Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

DCD/DCB (RIDS)

December 6, 1991

Mr. A. Bert Davis
Regional Administrator
U.S. Nuclear Regulatory Commission
799 Roosevelt Road-RIII
Glen Ellyn, Il 60137

Subject: Dresden Station Units 2 and 3
Response to Confirmatory Action Letter
CAL-RIII-91-014
NRC Docket Nos. 50-237 and 50-249

Reference: (a) Confirmatory Action Letter (CAL-RIII-91-014) from A. Bert Davis (NRC) to Cordell Reed (CECo) dated October 22, 1991

Dear Mr. Davis:

Enclosed is Commonwealth Edison Company's (CECo) response to the subject Confirmatory Action Letter (CAL). The CAL discussed the event that had occurred during fuel moves in the spent fuel pool at Dresden Station on October 18, 1991. To address this event, the CAL requested CECo to provide the following: an action plan to deal with potential loose parts in the fuel pool, and assess any damage to components that may have been affected by the event, an evaluation of alternatives available to address the damaged fuel assemblies and fuel crane, and the results of a management evaluation of the events, including the root cause(s) and the corrective action plan to prevent recurrence.

If there are any questions or comments regarding this response, please contact Rita Radtke, Compliance Engineer, at (708) 515-7284.

Very truly yours,

D. Galle 12/6

D. Galle
Vice President-BWR Operations

cc: Document Control Desk-NRR
B.L. Siegel, Project Manager-NRR
W.G. Rogers, Senior Resident Inspector-Dresden

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ATTACHMENT A

RESPONSE TO CONFIRMATORY ACTION LETTER
CAL-RIII-90-014

Description

At approximately 22:15 hours on October 18, 1991, two Fuel Handlers were in the process of reorganizing the Unit 3 fuel pool in preparation for fuel load. The Grapple Operator had just completed step #312 of the fuel moves. Step #312 placed fuel bundle X3R-106 into fuel storage location F2-J9. After seating the fuel bundle, the Operator opened the grapple hook by releasing the air pressure. The Operator believed he raised the grapple head high enough to clear the fuel bundle bail; however, the Operator failed to twist the mast to ensure bail clearance. The grapple head had not been raised high enough to clear the fuel bundle bail. When the Operator began moving the refueling bridge west, the grapple head deformed the first bail with which it was still in contact and impacted the bail of one other adjacent fuel bundle in its respective storage location. A third bail was initially thought to have been damaged but subsequent inspections determined that the marks on the bail were the result of normal bundle handling.

At approximately 22:30 hours, the second Fuel Handler, who had been verifying the fuel moves, contacted the Fuel Handling Supervisor (who was in the fuel handling office) via telephone and informed him that at least two fuel bails had been damaged. The Supervisor asked for the location of the bundles so that they could be logged; however, no explicit instructions to discontinue fuel moves were provided by the Supervisor. The Fuel Handlers exercised the grapple to evaluate any possible damage. In addition, the fuel handler also noted that no bubbles had risen from the damaged fuel bundles indicating in his mind that no tie plate damage had occurred. Believing the grapple was operable, they then moved three additional fuel bundles. Fuel movement was discontinued after the third bundle was moved because the grapple began making some unusual noises during the second move and further unusual noises during the third fuel move. The two Fuel Handlers then parked the grapple over an empty fuel rack location, left the refuel floor, and went back to the office.

One of the involved Fuel Handlers discussed the event with the Fuel Handling Supervisor at the office. The Supervisor and two other Fuel Handlers then went to the Refuel Floor to inspect the grapple. The Supervisor discussed the event with these Fuel Handlers and noted that two fuel bundle bails had a significant degree of bending. The Supervisor also noted that the upper tie plates (other than the bails) appeared normal and that no unusual radiation conditions existed on the floor based upon the fact that ventilation systems had not tripped and that the continuous air monitor was not alarming. The Supervisor proceeded to check the grapple's operability. With the new Fuel Handling crew on the bridge, the Supervisor directed a Fuel Handler to move the grapple to the cask pad in order to pick up a test weight and conduct further inspections. In preparation for picking up the test weights, the uppermost telescoping square mast section separated from its retainer plate and thereby caused all sections to collapse to their limit on the internal cable. It should be noted that the cable supports the weight of the fuel assembly, the mast merely provides lateral rigidity. Fuel moves were suspended for the remainder of the shift (which concluded at 0200 hours). Subsequent inspection revealed no cable damage.

