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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'81 DEC 10 P4:18

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	Docket No. 50-155 OLA
CONSUMERS POWER COMPANY)	(Spent Fuel Pool
)	Modification)
(Big Rock Point Nuclear Power Plant)))	

TESTIMONY OF EDMUND W. RACIBORSKI
CONCERNING O'NEILL CONTENTION IIG(a)

I. INTRODUCTION

My name is Edmund W. Raciborski, and I am presently the Quality Assurance Superintendent at the Big Rock Point facility. My responsibilities as QA Superintendent are to verify the implementation of the Consumers Power Company Quality Assurance Program at Big Rock through the conduct of audits, surveillances, and the review of documents associated with the implementation of the program. I have a Bachelor of Science degree from Western Michigan University and have been employed in the quality assurance field for eight years, with four of those eight years spent at operating nuclear facilities, namely Palisades and Big Rock Point. (A copy of my professional qualifications is attached). Based on my education and work experience, I feel I can adequately address O'Neill Contention IIG(a) which states:

Administrative controls proposed to prevent a cask drop over the pool are inadequate. These are mentioned on pages 4-9 of the application. Administrative controls have proved inadequate in the past in preventing incidents and are frequently violated at the plant.

The purpose of this testimony is to respond to O'Neill Contention IIG(a), specifically the third sentence, "Administrative controls have proved inadequate in the past in preventing incidents and are frequently violated at the plant." To show that the administrative controls involving the spent fuel pool at Big Rock Point are adequate for preventing incidents and are not frequently violated at the plant, I will begin addressing this contention by explaining what quality assurance is and what specifically we, the quality assurance staff, do at Big Rock Point. Secondly, I will explain how we identify, track, and resolve deficiencies associated with the violation of administrative controls. Thirdly, I will explain the results of my survey of the violations involving the spent fuel pool. Finally, I will list my conclusions and the basis for those conclusions.

II. QUALITY ASSURANCE AT BIG ROCK POINT PLANT

Quality assurance is defined as "all those planned and systematic activities necessary to provide adequate

confidence that a structure, system, or component will perform satisfactorily in service." Quality assurance (QA) is not only my job but everybody's job at Consumers Power Company's Big Rock Point plant. Big Rock Point, as well as all other nuclear facilities, has implemented a QA program to assure that operations are performed in a correct and consistent fashion. The basis for this quality assurance program is Title 10 of the Code of Federal Regulations, Part 50, Appendix B (commonly referred to as 10 C.F.R. Part 50, Appendix B), and the American National Standards ANSI N 18.7, 1976, titled, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants."

Quality assurance encompasses activities associated with doing a job correctly as well as verifying and documenting the satisfactory progress and completion of work. The term, quality assurance, also describes my functional unit responsibility to verify and document the satisfactory implementation of the QA program at the plant site. We, as a department, serve as the in-house monitor of the implementation of the program, acting independently of the plant management staff and free from cost and schedule considerations involving the operation of the plant. We perform our verifications through a system of checks that include audits, surveillances, inspections, document reviews

and identification documentation, follow-up, and resolution of deficiencies and nonconformances. Quality assurance personnel have the authority to stop work if, in our opinion, it is not being safely carried out.

III. THE DEVIATION REPORTING AND CORRECTIVE ACTION SYSTEM

One of the basic foundations for the quality assurance system is the ability to document, evaluate, and resolve deficiencies, such as violations of administrative controls, as they occur within the program. The method used in Consumers Power Company and at Big Rock Point to accomplish this is called the deviation reporting and corrective action system. This system has been established to assure that conditions adverse to the quality of items and activities are promptly identified, documented, reported to appropriate levels of management, and corrected.

