U. S. NUCLEAR REGULATORY COMMISSION
REGION V

Report Nos. 50-528/88-30, 50-529/88-29, and 50-530/88-28

Docket Nos. 50-528, 50-529, and 50-530

License Nos. NPF-41, NPF-51, and NPF-74

Licensee: Arizona Nuclear Power Project
P. O. Box 52034
Phoenix, Arizona 85072-2034

Facility Name: Palo Verde Nuclear Generating Station Units 1, 2, and 3

Meeting Location: NRC Region V Office, Walnut Creek, California

Meeting Conducted: August 17, 1988

Approved by: _____ 9-12-88
S. A. Richards, Chief Date Signed
Engineering Section

DETAILS

1. Meeting Participants:

USNRC

J. B. Martin, Regional Administrator
J. Lieberman, Director, Office of Enforcement
G. Holahan, Assistant Director, Division of Reactor Projects - III/IV/V, NRR
G. W. Knighton, Director, Project Directorate V, NRR
M. R. Johnson, Office of the Executive Director for Operations
D. F. Kirsch, Director, Division of Reactor Safety and Projects
A. E. Chaffee, Deputy Director, Division of Reactor Safety and Projects
R. A. Scarano, Director, Division of Radiation Safety and Safeguards
M. B. Blume, Regional Attorney
R. P. Zimmerman, Branch Chief, Reactor Projects Branch
G. P. Yuhas, Branch Chief, Emergency Preparedness and Radiological Protection Branch
J. L. Crews, Senior Reactor Engineer
A. D. Johnson, Enforcement Officer
D. M. Kunihiro, State Liason Officer
L. F. Miller, Section Chief, Reactor Projects Branch
S. A. Richards, Chief, Engineering Section
T. J. Polich, Palo Verde Senior Resident Inspector
M. Cillis, Senior Radiation Specialist
G. N. Cook, Public Affairs Officer

Arizona Nuclear Power Project (ANPP)

O. M. De Michele, President and Chief Executive Officer, APS
D. B. Karner, Exec. Vice President, ANPP Administration
J. G. Haynes, Vice President, Nuclear Production
L. G. Papworth, Director, Quality Assurance
J. Kirby, Director, Site Services
J. E. Allen, Director, Engineering and Construction
W. E. Ide, Plant Manager, Unit 2
T. D. Shriver, Manager, Compliance
J. M. Allen, Plant Manager, Unit 1
W. F. Quinn, Director, Nuclear Safety & Licensing
R. M. Butler, Director, Standards and Technical Support
J. Mann, Manager, Radiation Protection
D. Canady, Manager, Communications
A. Gehr, Attorney

2. Introduction

An enforcement conference was held on August 17, 1988, at the NRC Region V office in Walnut Creek, California. The purpose of the enforcement conference was to discuss the facts and circumstances surrounding three recent events at Palo Verde, each of which appear to be significant violations of NRC requirements. The three events discussed were the early criticality at Unit 1, which occurred on May 14, 1988; the inadvertent rendering inoperable of the Essential Chilled Water System at Unit 1 during the period of May 20 - 29, 1988; and a personnel radiation overexposure, which occurred at Unit 2 on May 22-23, 1988. A summary of the discussion of each event is provided below.

3. Personnel Overexposure to Radiation at Unit 2.

Mr. Martin opened the discussion by stating that the purpose of the meeting was to ensure that all the available facts associated with the related events were clearly understood, and that to achieve that goal, an open and straight forward discussion was needed. Mr. Martin noted that the Director of the NRC Office of Enforcement, a representative of the office of the Executive Director for Operations, and two representatives from the NRC Office of Nuclear Reactor Regulation, were present, due to the increasing concern on the part of the NRC with Palo Verde's overall performance.

Mr. Yuhas then summarized the apparent violations related to the Unit 2 overexposure event. The violations include the exposure of an individual to a radiation dose in excess of the quarterly limit of 3.0 rems; failure to make the radiation surveys necessary to comply with 10 CFR Part 20 requirements; failure to implement the ALARA program; failure to make a required radiation exposure report to an individual; and failure to adequately post and control access to high radiation areas. Licensee representatives indicated that they had no disagreement that the violations occurred as stated. Mr. Scarano then discussed NRC findings from an inspection which had concluded on August 11, 1988, which provided further indication that significant deficiencies exist with the Palo Verde Radiation Protection Program. The inspector had found that the Quality Assurance and the licensee's Standards Group had both identified that ALARA (As Low As Reasonably Achievable) Committee meetings had not been held for a period of over one year, in apparent violation of the licensee's program. In the case of the overexposure event, the work being performed clearly should have been reviewed by the ALARA committee in accordance with the licensee's procedures, but this was not done. Mr. Scarano also pointed out that the work proceeded in spite of repeated questioning by personnel involved; that the licensee's followup review of the event did not identify the recent audit findings concerning the ALARA committee; and that the radiation protection technician assigned to the work was acting as both the decontamination foreman and as the health physics coverage for the job. Additionally, this assignment of dual responsibilities for Radiation Protection (RP) technicians was apparently continuing and was again observed by an NRC inspector