The Fuel Handling Supervisor was unaware of the reporting requirements regarding damage to nuclear material. After the mast failed at approximately 23:00 hours, the Fuel Handling Supervisor on-site called the senior Fuel Handling Supervisor at home who recommended that they wait until morning to facilitate repairs. Upper Station Management personnel were informed of the situation at approximately 06:00 hours when the Senior Fuel Handling Supervisor arrived on-site.

Request:

1. Develop an action plan addressing: (a) potential loose parts in the fuel pool, and (b) assessment of damage to affected fuel assemblies, the fuel crane, the grapple, and any other components that may have been affected by the event.

Response to 1.a:

The potential for loose parts in the fuel pool is minimal given the fact that the failure mechanism of the U-3 refueling mast is known, namely that the retainer plate weld failed. The very top mast section, which is the stationary mast section attached to the grapple assembly, was removed and placed on the refuel floor. An inspection of that mast section revealed the separated retainer plate, as expected after drawing reviews. The sections of the Unit 3 mast that fell to the limit of their travel in the Unit 3 fuel pool were inspected in the fuel pool to ensure a clean break with no indication of fragmenting. A further inspection was made of the hook area to be sure that no parts were broken free when the hook assembly struck the two fuel bails. As a precautionary measure, an underwater television scan was made of the area where the bails were impacted and areas that were traversed by the grapple during the subsequent fuel moves and the motions required to reach the cask pad area. No loose parts were identified.

Response to 1.b.:

Fuel Assemblies

Early reports of fuel assembly damage indicated that potentially three assemblies were damaged. Subsequent video taped inspections revealed that only two assemblies were damaged. The reported markings on the third assembly were caused by normal assembly handling. An assessment of the fuel assembly damage has been conducted by Siemens Nuclear Power Corporation based on drawings of the current conditions of the upper tie plates and descriptions of the event. Confirmation of assembly integrity and approval to handle the two damaged assemblies was provided in a letter from Ms. Y. U. Fresk of Siemens Nuclear Power Corporation to Mr. D. R. Zahakaylo of Commonwealth Edison dated October 23, 1991.

Fuel Crane

An evaluation of the damage to the refueling mast and an investigation to determine if the refueling bridge received any damage during the event was conducted in accordance with the recommendations provided by General Electric. Initial evaluations of the damage to the refueling mast determined that it is not cost effective to repair. Plans have been developed to transfer the refueling mast from the Unit 2 refueling bridge to the Unit 3 refueling bridge. It should be noted that two replacement masts for the Unit 2 and Unit 3 refueling bridges were already on order and scheduled for installation in early 1992.

New round masts were selected for various reasons. Our current square masts are no longer available as new replacements as well as the fact that they are outdated causing parts problems. The new masts provide several advantages such as current design, double hook design, and the elimination of unnecessary dose due to contamination plate-out on the old masts.

Fuel Rack

Initial investigations have indicated no apparent deformation in the spent fuel storage racks. A detailed visual and video taped inspection of the spent fuel rack storage cells that contain the damaged assemblies, as well as the neighboring cells, will be conducted after the two assemblies are removed prior to fuel loading to verify that no physical deformation of the fuel racks occurred during the event. If anything unusual occurs during the removal and inspection process of the damaged fuel bundles and fuel racks, the NRC will be notified in a subsequent letter as well as appropriate notifications of the Senior Resident Inspector and 50.72 requirements.

Response to 1.b. (cont'd):

Other Components

Initial inspections of the collapsed mast sections from Unit 3 revealed that the retainer casting, originally welded to the upper section of the movable mast section, was missing. Evaluation of design drawings concluded that this retainer casting could only be in the upper-most, stationary section of the mast which was still attached to the grapple assembly. This mast section was removed and placed on the refueling floor. Close inspection revealed that the retainer casting was indeed still in the upper-most mast section. Upon removal, it was determined that weld deterioration had occurred to the point that the retainer had broken free from the first movable mast section. This offered confirmation as to why the movable mast sections had collapsed to their limit on the cable assembly. Before the Unit 2 mast could be used in place of the Unit 3 mast, a complete disassembly and inspection of the Unit 2 mast would have to be performed. The Unit 2 mast was also placed on the refueling floor and disassembled. Following instructions from General Electric, the flat areas of the retainer/mast joints were excavated by grinding and revealed the same weld deterioration as found on Unit 3. The Unit 2 mast was repaired per General Electric instructions and will be used to complete D3R12. Thereafter, both masts will be scrapped and replaced with new style round masts. Extensive inspections by a General Electric field representative revealed no damage to the Unit 3 refueling bridge and mast mounting points. The Unit 3 grapple pulley assembly showed no damage.

