented with the intent of improving quality and efficiency.

Job ownership is an area that may need more attention. There are some indications that the plant staff is not fully accepting responsibility for such things as housekeeping, adherence to radiation protection standards, and correction of procedural inadequacies. These issues should be taken into consideration in future inspection activities.

**Planning:** Progress has been made in work planning, including implementation of a station-wide 3-day schedule. However, the central planning process has not been accepted by all staff, and some supervisors still work from their own priority lists. A great deal of progress remains to be made in work and outage planning.

**Communication:** The licensee has recognized weaknesses in inter-departmental communications and has taken some steps to improve. Examples include the development of a 3-day rolling maintenance schedule, routine planning meetings to discuss resolution of plant system problems, and an expanded shift turnover process. Routine meetings attended by all department heads are also being held with senior level corporate management.

**Root Cause Determination for Dresden Problems:** This issue was not pursued by the DOT. At the time of this visit, a licensee contractor was developing causal factors for the performance problems at Dresden. Similarly, Region III, in response to a Commission staff requirements memorandum, was independently developing root causes for CECO weaknesses. Both of these studies were expected to be complete in June 1992. The DOT saw no benefit in discussing this matter further until the results of these studies became known.

### III. Plant Status

During the visit, Unit 2 was operating at approximately 92% power due to problems with the condensate pump vibration. Unit 3 was in a forced outage due to the degradation of a recirculation pump seal.

#### IV. Engineering and Technical Support

Vulnerability Assessment Team (VAT) was considered a positive engineering initiative.

CECo corporate has developed a short term initiative to review approximately 10 systems important to safety to identify vulnerabilities of these systems to safety significant events. This effort is underway and will utilize such things as:

- PRA
- Potential vulnerabilities identified in regulatory correspondence for CECO as well as other licensees
- Input from the Dresden Technical Staff
- Maintenance records
- Design changes and temporary alterations
- Open and unresolved engineering issues

The licensee has established a six person team and is optimistic that they will complete the evaluation in August 1992. The VAT is composed of individuals with extensive experience who, mostly, have not been affiliated with Dresden for a long period of time. This should provide a degree of independence.

Improvements made in the engineering and technical support area may improve quality and help reduce the high backlogs of work.

Since the last DOT visit, Dresden has made several improvements in the engineering area, including:

- Creation of a Technical Review Board to comprehensively review and prioritize modifications.
- Establishing the scope for the 1/93 Unit 2 refueling outage (D2R13) well before the start of the outage. Management expectations are that the scope of modification work for outages will be established, and held firm, 1 year before the start of the outage.
- Additional licensing basis information available to the Technical Staff in the form of the Dresden SERs with an index.
- Periodic status meetings were instituted with the Technical Staff and other departments (operations, maintenance) to improve communications and provide proactive management of issues.
- Receipt of a Technical Information Manual from corporate engineering that contains guidance in areas such as mechanical, electrical, instrument and control, environmental qualifications, and systems.

These improvements are very recent and, although they appear to be positive, it is too soon to determine whether there will be any long term benefit.

The high backlogs of work in the engineering area were still evident. These included a high number of proposed modifications (approximately 800), nuclear tracking items, parts requiring evaluation, and site engineering service requests.

## V. Operations and Planning

### INPO assist visit held to address human performance.

An INPO assist visit was conducted from April 13-17, 1992, to improve human performance, addressing issues such as procedure usage and supervisory involvement.

### Some improvements were made in daily work planning but problems still remain.

Since the last DOT visit, the station has done a large amount of work in the area of planning and scheduling. A more rigorous approach is now being taken to scheduling items and sticking to schedules. Presently, if an item is not on the schedule, it does not get done unless authorized by the Shift Engineer. Several people in the operations department expressed a positive attitude to this new approach.

Several obvious problems in daily work planning still remain. The present format is not conducive to use by the operations department. The planning department is in the process of developing a new format of the daily work schedule to help the operations department. Also, it appears that a consistent daily work plan is not being used by all departments. There are several work planning meetings throughout the day such as the morning operations planning meeting (7:45 am), the shift briefings, and the daily planning meeting. These meetings use different schedules of virtually the same work activities.

The effectiveness of the daily planning process and outage planning will be reviewed in the future.

### Several improvements were made in control room administrative processes.

Some reduction in the administrative burden of the SCRE (control room SRO) was made, and the Shift Engineer (SE) was given the authority to change the 3-day rolling schedule. These changes were considered to be positive. The shift turnover process was also changed to include all the departments that are on shift. Shift change is being held in an area directly outside the control room, and, as a result, the majority of the control room licensed operators are not directly involved. They are briefed later by the SE or the utility operator and get a copy of the shift turnover sheets. The operating shift staff did not consider this new turnover process to be a significant enhancement. The DOT agreed that leaving out part of the control room staff was not an optimum situation, however, this new turnover process should improve communications between on-shift departments.

