Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

DCS

January 16, 1992

Mr. J. Lieberman, Director
Office of Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Dresden Nuclear Power Station Unit 3
Notice of Violation and Proposed Imposition
of Civil Penalty
NRC Docket Number 50-249

References: (a) A.B. Davis (NRC) letter to Cordell Reed (CECo)
dated December 17, 1991.

(b) C.E. Norelius (NRC) letter to Cordell Reed (CECo)
dated November 8, 1991.

Mr. Lieberman:

This letter provides Commonwealth Edison Company's (CECo) response to the Notice of Violation and Proposed Imposition of Civil Penalty as transmitted in Reference (a). An Enforcement Conference was held on November 22, 1991 to discuss the results of the NRC's inspection (Reference (b)) of the events surrounding the October 11, 1991 unplanned exposure of two personnel during inservice inspection of a recirculation pump discharge valve at the Dresden Unit 3.

Commonwealth Edison acknowledges the violation as stated in the Notice of Violation contained in Reference (a). The attachment to this letter contains the immediate corrective actions taken as well as additional corrective actions which should be effective in precluding recurrence of the violation.

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JEH 1/1

In accordance with 10 CFR 2.205, enclosed is the payment of $25,000 in response to the imposed civil penalty.

If there are any questions or comments regarding this response, please contact the undersigned at 708/515-7330

Very truly yours,

T.J. Kovach
Nuclear Licensing Manager

Attachment: Civil Penalty Check #02-002 00113465
$25,000.00

cc: A.B. Davis, Regional Administrator, Region III
B.L. Siegel, Project Manager, NRR
W.G. Rogers, Dresden SRI

ATTACHMENT A

RESPONSE TO NOTICE OF VIOLATION

INSPECTION REPORT NO. 50-249/91033

VIOLATION (249/91033-I.A)

Technical Specification 6.2.B requires that radiation control procedures be maintained, made available to all station personnel, and adhered to.

Contrary to the above, on October 11, 1991, the pre-job ALARA briefing for work on the components of the "B" recirculation pump discharge valve did not include a representative of the Inservice Inspection (ISI) Group and the radiation protection technician (RPT) monitoring the second phase of the job. This is contrary to DAP 12-9, Revision 4, Paragraph F.3, which requires, in part, that pre-job ALARA briefings for jobs which involve more than one work group and meet the following criteria shall include all work groups involved in the job. The criteria includes (1) a working dose rate greater than 1 R/hr, (2) general area loose contamination levels greater than 250,000 dpm/100cm2, (3) high potential for highly radioactive particles, or, (4) high potential for a worker's body to come in contact with high dose rate piping or components. The RPT monitoring the job being briefed must be in attendance during the pre-job briefing.

REASON FOR THE VIOLATION

Commonwealth Edison acknowledges the violation. Procedure DAP 12-9 was not followed in that a representative of the ISI Group and the RPT monitoring the second phase of the job were not in attendance for the pre-job ALARA briefing on October 11, 1991.

The Station, with assistance from Corporate Radiation Protection, initiated an immediate formal investigation to identify the causes of the event. This investigation included a detailed review of the event including a review of the video tape, documentation associated with the event, and interviews with all individuals involved in the event.

The formal pre-job planning was not adequate because (1) the VT-1 visual inspection attributes having been neither delineated in the job task analysis nor discussed at the pre-job ALARA briefing, were not reviewed and evaluated adequately, and (2) the job supervisor did not ensure that all workers were available for the pre-job briefing to provide all involved workers an opportunity to discuss their roles in the inspection activities.

CORRECTIVE ACTION TAKEN

1) DAP 12-9 has been revised (effective December 27, 1991), through the temporary procedure process, to correct deficiencies identified from the analysis of this event including,

   (a) evaluation of non-routine inspection activities,

   (b) evaluation of the adequacy and detail of the job tasks identified, and,

   (c) methods to ensure that all workers are appropriately briefed.

2) Additionally, a letter to station department heads, from the Health Physics Services Supervisor, was issued on December 28, 1991 explaining the changes being made to DAP 12-9 and the reasons for these changes.

CORRECTIVE ACTIONS TO BE TAKEN

Further changes to DAP 12-9 are currently in progress, to enhance the planning efforts and streamline the overall process, with completion of these changes expected prior to June 26, 1992.

VIOLATION (249/91033-I.B)

Procedure DRP 1140-04, Revision 0, Paragraph G.3.a(4), requires that additional copies of the survey be provided with each copy of the radiation work permit (RWP) which is distributed for worker review at access control points. Distributing copies of the survey to accompany the RWP will not be required if radiological status boards are located near the access control area(s) and if the information on that status board reflects conditions applicable to the work.