To assist in describing the corrective action system as it is today, I feel it is necessary to look back into the history of the system and follow its growth from inception to the formalized reporting system it is today. The original corrective action document used at, and developed by, Big Rock Point was the "operating incident." This document was developed in the mid-1960's to assure the plant met the reporting requirements outlined in the Big Rock

Point plant's Technical Specifications. The "operating incident" was an attempt to formalize the reporting of problems. It documented the incident, the action taken after the incident, the plant review committee review and recommendations, and the final disposition by the plant superintendent. This type of reporting served to meet the needs of the plant and Atomic Energy Commission (AEC) until the early 1970's when the reporting requirements changed and necessitated a revision of the corrective action system. The new corrective action document was called the QA-16 - Abnormal Occurrence Report/Unusual Incident. This document formalized the reporting system and required more detailed documentation of the problem, the immediate corrective action, the conclusions and final disposition, the approval by the plant superintendent and the QA audit engineer on-site.

Today the corrective action system is a graded system which uses different reporting forms to document problems or nonconformances. This graded approach is based on the seriousness of the event or potential event, starting with reportable occurrences and lessening in scope to minor equipment malfunctions, personnel errors, or documentation anomalies. The corrective action documents (CAD's) used in this system are outlined as follows:

1. Event Report (ER) (QA-19) is initiated to document items that may be reportable to the Nuclear Regulatory Commission using the following guidelines:
 - A. Events identified in the plant Technical Specifications as reportable.
 - B. Instances of noncompliance identified in NRC inspection reports.
 - C. Conditions identified by the NRC as unsatisfactory when evaluation by the Plant General Manager/Superintendent determines that corrective action is necessary.
 - D. Events which are violations of plant technical specifications.
 - E. Deviations which have been documented in Deviation Reports (DR's) or Nonconformance Reports (NR's) that are determined to be reportable during evaluation.
 - F. Nonreportable events which are not reportable to the NRC, but are determined to be serious enough to warrant an Event Report.
2. Nonconformance Reports (NR's) (QA-17) - Only Quality Assurance Department personnel issue NR's.
 - A. Nonconformance Reports are issued to document significant programmatic deficiencies or multiple recurrences of less significant deficiencies indicating a significant adverse trend.
3. Deviation Reports (DR's) (QA-16) are initiated to document the following situations.
 - A. Failure of Q-Listed items when an evaluation by the Supervisor responsible for use of the item determines that, in addition to repairing the item, corrective action is necessary to prevent recurrence because of the severity of repetitive nature of the failure.

- B. Audit findings that result from auditing internal operations.
 - C. Deviations from specified criteria.
 - D. Use of measuring and test equipment that is out of calibration or has exceeded the calibration due date.
 - E. Unusual conditions significant to safe plant operations.
 - F. Failure to comply with a docketed commitment.
 - G. Failure to follow approved procedures.
4. Nonconforming Material Reports (NMR's) are used to document and disposition deficiencies detected during Receipt Inspection. The form provides for identification of discrepant material and the source of supply; disposition of the nonconformance (Reject, Rework, Repair, use as is) including any technical considerations used in reaching the final disposition; and completion review. A copy of the completed NMR is forwarded to the Director QA-Nuclear Operations to serve as input into the evaluation and re-evaluation of suppliers for the Nuclear Quality Assurance Program Approved Suppliers List. (Note: This is the only corrective action document that is not included in the Corrective Active Status Reporting System Data Bank).
5. Recommendations to stop work (RSW) (QA-18) are initiated if an occurrence is serious and the immediate measures taken to mitigate the consequences of the nonconformance are inadequate to:
- A. Control the processing, delivery, installation, or operation of a nonconforming or defective item.
 - B. Prevent a serious violation of the QA Program requirements.
 - C. Prevent continuation of an activity which could result in a significant hazard to the health and safety of the public.

These reporting forms include not only an identification and description of the incident, but also an evaluation of its significance, the cause or causes, the required corrective actions, and a due date for completion of the corrective action based on an assigned priority. In general, the person witnessing the event completes Part One, Identification and Description, then forwards the Corrective Action Document (CAD) to his Supervisor. The Supervisor reviews the CAD to assure it is applicable and that the necessary immediate corrective action is taken, then forwards the CAD to management for evaluation and disposition. At this time, a copy of the CAD is forwarded to the Quality Assurance Department for assignment to a QA staff member for follow-up.