Response to 1.b. (cont'd):

Other Components
As a result of the camera/visual inspection of the affected areas of the fuel pool, the overall bridge inspection, and the localized nature of the event, it is not believed that any other piece of equipment or component was damaged.

Request:

2. Evaluate the alternatives available with respect to the damaged fuel assemblies and fuel crane. Your evaluation will consider: (a) the potential for core redesign, (b) the ability to move these fuel bundles in the future, (c) fuel assembly repair (if applicable), (d) comprehensive testing of any repairs or modifications to the fuel crane, and (e) other alternatives.

Response to 2.a.:

A re-evaluation of the Unit 3 Cycle 13 core loading plan was initiated the day the event was reported to Station Management. The engineers of the Nuclear Fuel Services Department of Commonwealth Edison developed a revised reload plan based on the need to permanently discharge the two damaged assemblies. This revised reload plan has been independently reviewed and approved by the fuel vendor, Siemens Nuclear Power Corporation.

Response to 2.b.:

The fuel vendor, Siemens Nuclear Power Corporation, has already performed an evaluation of the damaged assemblies based on information and drawings provided to them by CECo. The results of their evaluations indicate that the two damaged assemblies may be moved with minimal risk. A procedure outlining the concerns and any special methods to be used when moving assemblies with bent bails will be completed prior to moving the damaged assemblies. The first actions taken when fuel moves resume, will be to remove these damaged assemblies.

Response to 2.c.:

Repair of the damaged assemblies is neither required nor anticipated since a core reload design has been developed requiring the two damaged assemblies to be permanently discharged. An evaluation of the integrity of the fuel assemblies performed by Siemens Nuclear Power Corporation indicated that the assemblies may be handled with minimal risk.

Response to 2.d.:

After the repairs to the Unit 2 mast assembly noted in 1.b above, and after mounting to the Unit 3 bridge, existing procedures regarding grapple/mast tests for refueling will be performed. No additional special tests will be required for this equipment.

Response to 2.e.:

One alternative considered dealt with leaving the two damaged fuel assemblies in their current positions; however, since the bails on the damaged assemblies appear to obstruct neighboring spent fuel rack locations, these assemblies must be removed before the core can be reloaded. Other alternatives to the steps currently taken or planned are not anticipated at this time. Also, as noted above, the Unit 3 mast will no longer be used. The Unit 2 mast will be used to complete D3R12 after its repair and testing.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence.

Response to Root Cause Evaluation:

The root cause of the damaged fuel bundle bails is personnel error on the part of the Fuel Handling Operator. The Operator failed to follow procedure by not raising the grapple a sufficient amount and then twisting the grapple back and forth (to verify that the grapple was disengaged) prior to initiating horizontal motion with the refueling bridge.

The apparent root cause of the failure to report this event to upper Station Management personnel was inappropriate judgment on the part of the Fuel Handling Supervisor. The Fuel Handling Supervisor failed to recognize the significance of the event.

The apparent root cause of the Fuel Handlers' action of moving fuel, after having damaged nuclear material and possibly the fuel grapple, is inappropriate judgment on the part of the Fuel Handlers, and the lack of specific direction by the Fuel Handling Supervisor to stop all grapple work.

Contributing to this event were:

- a failure to train the Fuel Handling supervisor on reportability requirements.
- a failure to reinforce Management's expectation that all activity be stopped in the event of an unusual occurrence or personnel error as well as other expectations involving safety, error-free operations, communications, and conservatism.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence. We understand that this will include, but not be limited to:

   a. An evaluation of the adequacy and effectiveness of communications and controls of operations associated with fuel movement. The evaluation will include an assessment of supervisor involvement with respect to: (i) procedural adherence by refueling workers, (ii) effectiveness of communications on the refueling floor, (iii) maintaining a clear safety perspective while performing refueling operations, (iv) maintaining communications with plant management and operations staff regarding fuel handling anomalies, and (v) the impact of work hours on refueling handler performance given the guidance contained in GL 82-12 regarding work hours associated with safety related activities.