during a recent inspection. Mr. Haynes responded that ANPP found the lack of ALARA committee meetings to be unacceptable. He explained that the audit findings regarding the ALARA committee were only provided to the personnel responsible for the committee meetings and not to a higher level of management. Mr. Haynes stated that actions planned would preclude a recurrence. Mr. Haynes also maintained that RP technicians were no longer being assigned dual responsibilities and requested that a further discussion be held later on the most recent NRC observations.

The discussion then continued focusing on the question of who is responsible for ensuring that work planning includes a proper ALARA review. Initially, it appeared unclear to the licensee representatives whether this responsibility was with the Unit RP Manager or the ALARA Supervisor. Mr. Martin noted that if the responsibility was not clear to ANPP Managers, it couldn't possibly be clear to the plant workers. Mr. Haynes replied that the Unit RP Manager is fully responsible for RP practices at his assigned unit.

Mr. Lieberman then questioned why the audit results did not reach a higher level of management and further questioned whether this was typical of all audits. After a brief discussion, Mr. Martin stated that the main point deserving focus was that management was denied the opportunity to act by not being informed of their own internal audit findings. Mr. Martin shared his experience that personnel overexposures occur infrequently and are almost always a clear indication of significant problems with a licensee's RP program. Mr. Martin further observed that there were numerous opportunities for various personnel to stop the sequence leading to the event, but no one did. He noted that this was similar to the situation which led to the steam driven auxiliary feedwater pumps at Units 1 and 2 being rendered inoperable in late 1987. Mr. Martin stated his conclusions that the event indicated that personnel at Palo Verde have a basic lack of respect for radiation; that personnel in the RP program lack the proper instincts; and that management of the RP program has been weak. Additionally, Mr. Martin stated his alarm at the disregard apparently displayed towards the two management systems involved, that being the licensee's audit program and the ALARA program. Mr. Martin questioned whether management or personnel at the working level are capable of identifying that significant problems exist with programs. He continued by noting that the licensee's review of the event was poor and considered it unacceptable not to learn everything possible from this experience. Mr. Martin then questioned whether managers were personally touring radiologically controlled areas, so that they could be in a position to assess the status of their RP program.

Mr. Karner responded for the licensee by indicating his basic agreement with Mr. Martin's comments. Mr. Karner then led a discussion on the recent loss of top level personnel from the RP program and the licensee's efforts to fill their vacant positions with high quality personnel. Mr. De Michele observed that the overexposure event occurred in part due to the failure of one key individual to do his job. Mr. Martin added that many key

individuals did not do their jobs, particularly with regard to reviewing the event. He emphasized that ANPP needed to thoroughly assess all aspects of the event, so that they could improve their performance by the experience. He suggested that personnel need to be sensitized to basic fundamental principles of working with radiation, so that when confronted with a difficult situation, they will act correctly based on instinct. Mr. De Michele concurred and reemphasized his statement that key personnel be held responsible for their failures.

Mr. Haynes then described corrective actions planned by the licensee as the result of the event, which include a complete review of the RP program by both ANPP personnel and by consultants. Mr. Haynes will meet periodically with the RP managers to provide additional management oversight until all RP management positions are filled.

Mr. Martin then summarized that there appeared to be no basic disagreement over the facts and that additional review of the event was needed by the licensee. Mr. Martin suggested that the licensee perform their additional review promptly so that the results could be considered by the NRC. He added that the RP technicians should be made aware of actions being taken so that they are not alienated by any program changes. The licensee representatives agreed.

4. Essential Chilled Water System Inoperable at Unit 1.

Mr. Richards opened the discussion on this event by summarizing the event, as described by ANPP's Licensee Event Report (LER) 88-17 and by the NRC's special inspection report 50-528/88-24. There was no disagreement that the event occurred as described. Mr. Richards summarized the NRC concern that this event again indicates that the correct working atmosphere has not been established, in that personnel involved did not clearly think through what they were doing; a questionable situation was not followed up on; and a lack of attention to detail was evident. Mr. Richards added that this event appeared to be a continuation of similar recent events involving operator performance.