A computer system has been developed to assist in tracking and notifying personnel of the Corrective Action Document status called the "Corrective Action Status Reporting System." This system summarizes information for all Corrective Action Documents except Nonconforming Material Reports. The information typically summarized includes a description of the occurrence, the initiator, to whom it is forwarded, the evaluator, to whom it is assigned, with the due dates, priorities and completion status. The Corrective Action Status Reporting System compiles data on a monthly

basis and generates reports which inform not only management, but all personnel involved with Corrective Action Documents, of the status of the documents.

This brings us to the last item in describing the complete corrective action system, Trend Analysis. The Corrective Action Documents are evaluated and entered into a computerized system intended to help Consumers Power Company management identify and correct adverse trends, for example, deficiencies in specific aspects of employee training. From this trend analysis data a quarterly report is generated to the Director, Quality Assurance Nuclear Operations, who includes the trend analysis as a topic on the agenda of the quarterly QA program for operations' status meeting. Efforts are directed at obtaining top management support to reverse adverse trends.

It must be remembered that Quality Assurance is an independent organization that does not report to anyone at the plant site. This reporting of deficiencies and adverse trends by QA to Company management occurs at the Vice-Presidential level of Nuclear Operations. This separation assures that the site QA staff can function effectively to follow-up on adverse trends and assure proper solution without pressure from plant management. This independence along with the support of management off-site allows adequate corrective actions for identified problem areas; and

if the corrective action in our opinion is not appropriate/adequate to reverse the trend, QA may use the recommendation to stop work (RSW) mechanism to correct the deficient area.

IV. THE ADEQUACY OF ADMINISTRATIVE CONTROLS AT BIG ROCK PLANT

To respond the O'Neill Contention IIG(a) regarding the adequacy of the administrative controls at Big Rock Point, I and members of my staff have performed the following investigation. A review of the entire Corrective Action and Deviation Reporting System was performed to sort out all documented Big Rock administrative control violations since the plant started operation. These were reviewed to identify all violations specifically associated with or around the fuel pool or reactor building crane. The end result indicated a total of twenty-three administrative control violations in the areas mentioned, spanning nineteen years of operation. In my opinion, this number of violations is not significant, nor does it indicate any unusual trend which could be termed frequent. The twenty-three discrepancies represent various administrative control problems ranging from potentially serious, for example, moving fuel without a procedure (the September 1, 1981, incident discussed below), to minor in nature, such as failure to "sign off" on a written procedure. All these discrepancies with the exception of the September

1, 1981 incident, have been resolved. Some required minimal or short-term corrective action(s), and others required major changes or long-term solutions. Nonetheless, all were discovered, documented, and corrected by the use of the corrective action system and have been or will be addressed properly with concurrence obtained by quality assurance during follow-up or final close out reviews.

As an example, the September 1, 1981 occurrence involved the movement of fuel assemblies without the use of proper controls by operations personnel. The incident was observed by maintenance personnel in the area who notified the quality control inspector immediately, who in turn investigated, then notified the shift supervisor, and as a result, all activity was halted pending resolution. The potential severity of the incident in my opinion was high. However, due to the immediate corrective action taken, the situation was normalized. Subsequent investigation and evaluation of the problem by operations personnel was thorough, and the concerns raised were reviewed and discussed with plant personnel at length. The resultant remedial corrective action and proposed corrective action to prevent recurrence adequately address the root cause of the problem in my opinion, and based on the satisfactory completion of these actions, I do not foresee this specific incident occurring in the future.

Big Rock Point has historically viewed the corrective action system as a management tool and has always demonstrated a good record of timely corrective action with a minimum of documents being overdue; and as long as this attitude is maintained, the corrective action system will continue to work effectively.

In addition to a review of the corrective action system, a checklist was prepared and utilized to verify the level of compliance to specific requirements of ANSI 18.7 (1976), Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants, against the existing plant administrative controls and/or procedures. A sample of surveillance test procedures, as well as maintenance, instrument and control, chemistry and emergency operating procedures, were reviewed and, as a result, deficiencies concerning procedural format and content were identified. These discrepancies have been documented, and the response by the plant management has been favorable regarding resolution and correction of the deficiencies. I felt in general that the implementing procedures reflect the requirements of the Quality Assurance Program adequately. However, standardization to specific requirements of ANSI 18.7 will enhance and clarify the program for all concerned. In addition to this overall review of plant procedures and

controls, the fuel handling procedures program specifically was reviewed in detail to assure compliance to ANSI 18.7 requirements. This review disclosed several deficiencies in the areas of responsibility assignment, failure to have a summary document which provides a consolidated base for the description of the fuel-handling procedures program, and incorrect procedural content/format. These results, in addition to the other procedural reviews, support the need for the standardization to ANSI 18.7 (1976). The results of the surveillance were recently submitted to the plant management and are still under evaluation by them.