Although Dresden is meeting its Technical Specification limits for control room operators, a shortage of about five licensed reactor operators has caused some forced overtime. This is an area that needs attention to ensure that the operators do not work an excessive amount of overtime.

## VI. Maintenance

A new maintenance department head was assigned.

The Master Mechanic at LaSalle, Tim O'Connor, was assigned as the new head of the maintenance department at Dresden. Mr. O'Connor will start work at Dresden in about 1 month. The present head of maintenance, David Van Pelt, will be taking an assignment in the corporate office.

Management expectations have been communicated to the lowest levels of maintenance staff.

Interviews with the maintenance staff revealed that mechanics, electricians, and I&C technicians were well aware of management expectations to follow written procedures and work packages, work carefully and safely, and to do the job right. If a problem is experienced on the job the workers know to stop work, contact their foreman, and get the issue resolved before continuing. The DOT and the resident inspection staff will evaluate whether these actions are actually taking place, in practice. Working level personnel were also aware of recent management initiatives to improve site performance, such as the VQ program, however, they, like the first level supervisors, had a wait-and-see attitude toward the new programs. They have seen programs come and go in the past without complete and successful implementation, and they remain skeptical. Working level personnel were aware of the plant manager's presence in the plant on backshifts and weekends, and this has had a positive effect.

Efforts to improve materiel condition are lagging.

The licensee has a two-prong approach to improving the plant materiel condition. Efforts involve (1), a housekeeping program focused on cleanliness, removing clutter, painting, lighting, oil and water leaks, and items that require maintenance action but are not necessarily plant related (phones, elevators, etc.) and (2) an initiative to improve equipment reliability and availability.

The current housekeeping program has been in place for approximately 2 years, however, it was revitalized about 6 months ago. The program is headed by a maintenance foreman and consists of a dedicated crew of 2 mechanics and 2 electricians and is supported by 22 inspectors, a mixture of supervisory and union personnel from all of the plant departments. Inspecting to look for housekeeping deficiencies is performed as a collateral duty on every second Thursday for 4 hours. The inspectors are provided with some basic training and expectations and are instructed to identify housekeeping issues with pink florescent tags. Although the program provides a worthwhile service, the dedicated manpower appears to be too small to accomplish its site-wide task. Much of the program's effort is spent trying to remove and store various items left behind by the station laborers, maintenance personnel, and contractors. Florescent tags were not seen in a number of areas of the plant that warranted housekeeping attention. The team identified a number of items during its

brief tours that should have been identified by the housekeeping inspectors.

The initiative to improve equipment reliability and availability is currently in the brainstorming stage. The effort is being controlled by corporate, with input from the Assistant Supervisors of Maintenance from all six CECO sites. Efforts are underway to develop an indicator and program parameters by the third quarter of 1992 with full implementation by the first quarter 1993.

**Plant tour revealed weak housekeeping. Materiel condition still weak.**

Members of the DOT toured the plant at various times during the visit. The overall impression was that housekeeping was weak. Overall materiel condition was also considered weak based on the large backlog of MWRs and the operating record of the station. During the visit, Unit 3 was in a forced outage and Unit 2 was operating derated due to condensate pump problems. No observation was made with regard to the number of oil and steam leaks. The following specific concerns were identified:

- Several in-service, high-pressure gas bottles, located near safety related equipment, were found to be improperly secured, creating a potential missile hazard. These bottles did not have safety caps and, if they fell over, would not have been held up by anything other than very small diameter copper tubing or rubber hose.
- 4 TBCCW valves (non-safety-related, manual operated, rising stem gate valves) were found with tape on the stems that would have prevented operation.
- A considerable amount of material was scattered around the plant that appeared to be improperly stowed.
- An annunciator cover plate was broken off the remote shutdown panel.
- There were approximately 20 deficiency tags on annunciators in the Unit 2 control room indicating some abnormality with these circuits.

The specific concerns above were identified to the licensee for correction.

**Database developed for high priority equipment problems, but it was not clear how it would be used.**

In response to NRC concerns Dresden began an initiative in December 1991 to develop the Equipment Reliability Issues Database. This database was developed to assist the site in establishing priorities regarding equipment problems and tracking the corrective actions taken to address those problems. It currently consists of 89 high priority, recurrent-type of equipment problems identified by upper station management with input from the various plant departments. The database is maintained by the technical support department and is updated and distributed monthly to all department heads.

The team felt that this is a positive initiative that could help focus all site departments on the most important equipment problems requiring

attention. However, it was not clear how items will be added or deleted from the database or how the database will be used in conjunction with work planning and scheduling.

Post-maintenance testing database was under development as a site initiative.

The maintenance department staff was in progress of establishing a database relating equipment with potential post-maintenance tests (PMT). This would provide a continually updated database for work analysts to refer to for PMT needs. The system was being developed at Dresden in coordination with similar systems at Quad Cities and LaSalle. The team viewed the PMT database as a positive initiative and will continue to monitor and evaluate its implementation in future visits.