Contrary to the above, on October 11, 1991, a copy of the survey of the "B" recirculation pump discharge valve components and the work area was not distributed with each copy of the RWP distributed for worker review at the drywell access control point, nor did the information on the status board reflect conditions applicable to the work in that the survey was documented after the work was complete.

REASON FOR THE VIOLATION

Commonwealth Edison acknowledges the violation of DRP 1140-04 related to copies of surveys not being available for worker review. Copies of the survey of the "B" recirculation pump discharge valve components and the work area were not available for review by the workers prior to starting the inspection process due to a failure to fully implement station procedures. Therefore, the two workers involved in the inservice inspection did not have an opportunity to examine the dose rates on a map showing the components and any dose rate gradients.

CORRECTIVE ACTION TAKEN

1) The primary individuals involved in this event were counseled regarding their responsibilities for adherence to station policies and procedures.

2) Additionally, expectations of senior and middle station management and corporate management were communicated to all station personnel regarding adherence to station procedures using the following methods:

   (a) station-wide meetings conducted by department heads to discuss recent events (including this event) at Dresden Station. These meetings were held at the end of October.

   (b) a meeting of all station supervisors conducted by the Station Manager and Vice President - BWR Operations.

   (c) Station Manager memorandum, issued at the security ingress point to all site personnel.

3) In addition to these discussions, Radiation Protection Department management conducted specific discussions with Radiation Protection Department personnel on the necessity of ensuring survey data is made available prior to the start of work evolutions.

4) Procedure DAP 12-9 was revised to emphasize discussion of radiological survey data during the pre-job ALARA briefing process.

VIOLATION (249/91033-II.A)

10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to the above, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.201. Specifically, during the ALARA committee meeting on September 10, 1991, and the pre-job ALARA and bullpen briefings on October 11, 1991, the licensee did not adequately evaluate the physical positions the two workers would have to assume relative to the potential radiation hazards incident to performing inservice inspection of the components of the "B" recirculation pump discharge valve.

REASON FOR THE VIOLATION

Commonwealth Edison acknowledges the violation in that surveys were not made to adequately assess total occupational doses.

The failure to adequately evaluate the workers positions relative to the potential radiation hazards at either the Station ALARA Committee or the pre-job ALARA briefing was due to the fact that the VT-1 visual inspection attributes were not delineated in the job task analysis nor adequately communicated prior to the start of work. Failure to adequately evaluate the worker positions during the briefing that occurred at the drywell bullpen between the workers and the RPT, resulted from a failure, on the part of the individuals involved, to adequately communicate the activities to be performed and the radiological conditions associated with the task. Additionally, there was a lack of follow through, on the part of the individuals involved, when differences were identified regarding the job.

CORRECTIVE ACTION TAKEN

1) Procedure DAP 12-09 has been revised to incorporate the following changes:

   (a) for tasks estimated to be greater than 1.0 person-Rem, review of the work package and/or procedure by the ALARA Group is required. Work packages and/or procedures for tasks estimated to be less than 1.0 Person-Rem an ALARA review will be done on a case by case basis (i.e. infrequently performed jobs).

   (b) an ALARA Action Review is now required for "non-routine" activities such as, but not limited to, disassembly, inspection, and/or handling of components with the potential for high smearable contamination conditions, high radiation levels and/or changing radiological conditions.

   (c) the pre-job briefing checklist has been revised to aid the job supervisor during the supervisory pre-job briefing. Major changes include the requirement that all work parties necessary to support the job are in attendance at the briefing, discussion of dosimetry placement and usage, and assurance that workers are warned of the survey requirements when working around the spent fuel pool or open primary systems.

2) In addition to these discussions, Radiation Protection Department management conducted specific discussions with Radiation Protection Department personnel on the absolute importance of controlling radiological work in the field by ensuring that they stop activities that are radiologically nonconservative.

CORRECTIVE ACTIONS TO BE TAKEN

DAP 12-9 will be undergoing additional revision to improve this planning tool with the expectation that this will be completed by June 26, 1992.

VIOLATION (249/91033-II.B)

10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.201. Specifically, the licensee did not survey the inner faces of the "B" recirculation pump discharge valve discs prior to work being performed near those faces.

REASON FOR THE VIOLATION

Commonwealth Edison acknowledges the violation due to the fact that the inner faces of the "B" recirculation pump discharge valve discs were not surveyed prior to work being performed near those faces, surveys were not made to determine that the individuals performing the ISI activities would not exceed anticipated exposures.