CONCLUSIONS

Historically, the Big Rock Point plant has had a very good record of implementing the administrative controls, as demonstrated by a review of the corrective action system which serves as a record of violations. As noted earlier, plant procedures do in fact contain deficiencies associated with content/format, but overall reflect regulatory and administrative requirements satisfactorily. The procedures need to be standardized to meet ANSI N 18.7 (1976) requirements. Such deficiencies have and will continue to be identified as they may arise, and as long as the plant operating personnel continue to maintain a positive approach

toward the resolution of these deficiencies, the question of adequacy of administrative controls can only be answered positively.

The potential for not following administrative controls is always present, but with documentation of these violations and the corrective actions implemented to prevent recurrence, this potential is greatly reduced. It is my intention to continue as part of my responsibilities to conduct audits, surveillances, inspections and follow-up as required on all deficiencies identified and documented as part of the corrective action stem. In conclusion, I would have to say that the administrative controls involving the spent fuel pool, including those listed on page 4-9 of the application, are in fact adequate, and they have not been frequently violated at Big Rock Point.

NAME: Edmund W. Raciborski

ADDRESS: 800 Bren Del Drive, Petroskey, Michigan

EDUCATION:

HIGH SCHOOL: L. C. Mohr High School, South Haven, Michigan

UNIVERSITIES: Lake Michigan College, Benton Harbor, Michigan
Western Michigan University, B.S. 1972
Sociology (Major), Business (Minor)

PROFESSIONAL EXPERIENCE:

Quality Assurance Superintendent, Consumers Power Company, Big Rock Point Nuclear Plant, Charlevoix, Michigan, April 1981 to Present.

Responsible for the verification of the implementation of the quality assurance program at Big Rock Point. Responsibilities include the direct supervision of a staff of quality assurance engineers and/or analysts in addition to a quality control staff at the plant site. Provide input to general office Quality Assurance Department management regarding the status of the implementation of the quality assurance program at the plant site. Develop and implement an audit and surveillance schedule. Assist in the preparation of departmental budget and manpower planning submittals. Administer wage and salary recommendations for entire staff. Participate and attend all Plant Review Committee meetings. Interface with plant management on a daily basis in all quality matters. Interview and select all candidates for quality assurance and quality control positions at Big Rock Point. Interface with Nuclear Regulatory Commission Resident Inspector(s) at the plant site regarding quality matters.

Senior Quality Assurance Administrator, Consumers Power Company, Jackson, Michigan, December 1981 to April 1981.

Responsible for the development and implementation of a training program for the entire nuclear operations quality assurance department. This included selection of courses, scheduling and coordination of all departmental

training sessions. Developed and presented quality-related courses. Conducted quality assurance indoctrination of nuclear operation personnel. Interfaced with other departments to obtain/give training. Developed a training matrix for each individual within the department.

Quality Assurance Engineer, Consumers Power Company, Jackson Michigan, March 1977 to December 1980.

Responsibilities included various aspects of quality engineering and planning as required for nuclear power plant modifications, repairs and procurement of replacement parts. Provided special project support to plant/general office management. Served as liaison between plant/general office quality assurance personnel for resolution of problems of a quality nature concerning Palisades, Big Rock Point, and Midland Nuclear Plants. Developed and presented quality assurance training to nuclear operations personnel. Performed source surveillance/audits as required. Responsible for quality audits associated with fuel for Big Rock Point and Palisades Nuclear Plants. Certified lead auditor at ANSI 45.2.23 requirements. Participated in a complete revision of the topical report for resubmittal to the NRC with the sole purpose of realignment to meet the current standard review plan. Served as alternate company representative in attendance at EEI Quality Assurance Task Force Operations subcommittee meetings. Responsible for the formulation, review, selection, and scheduling of all department training. Served as a member of the Palisades Management Review Task Force effort from November 1979 to May 1980 in the areas of technical specification surveillance testing and corrective action system implementation.