Mr. Holahan questioned what the safety significance of the event was. Mr. Butler responded that the effect of a loss of essential chilled water on safety related components during a design basis event was still being assessed. The licensee agreed to supplement their LER when their assessment was complete.

Mr. Haynes then briefly reviewed the event and Mr. Allen discussed corrective actions being taken as a result of the event. The licensee's corrective actions are summarized in enclosure (2). Mr. Lieberman observed that the proper training of Shift Supervisors as supervisory personnel is very important in ensuring that personnel conduct their work in a proper fashion. Mr. Haynes agreed and added that actions were continuing to ensure that management expectations are clearly communicated to operations personnel. Mr. Martin closed the discussion on this event by noting that management must routinely visit the control rooms to effectively know how operations

are conducted and indications are that ANPP management has not been doing this.

5. Early Criticality at Unit 1.

Mr. Miller opened the discussion by summarizing the apparent violations contained in special inspection report 50-528/88-20. A discussion then proceeded regarding the apparent violation associated with the failure to immediately borate when the reactor became critical below the power dependent insertion limit (PDIL). Mr. Haynes stated that the shutdown margin was known to be acceptable because it was calculated prior to the unit startup. Mr. Miller responded that the fact that criticality was achieved well prior to the calculated condition should have caused the operators to question whether the shutdown margin was accurately known, and therefore immediate boration was needed. Mr. Haynes replied that there was no disagreement, as long as the NRC did not read the Technical Specifications to require that boration be performed following a dropped control element assembly (CEA) or following a reactor power cutback. Mr. Miller indicated agreement and noted that the Technical Specifications specifically address a dropped CEA or a cutback.

With regard to the apparent violation associated with improper reporting to the NRC, Mr. Shriver stated that ANPP had concluded that a one hour 10 CFR 50.72 report to the NRC had not been required because the unit shutdown had been voluntary. However, the licensee representatives agreed that their report should have included the fact that the unit had achieved criticality below the PDIL and well before the calculated critical conditions were obtained.

Mr. Miller continued by summarizing the NRC concern that the licensee's post trip review was inadequate. Mr. Kirsch questioned whether the licensee disagreed with the NRC findings and Mr. Haynes responded that there was no disagreement, except as previously noted. Mr. Martin then summarized his concern, that this event again illustrates that licensee personnel do not exhibit the correct basic instincts. He observed that despite clear indications of problems, the operations crew elected to proceed, and then following the event, the operator logs and statements did not adequately describe what had occurred. Mr. Martin concluded that the event was a substantial management failure, in that personnel with many years of training conducted themselves in a manner contrary to that training, thereby indicating that management has not adequately expressed to the operations personnel management's expectation with regard to the conduct of operations and the need to stop evolutions when questionable situations arise. Additionally, Mr. Martin concluded that the poor review of the event was unexcusable, and that this event again has aspects in common with other recent events that have been a topic of discussion between ANPP and the NRC. Mr. Holahan added that the licensee's communications with NRC headquarters personnel tended to minimize the significance of what had occurred. He further stated that the instincts of the personnel is what is important and apparently management has not succeeded in

conveying their expectations down to the working level. Mr. Karner responded that ANPP agrees that management has failed to establish their expectations and set the proper standards. He also agreed that the initial review of the event was not correctly done.

Mr. Haynes then discussed the licensee's corrective actions (see enclosure(2)). The actions specifically include implementing a lower threshold for event evaluation; incorporating lessons learned from this event into future event reviews; and ensuring that Senior Managers respond to the site for events. Mr. Haynes noted that although the written review of the event does not document it, ANPP management was critical of operations personnel performance immediately following the event.

Mr. Martin closed the discussion on this event and the meeting by reemphasizing the importance of reviewing significant events thoroughly prior to proceeding, with participation by engineering personnel.

UNIT 1 EARLY CRITICALITY

I. CAUSES

A. OPERATION CONTRARY TO MANAGEMENT EXPECTATION

B. IMPROPER OPERATOR PERFORMANCE DURING THE REACTOR STARTUP

C. PROCEDURAL INADEQUACIES

D. ERRORS IN XENON PROGRAM

I. CORRECTIVE ACTIONS

A. COMPLETED ACTIONS

1. APPROPRIATE DISCIPLINARY ACTION AND/OR COUNSELING.

2. UNIT 1 MANAGEMENT HAS ISSUED A LETTER REMINDING ALL PLANT PERSONNEL TO ADOPT A CONSERVATIVE APPROACH WHEN CONDITIONS ARE OTHER THAN EXPECTED.