Response to 3.a. (i):

The current Dresden Fuel Handling Supervisors were previously assigned as licensed Control Room Reactor Operators prior to assuming the duties of Fuel Handling Supervisors. This background provided them with a strong sense of the need for procedural adherence. For those Fuel Handling operations that were exceedingly repetitive, the procedures were reviewed by the Supervisor with the crew early in the outage. Thereafter, those tasks were considered to be a normal part of Fuel Handling routines. For Operations that were not repetitive or routine, it has been the practice of the Fuel Handling Department to have the applicable procedure steps in-hand during the evolution. In addition, Dresden Administrative Procedure DAP 7-2, "Conduct of Shift Operations", is currently being revised to strengthen management expectations regarding procedure usage and adherence. This procedure revision will be complete by January 31, 1992. In the interim, an Operations Department Policy, Policy #30, "Operations Department Initiatives" is in place and offers appropriate guidance.

Response to 3.a (ii):

Effectiveness of communication on the refuel floor between the Fuel Handlers on the refueling bridge was not an issue. The initial damage to the fuel bails was strictly related to the operator's failure to follow a routine procedural step he had performed in the past. The subsequent communications between the second Fuel Handler and the Supervisor was apparently inadequate since the Supervisor did not gain a clear picture of the extent of damage until he got up to the refuel floor himself. After the events on the refuel floor were assessed, the Fuel Handling Supervisor directed that the grapple be moved to a safe location of the pool for further testing, however, he did not communicate the situation to the Shift Engineer. The expectation to communicate has been addressed in detail to all of the Fuel Handlers. It has been provided in a letter to all Fuel Handlers from the Operating Engineer in charge of the Fuel Handlers, and has been developed into an Operations Department Policy (Policy # 31). This new policy was issued to each fuel handler individually, including documented receipt. This policy was also reviewed in a tailgate.

It was ensured that all fuel handlers attended this discussion as well as several other expectations discussions totaling over six hours and spanning such topics as this particular event, past events, expected safety standards, attention to detail, procedure adherence, and communications.

Response to 3.a (iii):

A clear safety perspective while performing refueling operations needs improvement. The Training Department has provided a session on the consequences of a refueling accident to all Fuel Handling personnel to enhance the current level of understanding and the need for maintaining a clear safety perspective during all phases of fuel handling operations, not just during core alterations. This training session has now provided the entire department with a clear safety perspective. The elements of this training session will be incorporated into the Initial Fuel Handler Training program as well as the continuing training program.

Response to 3.a (iv):

Communications with plant management and operations staff regarding fuel handling anomalies were not adequately maintained. The expectation to communicate has been addressed in detail to all of the Fuel Handlers. It has been provided in a letter to all Fuel handlers from the Operating Engineer in charge of the Fuel Handlers, and has been developed into an Operations Department Policy (Policy # 31). The Operations Department Policy #22, "Command and Control Authority," has been reviewed by all Fuel Handlers to ensure that all personnel are aware of the need to keep the Shift Engineer and plant management apprised of fuel handling anomalies.

Response to 3.a (v):

Dresden Station complies with the guidelines provided in GL 82-12. The Fuel Handlers involved in the event were in compliance with the guidelines of GL 82-12 at the time of the event. It should be noted that the Fuel Handler involved in the bail damage had worked seven days a week since September 14, 1991, but attested that he was not tired at the time of the event. Even though work hours are within GL 82-12 guidelines, for the forthcoming fuel moves on Dresden 3, efforts will be made to avoid scheduling work over long consecutive periods beyond 21 consecutive days. The current schedule for D3R12 reload is two-ten hour shifts. Reload is not expected to take longer than 7 days.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence. We understand that this will include, but not be limited to:

   b. A review of the adequacy and effectiveness of training of personnel regarding: (i) supervising refueling or fuel handling operations, (ii) performing refueling operations, (iii) procedural adherence, (iv) use of communications, and (v) response during and after off-normal occurrences.

Response to 3.b. (i):

The training of personnel regarding supervising refueling or fuel handling operations needs improvement. New Fuel Handling Supervisors are assigned periods of On-the-Job-Training (OJT) with experienced Fuel Handling Supervisors prior to their independent assignment. The entire Fuel Handler training course has been under revision for the past six months. The new course will specifically include areas of supervision, administration, and expectations. In the interim, the Operating Engineer in charge of Fuel Handling has had several sessions with the Fuel Handling Supervisors to more clearly define their roles as Supervisors and to convey management expectations as they apply to Fuel Handling.