Quality Control Supervisor, Consumers Power Company, Palisades Nuclear Plant, Covert, Michigan, July 1976 to March 1977.

Duties included supervision of three quality control inspectors and one clerk. Responsible for the implementation and conduct of inspections and surveillances associated with the quality control aspects of mechanical, electrical, and instrument and control maintenance activities. Directly responsible for quality control inspection plans and assignment of receipt inspections and the maintenance of all pertinent quality

records, certification and inspection reports for "Q" type materials received on site. Completed performance appraisals on staff as required. Coordinated all quality control activities with plant management/staff. Reported and tracked with the resolution of all nonconformances/-deviations in the area of quality control. Conducted indoctrination of all new plant personnel on the quality control and quality assurance function(s). Provided management with monthly status reports of quality control activities, deficiencies noted, and items of concern. Directly supervised the implementation of the material control system. Responsible for the review of all safety-related maintenance/work orders for inclusion of quality control requirements, and performed post-maintenance/work order review of same to assure compliance to the states requirements. Responsible for the training of all quality control personnel.

Quality Control Inspector, Consumers Power Company, Palisades Nuclear Plant, February 1974 to July 1976.

Developed and implemented original materials receipt inspection program including material control and was responsible for conduct of same including records control for all safety-related materials on site. Responsible for the preparation of checklists, conduct and reporting of all quality control inspections and/or surveillances. Provided quality control input to maintenance supervisory personnel as requested. Developed and authored quality control procedures.

Stockman, Consumers Power Company, Palisades Nuclear Plant, December 1973 to February 1974.

Responsible for the complete inventory of the Palisades storeroom to locate, identify, segregate, tag and issue all safety-related "Q" materials. Duties included direct interface with plant engineering personnel and vendor representatives in the performance of the above. Provided supervision in the relocation of the entire storeroom (five clerks).



EVENT REPORT

MARKET UNIT/RC

E-~~AK-4~~ - 30-
 DATE 9/15/81 0900
 SAFETY RELATED

'81 DEC 10 PA:18

IDENTIFICATION AND DESCRIPTION		PART 1	
A. Preparation of fuel assemblies G-01 G-02 for 1981 refueling without proper controls.			
B. PLANT SYSTEM/PLANT	00000.29210	EQUIPMENT - CLASS/PLANT	20220
C. DESCRIPTION OF OCCURRENCE OR CONDITION:		EQUIPMENT NUMBER C-5	
1. Fuel assemblies being moved without procedure			
2. Mech. stop block and fuel handling cable was not used while moving fuel bundle G-02			
3. Fuel pool hoist upper limit switch was found to be inoperable and hoist was operated in this condition.			
4. Daily crane checklist not being used.			
D. IMMEDIATE ACTION: Informed Shift Supervisor of deviation and requested they not move fuel without mech. stop block and fuel handling cable. 9-1-81, 0900 hours. 9-2-81 - QC test operated hoist untangled cable on drum and verified upper limit switch to be in an operable condition. (See attached continuation sheet).			
E. REFERENCES: QAPP 13-52 ANSI N45.2.2 Admin. Procd. D-QB-81-23		F. PREPARED BY: DUKelly RTR Kelly DATE: 9/15/81	
G. NONCONFORMING ITEM: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IDENTIFIED BY: DATE:		DEPT/PLANT: QB SECTION: QA	
H. CR FORWARDED TO: CJHartman DEPT/PLANT: BR SECTION: PS		APPROVED BY: [Signature] DATE: 9-15-81	
REVIEW AND NOTIFICATION		PART 2	
A. REPORTABLE TO NRC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		D. REPORTING REQUIREMENTS: ANNUAL <input type="checkbox"/> 30-DAY <input type="checkbox"/> 90-DAY <input type="checkbox"/>	
C. FACILITY PROC. MEETING: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		E. METHOD OF DISCOVERY: Case inspections by R/C Personnel	
D. FACILITY STATUS: Process Operation - 80%		F. 24-HOUR NOTIFICATION	
EVALUATOR: DCB DEPT/PLANT: BRP SECTION: QA ASSIGNED BY: [Signature]		NRC (PERSON CONTACTED): DATE: HOUR: BY WHOM:	
EVALUATION DUE DATE: 11/15/81 PRIORITY: 5 7 6 5 4 3		OFFSITE (PERSON CONTACTED): DATE: HOUR: BY WHOM:	
EVALUATION AND DISPOSITION		TWR (PERSON CONTACTED): DATE: HOUR: BY WHOM:	
A. PROXIMATE CAUSE: The proximate cause of this event are: 1. Inadequate operator training in fuel handling techniques. 2. Inadequate supervision of unlicensed operators. 3. Inadequate administrative controls in handling components in the fuel pool.			
B. ROOT CAUSE: Inadequate procedures for handling components in the fuel pool.			
C. CONSIDERED TO BE REPORTABLE UNDER 10CFR37.103: YES <input type="checkbox"/> NO <input type="checkbox"/>			
COMPLETION			
PART 4			
COMPLETION REVIEW			
PART 5			