3. THE REACTOR STARTUP PROCEDURE HAS BEEN MODIFIED TO INCLUDE SPECIFIC GUIDANCE ON HOW CLOSE THE PROJECTED TIME OF CRITICALITY IN THE ECC MUST BE WITH RESPECT TO THE ACTUAL TIME OF CRITICALITY. THIS IS ESPECIALLY IMPORTANT WHEN THERE IS A SIGNIFICANT XENON TRANSIENT IN PROGRESS. REVISED PROCEDURES TO ALLOW ONE HOUR BETWEEN ESTIMATED CRITICALITY AND ACTUAL CRITICALITY.

4. STARTUP PROCEDURE REVISED TO USE 15″ WITHDRAWAL INCREMENT BEGINNING WITH GROUP 3 AT 60″.

UNIT 1 EARLY CRITICALITY

(CONTINUED)

5. 1/M PLOTS REVISED TO START AT COMMENCEMENT OF PULLING REGULATING GROUPS.

6. UPGRADED THE COEFFICIENTS FOR THE XENON PROGRAM IN THE HP 85 COMPUTER FOR UNIT 1 AND UNIT 2 AND VERIFIED FOR UNIT 3.

7. INCORPORATED INTO PROCEDURES, INSTRUCTIONS AND PROGRAMS THE SPECIFIC REQUIREMENTS AND RESPONSIBILITY FOR DECLARATION OF CRITICALITY.

8. THE EXTENDED INTEGRAL ROD WORTH CURVES HAVE BEEN INCORPORATED INTO THE UNIT 1 CYCLE 2 CORE DATA BOOK. REVISED 410P-1ZZ03, REACTOR STARTUP, TO REFLECT THE NEW EXTENDED CURVES.

9. ISSUED A UNIT 1 NIGHT ORDER REQUIRING THE OPERATORS TO READ THE STEP IN 410P-1ZZ03 ON THE RADIAL PEAKING FACTORS ASSOCIATED WITH GROUP 3 CEAS BEING WITHDRAWN LESS THAN 95″ CAUSING A REACTOR TRIP IF CPC′S ARE NOT BYPASSED. SUBSEQUENTLY ADDED TO PROCEDURAL CONTROLS.

UNIT 1 EARLY CRITICALITY

(CONTINUED)

10. CHANGED 410P-1ZZ03 TO INCORPORATE AN APPROPRIATE PRECAUTION REGARDING THE CPC AUXILIARY TRIP

11. PERFORMED AN EVALUATION OF THE RO INVOLVED IN THE STARTUP TO DETERMINE IF HE POSSESSES SUFFICIENT PRACTICAL KNOWLEDGE SKILLS IN APPLYING REACTOR THEORY TO INSTRUMENT INDICATIONS.

12. COUNSELED THE STA INVOLVED TO ASSURE HE HAS PROPER UNDERSTANDING OF THE REQUIREMENTS FOR PROPER COMPLETION OF ALL ON SHIFT TASKS, PARTICULARLY LOGKEEPING

13. CHANGED 720P-9RX01 TO MORE CLEARLY DEFINE THE REQUIREMENTS ON CALCULATING AND DOCUMENTING THE ROD POSITIONS FOR ECC $\pm$500 PCM

14. REAFFIRMED THE NEED FOR ACCURACY AND COMPLETENESS IN THE AREAS OF STA SHIFT TURNOVER AND LOG TAKING

UNIT 1 EARLY CRITICALITY

(CONTINUED)

B. MANAGEMENT ACTIONS

1. OPERATIONS CREW SUPERVISORS SHALL BE INSTRUCTED REGARDING THEIR RESPONSIBILITIES FOR UNIT OPERATIONS, AND THAT FOR CRITICAL EVOLUTIONS THEY SHOULD BE DIRECTLY INVOLVED BY PROVIDING GUIDANCE AND ENSURING ALL ASPECTS OF THE TASK ARE UNDERSTOOD PRIOR TO TASK PERFORMANCE

2. OPERATIONS MANAGEMENT SHALL PERIODICALLY REVIEW THE CONTROL ROOM AND UNIT LOGS TO ASSURE THAT THE LOGS MEET THE STANDARDS ESTABLISHED IN THE CONDUCT OF SHIFT OPERATIONS