In addition, any sections of this new Fuel Handling Supervisor Training Course which have not already been presented to the incumbent Fuel Handling Supervisors will be presented to them prior to the next refueling outage, currently scheduled for the Fall of 1992.

Response to 3.b. (ii):

Recent fuel handling supervisors have been individuals with Reactor Operator (RO) licenses who were specifically chosen to fill the position of FHS and to obtain Limited Senior Reactor Operator licenses. This ensured that those individuals had the appropriate background to adequately interact with the Control Room during refueling activities. Currently, the training for new FHSs consists of a guided self study program. Current non Supervisor Fuel Handling Training consists of classroom training and an OJT program.

In the future, to ensure a consistent level of development and quality, a designated Fuel Handling Instructor has been assigned. During 1991, prior to D3R12, one day of training was presented which was directed to the Fuel Handlers' work assignments expected during the outage. An extensive procedure review as well as design concepts and abnormal situation response was presented to the Fuel Handlers subsequent to the bail bending incident. A specific pre-refueling outage training package will be developed, patterned after this program, and will be presented prior to each refueling outage. Included as a permanent part of this program will be a section devoted to management expectations.

In addition, the entire Fuel Handling Department will attend appropriate sections of the Initial Training Program prior to Dresden's next refueling outage, currently scheduled for the Fall of 1992. This program was piloted in 1989 and is currently a prerequisite for all new Fuel Handlers.

A continuing training program for all Fuel Handlers was started in 1990 to cover industry events and techniques and, procedure and equipment reviews. This program will continue with increased input of needs identified by the Fuel Handling Supervisors, as well as increased emphasis on management expectations. Additionally, the station is investigating the purchase of several dummy fuel bundles specifically for the purpose of initial and continuing training.

Response to 3.b (iii):

The training on procedural adherence within the FH Department can be strengthened. FH personnel have been instructed on the "Operations Department Initiatives," Policy No. 30 and on DAP 9-11 "Procedure Usage and Adherence." Both of these documents direct management expectations on procedure usage. This briefing has been performed by Operations Management and will be incorporated into the permanent Fuel Handler Training course.

Response to 3.b (iv):

Training on the use of communications within the FH Department was adequate. Communications is currently stressed as a portion of event training. A letter from the Assistant Superintendent of Operations to all Fuel Handlers dated January 13, 1989, discussing "Minimizing the Potential for Additional Fuel Loading Errors," states that communication on the refueling bridge must be clear and concise. The Potentially Significant

Event Concerning Two Fuel Mishandling Events dated October 3, 1990, established a requirement for the Independent Verifier to communicate positively with the Grapple Operator. This particular event concerning the bent fuel bails was not related to communications, it was directly related to the operator not following previously understood and followed directions. A lack of effective communications by the second operator and the FHS is recognized and has been addressed in 3.a.ii above. These concepts of awareness and communication will also be incorporated into the Initial Fuel Handler Training program as well as the continuing training program.

Response to 3.b (v):

FHS initial training addresses those abnormal events covered in procedure DFP 800-1, Appendix B, "Normal and Abnormal Working Conditions". Fuel Handling continuing training has incorporated in it industry events regarding off-normal occurrences and Dresden's responses to the potential risk at Dresden. Training, in direct response to this event, has been conducted with all Fuel Handlers to ensure understanding of the Design Basis Accident (DBA) concerning a dropped fuel assembly, including the expected results and operator responses. Additional topics included Emergency Classifications, Reactivity Management, and reportability requirements. These topics will be included in the Initial Training program under development (as mentioned in 3.b.(ii)) and will also be part of the continuing training program to be covered on a scheduled recurring basis.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence. We understand that this will include, but not be limited to:

   c. A review of the adequacy and effectiveness of procedures, both normal and abnormal, associated with refueling operations including required actions following an off-normal condition.

Response to 3.c.:

A review of the adequacy and effectiveness of procedures, both normal and abnormal, associated with refueling operations including required actions following an off-normal condition:

DFP 800-1, Appendix B, includes certain incidents that should be reported immediately to the Shift Supervisor on duty. This section will be clarified to include all abnormal occurrences, not just those that result in an apparent release of radioactivity. Included in this change will be requirements to notify the Radiation Protection Department and the Chemistry Department to take necessary readings and samples. This procedure change will be in place prior to any fuel moves.