- (G-1) - COPY 5 - FORWARD TO QA UPON COMPLETION OF PART 2.
- (R-1A) - COPY 4 - FORWARD TO NUCLEAR LICENSING ADMINISTRATOR UPON COMPLETION OF PART 3.
- (C-1) - COPY 3 - FORWARD TO QA UPON COMPLETION OF PART 3.
- (U-1) - COPY 2 - FORWARD TO ORIGINATING DEPARTMENT UPON COMPLETION OF PART 3.
- (I-1) - COPY 1 - FILED IN OCCUPANT CONTROL CENTER UPON COMPLETION OF PART 5.

FORWARD ALL CORRECTIVE ACTION DOCUMENTS THROUGH YOUR CORRECTIVE ACTION COORDINATOR!

FORM 10-17
FORM 10-18
FORM 10-20

CONTINUATION SHEET

(NOTE SECTION TO WHICH ADDITIONAL INFORMATION APPLIES)

122 22/05/81 81 - 5

(D) Immediate Action Cont'd: 9/2/81 - Reviewed memo from Ops/Maint. Supt. addressing the above four items.

Lined area for additional information.

CORRECTIVE ACTION SHEET

REPORT NO. 47-36-55
 TIME OF OCCURRENCE _____
 DATE _____ HOUR _____
 SAFETY RELATED

EVALUATION	PART 3	COMPLETION	PART 4
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PROPOSED REMEDIAL CORRECTIVE ACTION:

- Instruct the operating Dept personnel as to the importance and severity of the situation.
- Write a section for the operating procedures manual to cover component handling in the spent fuel pool.
- Write a daily checklist for the spent fuel pool bridge crane similar to that used on other plant cranes.

PRC: YES NO
 MEETING 15-81
 PRIOR TO PLACING RELIANCE
 YES NO
 ASSIGNED TO ALC/LEN
 DEPT/PLANT B2P
 SECTION OPS & MAINT
 APPROVED BY [Signature]
 DATE APPROVED 10/2/81
 REQ COMPLETION DATE 11/13
 PRIORITY: 5 4 7 3 6 2 5 1

REMEDIAL ACTION TAKEN:

- Instructions to operating Dept have been issued via memo dated 10/2/81.
- Plant manual Vols 18 & 19 revised.
- Checklist for bridge crane developed.

DETERMINED BY P. Alst DATE 10/2/81

COMPLETED BY _____ DATE _____
 APPROVED BY _____ DATE _____

PROPOSED CORRECTIVE ACTION TO PREVENT RECURRENCE:

- Conduct training for all auxiliary operators on the new procedures and the use of spent fuel pool component handling equipment.
- Revise plant Volume 18 such that spent fuel pool component handling is a part of the new auxiliary operator qualifications.
- Revise Opers Dept requalification training "tickler system" to perform this retraining annually.