C. POLICIES/PROCEDURES

1. ESTABLISH GUIDANCE ON THE STANDARDIZATION AND CONDUCT OF OPERATIONS BETWEEN CREWS TO INSURE CONSISTENCY BETWEEN THE ON-SHIFT AND REPLACEMENT CREW MEMBERS

2. EVALUATING <u>CONDUCT OF SHIFT OPERATIONS</u> REGARDING THE NEED FOR AN ON-SHIFT SUPERVISOR REVIEW OF THE CONTROL ROOM LOG PRIOR TO TURNING THE SHIFT OVER TO THE ONCOMING CREW TO ASSURE COMPLETENESS OF THE LOGS

UNIT 1 EARLY CRITICALITY

(CONTINUED)

3. OPERATIONS CONDUCT OF SHIFT AND STA CONDUCT OF SHIFT ADMINISTRATIVE PROCEDURES GOVERNING THE STA ROLE IN CONTROL ROOM OPERATIONS WILL BE REVIEWED AND REVISED AS NECESSARY TO ENSURE THAT THE STA IS MORE EFFECTIVELY UTILIZED ON SHIFT

4. REVIEW AND MODIFY THE PROCEDURAL CONTROLS ON THE CORE DATA BOOK TO ENSURE THAT THE DATA PROVIDED ADEQUATELY MEETS THE NEEDS OF THE USER AND IF NOT, CAN BE CHANGED EXPEDIENTLY

5. DIRECTION HAS BEEN PROVIDED THAT TDAS DATA, CURRENTLY AT PVNGS, WILL BE TRANSMITTED TO SAFETY ANALYSIS IN A TIMELY MANNER

6. EVALUATE AND UPGRADE THE ADMINISTRATIVE CONTROL REQUIREMENTS FOR THE XENON PROGRAM

7. UPGRADE PROCEDURES WHICH COVERS THE REQUIREMENT FOR ENS NOTIFICATIONS TO INCLUDE ENSURING ACCURATE AND ADEQUATE INFORMATION IS OBTAINED AND TRANSMITTED. AS AN INTERIM MEASURE, THE CONTENTS OF THE 1986 LETTER REQUIRING MANAGEMENT NOTIFICATION OF ENS CALLS HAS BEEN UPDATED AND DISSEMINATED TO THE COMPLIANCE REPRESENTATIVES

8. REVISE CONDUCT OF SHIFT OPERATIONS TO REQUIRE THE LOGGING OF SIGNIFICANT ACTIONS OCCURRING DURING AN ABNORMAL EVENT AS LATE ENTRIES IF THOSE ACTIONS WERE NOT LOGGED AT THE TIME THEY HAPPENED

UNIT 1 EARLY CRITICALITY

(CONTINUED)

D. TRAINING ACTIONS

1. ENSURE THE TRAINING PROGRAM (INITIAL AND REQUAL) AND OJT STRESSES AND EVALUATES THE OPERATOR ON COMPLIANCE WITH THE PROCEDURES DEVELOPED BY MANAGEMENT FOR DECLARATION OF REACTOR STATUS

2. PROVIDE SIMULATOR TRAINING, WITH MANAGEMENT OVERSIGHT, INVOLVING SCENARIOS WHERE THERE IS A LARGE ERROR BETWEEN THE ECC AND THE ACTUAL CRITICAL CONDITION

3. REVIEW THE TRAINING AND QUALIFICATION REQUIREMENTS OF THE FUELS MANAGEMENT STAFF RESPONSIBLE FOR CORE RELOADS AND UPGRADE AS NECESSARY

4. EVALUATE THE INITIAL/REQUAL TRAINING WITH REGARD TO LOGKEEPING

E. ENGINEERING ACTIONS

1. IMPROVE COMMUNICATIONS WITH COMBUSTION ENGINEERING REGARDING SPECIFIC OPERATING PRACTICES FOR USE IN FUEL DESIGN. UPGRADE THE REVIEW PROCESS FOR CHANGES RELATED TO CORE RELOADS.