In discussions with the plant staff developing the PMT database, it was apparent that the initiative and coordination of activities to establish the system between the CECo BWRs was driven by the individual plant staffs rather than being facilitated at the corporate level.

## VII. Radiation Safety and Radwaste

Some significant progress was made in the reduction of radioactive waste.

The team interviewed staff and reviewed the status of implementation of the radioactive waste backlog reduction. There has been extensive planning and implementation to reduce the major radioactive waste backlog. The goal is to reduce the backlog of radioactive waste to zero by September 1, 1992, and they appear to be on schedule. Overall, the backlog has been reduced from an initial 60,000 cubic feet in 1987 to approximately 8,000 cubic feet currently. Of particular note is completion of the south stock bay project. Also, the NS-1 project (unit one chemical decontamination waste) is approximately 33% complete. The licensee is continuing to evaluate methods of reducing dry active waste generation. The DOT will monitor progress in this area.

Radiation protection action plans not yet developed.

The team interviewed staff and reviewed the status of a number of radiation protection (RP) programs. The licensee is at a very early stage in the development of their RP improvement plans. They have identified many RP improvement items; however, action plans are not yet developed. The licensee is currently increasing its staff, including people with experience other than CECo, to develop a comprehensive action plan for resolution of the items. The DOT will follow up on this area in future visits.

Source term reduction program has potential.

The licensee developed a Source Term Reduction Program and implemented it to reduce general area dose rates. The program includes hydrolazing of process piping and installation of hot taps to facilitate further hydrolyzing. This program has the potential for significantly reducing

the station accumulated dose on the order of 200 person-rem per year. In June 1992, the licensee plans on changing the contractor support that this program receives that could have an impact on the timeliness of project completion. The DOT will continue to monitor its progress.

**Good radiation protection work practices were not always evident.**

An area for further improvement is worker adherence to good ALARA and RP work practices. There continues to be indications that not all workers onsite endorse the concept that RP and ALARA are part of every worker's responsibilities. A recent example of improper radiation protection work practices resulted in disciplinary action by the station management. This example and action appear to have been communicated to all levels of station personnel stressing the importance of RP and that people will be held accountable for their actions.

### **VIII. Procedures & Administrative Controls**

Several improvement initiatives have been developed in this area. However, most of those reviewed are still in their infancy with few identifiable results to date.

**Corporate manager put in charge of procedure improvement effort.**

A Procedure Review Manager was appointed on May 11 to assist in reducing the backlog of outstanding procedure changes. Plant management indicated that sufficient staff to work off the backlog would be provided. However, preparation of an action plan to accomplish the program goals was in the preliminary stages of development. Further followup of the activities associated with this initiative will also be performed during the next visit.

**Some improvement made but the procedure change process was still slow and cumbersome.**

Since the last DOT visit to the site, the licensee took steps to streamline the procedure change process. Bottlenecks were identified that significantly slowed the process, including the serial manner of conducting reviews coupled with many administrative loop-back steps. Dresden Administrative Procedure (DAP) 09- 02 was revised on May 14, 1992, to eliminate some unnecessary elements and modify the review scheme to quicken the process. This revised process was not implemented at the time the DOT departed the site, however, the new DAP, as written, should result in streamlining of the process. Implementation of the new procedure will be reviewed during the next site visit.

**Procedure revision backlog was still high with some progress made.**

At the time of the DOT visit, there were 2256 procedures in process of being revised, and average age of changes in the review cycle was 192 days (not including origination time). The time to revise a procedure was still considered high. Some licensee staff appeared to be frustrated by

the length of time to get procedures changed which can contribute to a "why bother to try to improve" attitude. The team noted both the total number of outstanding procedure changes, as well as the average age of those in the review chain, has decreased since the last visit in March and the licensee indicated the trend was continuing. Additionally, the number of outstanding temporary procedure changes have been somewhat reduced from that previously noted (from about 220 to 197). These backlogs and the time required to revise a procedure were still considered excessive.

**Quality of recently issued procedures was adequate.**

Several recently issued procedures were reviewed during the visit with no substantive concerns noted. Procedure development was consistent with administrative guidelines, but some minor technical discrepancies were noted and identified to appropriate licensee personnel.

**A major revision to the Dresden corrective action program was under development.**

The licensee planned to begin implementation of the Integrated Reporting Program (IRP) on July 28, 1992. The intent of the new program is to combine all current corrective action type processes in use at the station such as the Deviation Report (DVR) and Regulatory Occurrence Report (ROR) programs under one system. This appears to be a significant initiative that will be reviewed in more detail in the future.

#### **IX. Exit Meeting**

An exit meeting with the licensee was held on May 14, 1992. Mr. A. B. Davis, Regional Administrator, was in attendance as the senior NRC representative. Mr. Cordell Reed, Senior Vice President; Chuck Schroeder, Plant Manager; and other Dresden representatives were present.