PRC: YES NO
 MEETING 15-9
 PRIOR TO PLACING RELIANCE
 YES NO
 ASSIGNED TO ALC/LEN
 DEPT/PLANT B2P
 SECTION OPS & MAINT
 APPROVED BY [Signature]
 DATE APPROVED 10/2/81
 REQ COMPLETION DATE 11/13
 PRIORITY: 5 4 7 3 6 2 5 1

ACTION TAKEN TO PREVENT RECURRENCE:

- Plant manual volumes 18 & 19 have been revised.
- Sections 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

DETERMINED BY P. Alst DATE 10/2/81

COMPLETED BY _____ DATE _____
 APPROVED BY _____ DATE _____

(5016) - COPY 4 - (FROM 504) FORWARD TO NUCLEAR LICENSING ADMINISTRATOR UPON COMPLETION OF PART 3; (FOR 504 AND 504 - DISCARD).
 (P504) - COPY 3 - FORWARD TO CA UPON COMPLETION OF PART 3.
 (504-2) - COPY 2 - FORWARD TO ORIGINATING DEPARTMENT UPON COMPLETION OF PART 3.
 (504-1) - COPY 1 - FILED IN DOCUMENT CONTROL CENTER UPON COMPLETION OF PART 3.

FORWARD ALL CORRECTIVE ACTION DOCUMENTS THROUGH YOUR CORRECTIVE ACTION COORDINATOR!

282

9/23

concerning E/2-35, we
plan to do the following
to dispose:

1 - I have already, at the
time of the audit, made
a return to ACS outlining
the activity & the numerical
contribution return.

2 - ACS has written a warning
and findings memo to
all the operations people
3 - ACS has been instructed
to review SOP No 2 to
include a general procedure
to handle SFP components

4 - DOW has the first
draft copy of a
daily check sheet (exam)
for the SFP bridge crane
Thank you
M.H.

To ACSevener
FROM CRabel
DATE September 2, 1981
SUBJECT BIG ROCK POINT PLANT -
FUEL HANDLING EQUIPMENT
CC ENamara

PMD

Consumers
Power
Company

INTERNAL
CORRESPONDENCE

CRA 81-36

It has been brought to my attention that operators have been handling fuel in the spent fuel pool without taking the necessary precautions on having the bridge crane in proper working order. Specifically, 1) the lifting cable was not properly wrapped on the drum and thus defeated the up-limit electrical switch; 2) the mechanical up-limit stop was absent because a fuel handling cable and its associated obstruction/weight were not used; 3) the "crane checkout sheet" was not used to ensure that the bridge crane was in working order prior to usage.

These errors by the operators and in supervision's failure to properly inform new operators of correct equipment usage techniques cannot be tolerated.

Please inform the operating group and initiate the necessary corrective action. The consequences of an accident dealing with personnel safety in this particular situation are extreme.

Please follow up. Thank you.

To Shift Supervisors
Operators.
FROM ACSevener
DATE September 15, 1981
SUBJECT HANDLING MATERIAL IN FUEL POOL
BIG ROCK POINT PLANT -

Consumers
Power
Company

INTERNAL
CORRESPONDENCE

CC CRabel

ACS 81-90

A short time ago a fuel move was made in the fuel pool during which the weighted cable was removed from the bridge crane for a fuel move to the elevator. This cable with the weight was designed to put tension on the bridge winch cable so it will follow the grooves in the drum. When the drum made so many revolutions, a geared switch would stop the winch. The proper number of turns would stop the winch so that any radioactive material carried on the end of the cable would not be less than six feet from the surface of the pool when it stopped.

As you might know, this safety device was to prevent over exposure to persons on the refuel level in the event of a stuck switch in the raise direction. Removing the weighted cable allows the main cable to relax and wind over itself on the drum.

With the cable double wound on the drum, fuel could possibly be raised out of the water before the geared limit switch would operate. Therefore, never lift radioactive material such as fuel, channels, blades, etc. without the weight on the winch, and the cable in the proper grooves of the drum.

There will also be a check sheet to be filled-out before using any crane or winch. This sheet will be located near the crane or winch. In the case of the fuel pool winch, the sheet may be in the change area. Be sure to fill this out before lifting loads with a crane.