UNIT 1 ESSENTIAL CHILLER ISOLATION

I. INVESTIGATION SUMMARY

II. CAUSES

A. COGNITIVE PERSONNEL ERRORS

B. COMMUNICATION WAS NOT ADEQUATE

C. FLOW TRANSMITTER VALVES REPOSITIONED WITHOUT PROPER VALVE POSITION DOCUMENTATION AND VERIFICATION

III. CORRECTIVE ACTIONS

A. COMPLETED ACTIONS

1. APPROPRIATE DISCIPLINARY MEASURES HAVE BEEN TAKEN.

2. AS INTERIM CORRECTIVE ACTION, UNIT 1 ISSUED DIRECTION:

a. THAT "WARNING LABELS" NOT BE INSTALLED WITHOUT THE PLANT MANAGER'S APPROVAL.

b. TO OPERATIONS PERSONNEL TO REVIEW ADMINISTRATIVE REQUIREMENTS GOVERNING VALVE MANIPULATION.

c. TO REQUIRE MORE FORMAL COMMUNICATION.

d. REQUIRING THEY ADOPT A MORE CONSERVATIVE APPROACH DURING ABNORMAL CONDITIONS

UNIT 1 ESSENTIAL CHILLER ISOLATION

(CONTINUED)

E. FOR OPERATIONS TO CONDUCT AN INITIAL REVIEW OF SELECTED SAFETY SYSTEMS (EC, EW, SP, DG) TO DETERMINE POSSIBLE LOCATIONS OF OTHER CLASS/NON-CLASS INTERFACES.

3. THE PROCEDURE CHANGE NOTICE INCORPORATING THE "COMMUNICATIONS STANDARDS" INTO CONDUCT OF SHIFT OPERATIONS HAS BEEN IMPLEMENTED.

4. AN ADDITIONAL PERSON WILL BE ADDED TO THE OPERATIONS MANAGEMENT; I.E., AN ASSISTANT OPERATIONS MANAGER OR DAY SHIFT SUPERVISOR; TO PROVIDE COORDINATION AND CONTINUITY.

B. MANAGEMENT ACTIONS

1. EVALUATE THE NEED FOR LABELS ON INSTRUMENT ISOLATION VALVES

2. REVIEW PM TASKS AND ST'S TO ENSURE THE APPROPRIATE VALVES ARE POSITIONED AS REQUIRED. REVIEW OTHER PM TASK AND ST VALVE ALIGNMENTS IN OTHER SAFETY SYSTEMS REQUIRING NON-CLASS INSTRUMENTS TO BE ISOLATED AND UPDATE THE "AS LEFT" POSITIONS AGREE WITH THOSE REQUIRED BY THE SYSTEM OPERATING PROCEDURES (OP'S)

UNIT 1 ESSENTIAL CHILLER ISOLATION

(CONTINUED)

3. MEETINGS AT THE UNIT DEPARTMENT MANAGER LEVEL SHOULD BE USED FOR REINFORCING COMMUNICATION CONCERNING PLANT CHANGES OR IMPROVEMENTS BETWEEN UNITS.

C. POLICIES/PROCEDURES

1. REVIEW ODG 15 (NUCLEAR OPERATOR WORK STATION) AND 17 (SYSTEM STATUS CONTROL) AND PROVIDE ADDITIONAL GUIDANCE FOR "WORK PRACTICES" FOR AO'S AS DETERMINED NECESSARY

2. A PROGRAM WILL BE DEVELOPED, TO CONTROL THE INSTALLATION OF TAGS IN ACCORDANCE WITH THE INPO GOOD PRACTICES

D. TRAINING ACTIONS

1. TRAINING BASED ON THE "CONDUCT OF SHIFT" COMMUNICATION STANDARD SHALL BE PROVIDED TO CONTROL ROOM STAFF

2. LICENSED AND AUXILIARY OPERATOR TRAINING WILL BE PROVIDED ON THE ADMINISTRATIVE CONTROLS GOVERNING VALVE MANIPULATION AND SYSTEM STATUS.

3. ODG 15 (NUCLEAR OPERATOR WORK STATION) AND 17 (SYSTEM STATUS CONTROL) WILL BE INCLUDED IN AO TRAINING.

UNIT 1 ESSENTIAL CHILLER ISOLATION
(CONTINUED)

4. SUPERVISORY SKILLS TRAINING WILL BE PROVIDED TO THE SHIFT SUPERVISORS, ASSISTANT SHIFT SUPERVISORS, AND REACTOR OPERATORS

5. COMMUNICATIONS WILL BE PROVIDED IN TRAINING TO STRESS THE IMPORTANCE OF CLEAR AND COMPLETE COMMUNICATIONS

E. ENGINEERING ACTIONS

1. A REVIEW OF SAFETY-RELATED SYSTEMS WILL BE CONDUCTED TO IDENTIFY ANY OTHER CLASS/NON-CLASS INTERFACES THAT MUST BE ISOLATED BY CLOSED VALVES