The current series of Fuel Handling procedures includes a total of forty procedures. Other than the new procedures established as Fuel Handling Abnormal Procedures to be completed by September 1, 1992, each of the other procedures will be reviewed, and upgraded if necessary, prior to their use.

By September 1, 1992, the items in Appendix B, although adequate in their current configuration, will be broken out and developed into a new series of Fuel Handling Abnormal Procedures to allow for easier recognition of abnormal events and the approved, expected actions.

DFP 800-32, "Fuel Movements Within the Spent Fuel Pools," will be revised to: (1) replace the term "independent verifier" with "second verifier" which is a more accurate description of the position, (2) ensure that action steps are not included in Caution statements, (3) require that the second verifier ensure that the grapple is unlatched and free of the fuel bail. This revision will be complete before beginning fuel moves within the spent fuel pool.

In addition, the DFPs for fuel handling work required prior to start-up were reviewed and revised so that they fully address Fuel Handling concerns. These procedure changes will be implemented prior to performing the processes they govern.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence. We understand that this will include, but not be limited to:

   d. An evaluation of the performance and adequacy of design of mechanical and electrical equipment (including interlocks as applicable) utilized during the fuel handling process.

Response to 3.d.:

Evaluation of the performance and adequacy of design of mechanical and electrical equipment (including interlocks as applicable) utilized during the handling process.

There were no mechanical or electrical problems with the grapple or mast that contributed to the event. The subsequent failure of the mast is addressed in Section 1.b.

Dresden is scheduled to have two new grapple systems received by December, 1991. Installation will be complete prior to any fuel handling work subsequent to D3R12, the current Unit 3 refueling outage.

Request:

3. Conduct a management critique of the events, determine root cause(s), and establish an immediate corrective action plan to prevent recurrence. We understand that this will include, but not be limited to:

   e. A review of this event with respect to the effectiveness of your corrective actions from previous problems associated with the refueling operations during the last Unit 2 refueling outage.

Response to 3.e.:

Review of this event with respect to the effectiveness of corrective actions from previous problems associated with the refueling operations during the last Unit 2 refueling outage.

NOTE: Throughout this section, the term "Independent Verifier" appears. This term is a misnomer. Independent Verification as defined in DAP 7-27 is not practical for fuel handling applications. A more correct term would be "second verifier." The fuel handling operator actually manipulating the grapple and moving the fuel is considered to be the "first verifier". A second operator on the refueling bridge performs the function of "second verifier". His responsibilities are to ensure that the grapple operator is on the correct bundle, the correct location is accessed, that the fuel bundle is properly latched and following or unlatched and the grapple is raised enough to clear the bail, etc. In addition, a third operator was added to the procedures for fuel pool moves in order to be consistent with the reactor load/unload procedures. The third operator also verifies movements and provides communications to the grapple operator regarding the Nuclear Material Transfer Checklist.

The corrective actions established for the "Two fuel loading errors which occurred during the Reactor Vessel Unload during D2R12" would not have prevented this event. Independent verification of the grapple hook being raised above the fuel bail was not required; and, communication techniques involving repeat-back and phonetic alphabet usage would also have had no effect.

To help ensure that refueling activities are acceptably performed, Nuclear Quality Programs (NQP) will perform periodic overviews of refueling activities for the upcoming Unit 3 core load.

Request:

4. Within 30 days of the conclusion of your refueling activities, submit to NRC Region III a formal report of all significant activities surrounding this event including root cause determination and corrective actions taken to prevent recurrence.

Response to 4.:

This letter constitutes Dresden's 30 day formal report regarding this event.

SUMMARY

In order to minimize the potential for a recurrence, Dresden has taken the following actions:

- Management expectations have been communicated to all of the Fuel Handlers both verbally and in writing.

- These management expectations included: procedure adherence, communications both on the refuel floor and with Station Management, a clear safety perspective, and conservatism with regards to operating practices.

- Training has been performed with all Fuel Handlers to ensure understanding of the Design Basis Accident concerning a dropped fuel assembly, emergency classifications, reactivity management, and reportability requirements. Additional permanent changes to both the initial and continuing training programs are planned.

- Procedures for fuel handling work required prior to start-up were reviewed and revised so that they fully address Fuel Handling concerns. Fuel Handling Abnormal procedures will be developed.