There was no discussion of the disc separation during any phase of the job planning and briefing, therefore, discussion of potential radiological concerns did not take place. Appropriate surveys were not performed upon disassembly of the valve disc to ensure radiological conditions were as expected, due to a failure on the part of the RPT, to recognize and respond to this situation. Further, the workers were over-zealous with respect to completing their task without evaluating and performing the task in a radiologically conservative manner. Finally, the Radiation Protection personnel were not sufficiently aggressive in admonishing the workers to comply with their directions. Neither the RPT or the ALARA Coordinator stopped the job to better evaluate radiological conditions.

CORRECTIVE ACTION TAKEN

1) The primary individuals involved in this event were counseled regarding their responsibilities for adherence to station policies and procedures, their responsibilities for radiological safety, minimization of exposure and performance of work in a radiologically conservative manner.

2) Radiation Protection Department management conducted specific discussions with Radiation Protection Department personnel on the absolute importance of controlling radiological work in the field by ensuring that they stop activities that are radiologically nonconservative.

3) DAP 12-09 has been revised (as identified earlier) to incorporate the following changes which should aid in preventing future occurrences :

   (a) for tasks estimated to be greater than 1.0 person-Rem, review of the work package and/or procedure by the ALARA Group is required. Work packages and/or procedures for tasks estimated to be less than 1.0 Person-Rem an ALARA review will be done on a case by case basis (i.e. infrequently performed jobs).

   (b) an ALARA Action Review is now required for "non-routine" activities such as, but not limited to, disassembly, inspection, and/or handling of components with the potential for high smearable conditions, high radiation levels and/or changing radiological conditions.

   (c) the pre-job briefing checklist has been revised to aid the job supervisor during the supervisory pre-job briefing. Major changes include the requirement that all work parties necessary to support the job are in attendance at the briefing, inclusion of dosimetry placement and usage, and an inclusion that workers are warned of the survey requirements when working around the spent fuel pool or open primary systems.

CORRECTIVE ACTIONS TO BE TAKEN

1) Station personnel performance appraisals for 1992 will include items regarding radiological performance of work.

2) The station will develop lesson plans addressing conduct of radiologically challenging jobs to be used in departmental continuing training. The lesson plans will be focused at three levels of radiation workers, including:

   (a) RP Department personnel,

   (b) supervisors and planners, and

   (c) other personnel who routinely perform work in radiologically controlled areas.

These lesson plans will be developed by March 31, 1992 with completion of the training by the end of the year.

3) During the 1992 RPT Continuing Training session, a lessons learned session will be conducted to review the 1991 Unit 3 Refueling Outage with special emphasis on outage problems and barriers encountered during performance of work.

4) Procedure DAP 12-9 will be undergoing additional revision with the expectation that this will be completed by June 26, 1992.

VIOLATION (249/91033-II.C, II.D, and III)

II.C: 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not receive a total occupational dose in excess of the standards specified in 10 CFR 20.201. Specifically, the licensee did not adequately reevaluate the possible doses to two workers during the inservice inspection of the "B" recirculation pump discharge valve when actual inspection activities differed from those anticipated by radiation protection personnel.

II.D: 10 CFR 20.201(b) requires that each licensee make such surveys as may be necessary to comply with the requirements of Part 20 and which are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. As defined in 10 CFR 20.201(a), "survey" means an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions.

Contrary to above, on October 11, 1991, the licensee did not make surveys to determine that individuals would not be exposed to airborne concentrations exceeding the limits specified in 10 CFR 20.103. Specifically, the licensee did not reevaluate the potential airborne exposure from the close inspection of the "B" recirculation pump discharge valve discs when actual inspection activities differed from those anticipated by radiation protection personnel.

III: 10 CFR 20.202 (a)(3) requires that each licensee supply appropriate personnel monitoring equipment to, and require the use of such equipment by each individual who enters a high radiation area.

Contrary to above, on October 11, 1991, the licensee failed to supply monitoring equipment appropriate to ascertain the doses incurred by two workers who performed inservice inspection of the "B" recirculation pump discharge valve in a high radiation area. Specifically, the dosimeters supplied did not adequately measure dose to the most highly exposed portions of the whole body of each worker.

REASON FOR THE VIOLATIONS

Commonwealth Edison acknowledges the violations in that the worker's exposures were not evaluated when actual inspection activities differed from those anticipated by radiation protection personnel. Personnel monitoring equipment was not supplied to appropriately ascertain the doses incurred by the two workers who performed the inservice inspection. These violations occurred due to:

(1) Communications between the RPT and the ISI representative were not adequate in that the RPT did not reach resolution with the ISI representative when it was indicated that the ISI individual would break the valve body plane, or that separation of the valve discs would be part of the inspection activity.

(2) the details of the inspection process were not fully discussed by any of the workers.

3) individual failures to follow certain elements of established procedures.

(4) the failure of the workers to implement radiologically conservative work practices.

(5) the Radiation Protection personnel were not sufficiently aggressive in admonishing the workers to comply with their directions. Neither the RPT or the ALARA Coordinator stopped the job to better evaluate radiological conditions.

CORRECTIVE ACTIONS TAKEN

1) The primary individuals involved in this event were counseled regarding their responsibilities for adherence to station policies and procedures, their responsibilities for radiological safety, minimization of exposure and performance of work in a radiologically conservative manner.

2) In addition to these discussions, Radiation Protection Department management conducted specific discussions with Radiation Protection Department personnel on the absolute importance of controlling radiological work in the field by ensuring that they stop activities that are radiologically nonconservative.

3) Procedure DAP 12-09 has been revised (as identified earlier) to incorporate the following changes which should aid in preventing future occurrences :

   (a) an ALARA Action Review is now required for "non-routine" activities such as, but not limited to, disassembly, inspection, and/or handling of components with the potential for high smearable conditions, high radiation levels and/or changing radiological conditions.

   (b) the pre-job briefing checklist has been revised to aid the job supervisor during the supervisory pre-job briefing. Major changes include the requirement that all work parties necessary to support the job are in attendance at the briefing, discussion of dosimetry placement and usage, and assurance that workers are warned of the survey requirements when working around the spent fuel pool or open primary systems.

4) Additionally, expectations of senior and middle station management and corporate management were communicated to all station personnel regarding adherence to station procedures using the following methods:

   (a) station-wide meetings conducted by department heads to discuss recent events (including this event) at Dresden Station. These meetings were held at the end of October.

   (b) a meeting of all station supervisors conducted by the Station Manager and Vice President - BWR Operations.

   (c) Station Manager memorandum, issued at the security ingress point to all site personnel.

CORRECTIVE ACTIONS TO BE TAKEN

1) Procedure DAP 12-9 will be undergoing further revision to improve this planning tool with the expectation that this will be completed by June 26, 1992.

2) The station will develop lesson plans addressing conduct of radiologically challenging jobs to be used in departmental training. The lesson plans will be focused at three levels of radiation workers, including:

   (a) RP Department personnel,

   (b) supervisors and planners, and,

   (c) other personnel who routinely perform work in radiologically controlled areas. These lesson plans will be developed by March 31, 1992 with completion of the training by the end of the year.

3) During the 1992 RPT Continuing Training session, a lessons learned session will be conducted to review the 1991 Unit 3 Refueling Outage with special emphasis on an open discussion between RPT's, RP Supervisors, and Operational Health Physics personnel regarding outage problems and barriers encountered during performance of work.

DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved when the following actions were taken:

1) The primary individuals involved in this event were counseled regarding their responsibilities for adherence to station policies and procedures, their responsibilities for radiological safety, minimization of exposure and performance of work in a radiologically conservative manner. This was completed on or before November 18, 1991.

2) Radiation Protection Department management conducted specific discussions with Radiation Protection Department personnel on the absolute importance of controlling radiological work in the field by ensuring that they stop activities that are radiologically nonconservative. This was completed on or before October 25, 1991.

3) Initial changes were made, via temporary procedure, to Procedure DAP 12-09 on December 27, 1991.

ADDITIONAL CORRECTIVE ACTIONS APPLICABLE TO ALL VIOLATIONS

The following additional corrective actions are being added because they are directly applicable to this event and will solidify Dresden's overall improvement philosophy and strategy.

1) Members of the Operational Health Physics group and the Inservice Inspection/Testing group will meet to discuss methods by which both groups could work more effectively to meet mutual goals.

RESULTS ACHIEVED:

a) the first meeting of the two groups was held on January 09, 1992

b) the two groups will meet periodically to foster improved working relationships

2) The Station will review the policy for dosimetry placement, specifically multiple and extremity dosimetry. Procedures DRP 1210-4 and 1210-5 will be revised as necessary based on this review.

This will be completed by January 31, 1992.

3) 1992 RPT Continuing Training will be enhanced by adding the following topics of discussion:

a) dosimetry placement (including procedure review)

b) multiple badging

c) valve disassembly training demonstration which will also include discussion, by the ISI/IST group, on activities related to their inspections.

4) Corporate Radiation Protection will direct the preparation of a Lessons Learned Report based on the evaluation of recent CECo unplanned exposure events with appropriate recommendations being issued by February 28, 1992.

5) The Station will review the policy and process for exposure approval authorizations. Procedure DRP 1250-4 will be revised as necessary based on this review. This will be completed prior to the next unit refueling outage.